ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180-J	002			

KOPPERS COMPANY, INC.
7540 N. W. ST. HELENS RD.
PORTLAND, OREGON 97229

REPORTING PERIOD: FROM (20-21) YEAR 71 (22-23) MO 01 (24-25) DAY 31 TO (26-27) YEAR 71 (28-29) MO 01 (30-31) DAY 30

(32-37)

asterisks. "AVERAGE" is average computed for the reporting period and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex.". If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type (*"grab" or "__ hr. composite"*) as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER		*(3 card only)* QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	*(4 card only)* CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	0											
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E.	Chemist	71 10 09	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Henry E. Rassi

EPA Form 3320-1 (10-72) PAGE OF

NWT 001001

(3-5) ST	(6-16) PERMIT NUMBER	(17-19) DIS	SIC	LATITUDE	LONGITUDE
OR	2180-J	001			

KOPPERS COMPANY, INC.
7540 N. W. ST. HELENS RD.
PORTLAND, OREGON 97229

REPORTING PERIOD: FROM (20-21) YEAR 71F | (22-23) MO 01F | (24-25) DAY 31 | TO (26-27) YEAR 78 | (28-29) MO 09 | (30-31) DAY 30

1. Provide dates for period covered by this report in spaces marked "REPORTING PERIOD".
2. Enter reported minimum, average and maximum values under "QUANTITY" and "CONCENTRATION" in the units specified for each parameter as appropriate. Do not enter values in boxes containing asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyses that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type (*"grab"* or *"___ hr. composite"*) as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(22-37) PARAMETER		(3 card only) (38-45) QUANTITY MINIMUM	(46-53) QUANTITY AVERAGE	(54-61) QUANTITY MAXIMUM	QUANTITY UNITS	(62-63) NO. EX	(4 card only) (38-45) CONCENTRATION MINIMUM	(46-53) CONCENTRATION AVERAGE	(54-61) CONCENTRATION MAXIMUM	CONCENTRATION UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-78) SAMPLE TYPE
Flow	REPORTED	0	2,700	5000	gpm							5/7	Est
	PERMIT CONDITION											5/7	Est
Temperature	REPORTED	59	60	60	°F							5/7	Grab
	PERMIT CONDITION			80								5/7	Grab
pH	REPORTED	7.6	7.7	78								5/7	Grab
	PERMIT CONDITION			9.0								5/7	Grab
Oil & Grease	REPORTED						2.1	2.1	2.1			1/7	Comp
	PERMIT CONDITION								10.0			1/7	Comp
Phenols	REPORTED											5/7	Grab
	PERMIT CONDITION						0.1	0.1	0.1			5/7	Grab
	REPORTED								0.5				
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	YEAR 78	MO 10 DAY 19
LAST FIRST MI	TITLE		

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Rassi
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE OF

NWT 001002

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180-J	002			

KOPPERS COMPANY, INC.
7540 N. W. ST. HELENS RD
PORTLAND, OREGON 97229

REPORTING PERIOD: FROM (20-21) YEAR 78 (22-23) MO 08 (24-25) DAY 31 TO (26-27) YEAR 78 (28-29) MO 09 (30-31) DAY 30

1. "AVERAGE" is average [illegible] and "MINIMUM" are extreme values observed during the reporting period.
2. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
3. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
4. Specify sample type ("grab" or "___ hr. composite") as applicable. If frequency was continuous, enter "NA".
5. Appropriate signature is required on bottom of this form.
6. Remove carbon and retain copy for your records.
7. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER		(3 card only) QUANTITY MINIMUM (39-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS (62-65)	NO. EX	(4 card only) CONCENTRATION MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS (62-65)	NO. EX	FREQUENCY OF ANALYSIS (66-68)	SAMPLE TYPE (69-70)
Flow	REPORTED	0											
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
Rassi Henry E.	Chemist	78 10 09
LAST FIRST MI	TITLE	YEAR MO DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Rassi
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE OF

NWT 001003

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OK	2180-0	001			

REPORTING PERIOD: FROM (20-21) YEAR 78 (22-23) MO 07 (24-25) DAY 31 TO (26-27) YEAR 78 (28-29) MO 08 (30-31) DAY 31

...and "MINIMUM" are extreme values observed during the reporting period.

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "O".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "— hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER (32-37)		QUANTITY (3 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO. EX (62-63)	CONCENTRATION (4 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Flow	REPORTED	-0-											
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER (LAST / FIRST / MI)	TITLE OF THE OFFICER	DATE (YEAR / MO / DAY)
Rassi Henry E	Chemist	78 09 13

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Rassi

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE OF

NPDES	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
NA	2180-J	002			

REPORTING PERIOD: FROM (20-21) YEAR 78 (22-23) MO 07 (24-25) DAY 31 TO (26-27) YEAR 78 (28-29) MO 08 (30-31) DAY 31

1. Use only as appropriate. Do not enter values in boxes containing asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "___ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-46) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	-0-											
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
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	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE		
Rassi Henry E	Chemist	78	09	13
LAST FIRST MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Rassi
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE OF

NWT 001005

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OK	0184-J	001			

REPORTING PERIOD: FROM (20-21) YEAR 78 (22-23) MO 07 (24-25) DAY 31 TO (26-27) YEAR 78 (28-29) MO 08 (30-31) DAY 31

average is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" *is equivalent to 3 analyses performed* every 7 days.) If continuous enter "CONT."
5. Specify sample type (*"grab" or "___ hr. composite"*) as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	-0-											
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
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	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	78 09 13	I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Henry E. Rassi

EPA Form 3320-1 (10-72) PAGE OF

NWT 001006

	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
NT	2180-J	002			

REPORTING PERIOD: FROM (80-81) 78 (82-83) 07 (84-85) 31 (YEAR / MO / DAY) TO (86-87) 78 (88-89) 08 (90-91) 31 (YEAR / MO / DAY)

esterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "___ hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER (32-37)		QUANTITY (3 card only) MINIMUM (38-46)	AVERAGE (48-54)	MAXIMUM (56-61)	UNITS	NO. EX (62-63)	CONCENTRATION (4 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Flow	REPORTED	-0-											
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E (LAST FIRST MI)	Chemist (TITLE)	78 09 13 (YEAR MO DAY)	

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Rassi
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE ___ OF ___

NWT 001007

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
GP	2180-J	001			

REPORTING PERIOD: FROM (30-31) YEAR 78 (29-29) MO 06 (24-25) DAY 30 TO (26-27) YEAR 78 (28-29) MO 07 (30-31) DAY 31

1. Use the units specified for each parameter as appropriate. Do not enter values in boxes containing asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.
2. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
3. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
4. Specify sample type ("grab" or "___ hr. composite") as applicable. If frequency was continuous, enter "NA".
5. Appropriate signature is required on bottom of this form.
6. Remove carbon and retain copy for your records.
7. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	(62-69) UNITS	NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	(62-69) UNITS	NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED		- 0 -		gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
Rassi Henry E.	Chemist	78 08 04
LAST FIRST MI	TITLE	YEAR MO DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Rassi

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE OF

NWT 001008

NPDES

ST. | PERMIT NUMBER: 2280-J | DISCHARGE NO.: 004 | SIC | LATITUDE | LONGITUDE

REPORTING PERIOD FROM: 78 06 30 (YEAR MO DAY) TO: 78 07 31 (YEAR MO DAY)

1. "AVERAGE" is average computed over month and "MAXIMUM" the extreme value observed during the reporting period.
2. Specify the number of each type of sample that exceed the maximum (daily/7-consecutive-day/monthly) permit conditions in the columns labeled "No. Ex." If none, enter "0".
3. Specify frequency of analysis for each parameter (No. analyses/No. days) (e.g., "3/7" is equivalent to 3 analyses performed every 7 days). If continuous enter "CONT."
4. Specify sample type ("grab" or "__-hr. composite") as applicable. If frequency was continuous, enter "MAX."
5. Appropriate signature is required at bottom of this form.
6. Remove carbon and retain copy for your records.
7. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER		QUANTITY (3 card only) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX	CONCENTRATION (4 card only) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	REPORTED		-0-		gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER (LAST, FIRST, MI)	TITLE OF THE OFFICER	DATE (YEAR MO DAY)	I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT
Rassi Henry E	Chemist	78 08 04		Henry E. Rassi

EPA Form 3320-1 (10-72)

PAGE OF

NWT 001009

(2-8) OR ST | (9-15) 2180-J PERMIT NUMBER | (17-19) 002 DIS | SIC | LATITUDE | LONGITUDE

REPORTING PERIOD: FROM (20-21) YEAR 71 (22-23) MO 08 (24-25) DAY 01 TO (26-27) YEAR 71 (28-29) MO 07 (30-31) DAY 31

All entries specified for each parameter as appropriate. Do not enter values in boxes containing asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type (*"grab" or "___hr. composite"*) as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in p[illegible]

(32-57) PARAMETER		(3 card only) (38-45) QUANTITY MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) (38-45) CONCENTRATION MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-65) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED		-0-		gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	71 08 014	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT: Henry E. Rassi

EPA Form 3320-1 (10-72) PAGE OF

NWT 001010

(1-2) ST	(3-10) PERMIT NUMBER	(11-13) DIS	SIC	LATITUDE	LONGITUDE
OR	2180-J	001			

REPORTING PERIOD: FROM (20-21) YEAR 78 (22-23) MO 06 (24-25) DAY 30 TO (26-27) YEAR 78 (28-29) MO 07 (30-31) DAY 31

1. In the units specified for each parameter as appropriate. Do not enter values in boxes containing asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "___ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in p[illegible]

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	FREQUENCY ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED		-0-		gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
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	REPORTED												
	PERMIT CONDITION												
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	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE		
Rassi Henry E.	Chemist	78	08	04
LAST FIRST MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Rassi
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE OF

NWT 001011

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OK	2180 - U	001			

REPORTING PERIOD: FROM 78 05 31 (YEAR MO DAY) TO 78 06 30 (YEAR MO DAY)

and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "___ hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER (32-37)		QUANTITY (3 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO. EX (62-63)	CONCENTRATION (4 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Flow	REPORTED		-0-										
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER (LAST FIRST MI)	TITLE OF THE OFFICER (TITLE)	DATE (YEAR MO DAY)
Bassi Henry E	Chemist	78 06 30

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E Bassi
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (12-72) ORIGINAL PAGE ___ OF ___

NWT 001012

1ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
	[illegible]	004			

REPORTING PERIOD: FROM (20-21 YEAR 78, 22-23 MO 05, 24-25 DAY 31) TO (26-27 YEAR 78, 28-29 MO 06, 30-31 DAY 30)

and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the minimum and/or maximum permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. [e.g., "2/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "___hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signatures as required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-57) (58-65) 66-70

PARAMETER		(3 card only) QUANTITY MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS (62-65)	NO. EX	(4 card only) CONCENTRATION MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS (62-65)	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	REPORTED		-0-										
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Bassi Henry E.	Chemist	78 06 30	
LAST FIRST MI	TITLE	YEAR MO DAY	

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Bassi
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) ORIGINAL PAGE OF

NWT 001013

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180-U	001			

REPORTING PERIOD: FROM (20-21) YEAR 78 (22-23) MO 05 (24-25) DAY 37 TO (26-27) YEAR 78 (28-29) MO 06 (30-31) DAY 30

and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED		-0-										
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Bassi Henry E	Chemist	78 06 30	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Henry E Bassi

EPA Form 3320-1 (10-72)

ORIGINAL

PAGE OF

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
07	2180-0	004			

REPORTING PERIOD: FROM (20-21) YEAR 78 (22-23) MO 05 (24-25) DAY 31 TO (26-27) YEAR 78 (28-29) MO 06 (30-31) DAY 30

1. Enter "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.
2. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
3. Specify frequency of analysis for each parameter as No. analyses/No. days. *[e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
4. Specify sample type (*"grab" or "___ hr. composite"*) as applicable. If frequency was continuous, enter "NA".
5. Appropriate signature is required on bottom of this form.
6. Remove carbon and retain copy for your records.
7. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER (32-37)		(3 card only) QUANTITY MINIMUM (38-45)	QUANTITY AVERAGE (46-53)	QUANTITY MAXIMUM (54-61)	QUANTITY UNITS (62-63)	QUANTITY NO. EX	(4 card only) CONCENTRATION MINIMUM (38-45)	CONCENTRATION AVERAGE (46-53)	CONCENTRATION MAXIMUM (54-61)	CONCENTRATION UNITS (62-63)	CONCENTRATION NO. EX	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Flow	REPORTED		-0-										
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE		
Bassi Henry E.	Chemist	78	06	30
LAST FIRST MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Bassi
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) ORIGINAL PAGE OF

NWT 001015

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180-J	001			

REPORTING PERIOD: FROM 78 04 30 (YEAR MO DAY) TO 78 05 31 (YEAR MO DAY)

1. Enter reported minimum, average and maximum values under "QUANTITY" and "CONCENTRATION" in the units specified for each parameter as appropriate. Do not enter values in boxes containing asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.
2. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
3. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
4. Specify sample type ("grab" or "___ hr. composite") as applicable. If frequency was continuous, enter "NA".
5. Appropriate signature is required on bottom of this form.
6. Remove carbon and retain copy for your records.
7. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER		QUANTITY (5 card only) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX	CONCENTRATION (4 card only) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	REPORTED	500	714	2000	gpd							5/7	EST
	PERMIT CONDITION			10,000								5/7	EST
Temperature	REPORTED	50	51	52	°F							5/7	Grab
	PERMIT CONDITION			80								5/7	Grab
pH	REPORTED	8.2	8.3	8.3								5/7	Grab
	PERMIT CONDITION	6.0		9.0								5/7	Grab
Oil & Grease	REPORTED						2.1	2.1	2.1			1/7	Comp
	PERMIT CONDITION								10.0			1/7	Comp
Phenols	REPORTED						0.1	0.1	0.1			5/7	Grab
	PERMIT CONDITION								0.5			5/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
Last Rossi First Henry M	Chemist	78 06 14 (YEAR MO DAY)

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry M. Rossi
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE ___ OF ___

NWT 001016

NPDES | 2R80-3-4 | 001 | DIS | SUC | LATITUDE | LONGITUDE

REPORTING PERIOD: FROM 78 04 30 TO 78 05 31
YEAR MO DAY YEAR MO DAY

1. All entries must be typed or printed in ink within the boundaries of the boxes.
2. Specify units of measurement entered in each space. Use only units specified in permit.
3. Specify each sample taken during the reporting period as to the number of samples actually collected and analyzed. If no sample was collected and analyzed during the reporting period, enter "NA".
4. Specify frequency of analysis (as each sample is collected and analyzed, e.g., "1/D" is equivalent to 1 analysis performed every 1 day.) If continuous enter "CONT."
5. Specify sample type ("grab" or "___hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER		QUANTITY (3 card only) MINIMUM	QUANTITY AVERAGE	QUANTITY MAXIMUM	QUANTITY UNITS	QUANTITY NO. EX.	CONCENTRATION (4 card only) MINIMUM	CONCENTRATION AVERAGE	CONCENTRATION MAXIMUM	CONCENTRATION UNITS	CONCENTRATION NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	REPORTED	-0-											
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER: Rassi (LAST) Henry (FIRST) E. (MI)

TITLE OF THE OFFICER: Chemist (TITLE)

DATE: 78 06 14 (YEAR MO DAY)

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Rassi
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE OF

NWT 001017

(1-2) ST: OR

(3-15) PERMIT NUMBER: 2180-J

(16-18) DIS: 001

(19-19) SIC:

LATITUDE:

LONGITUDE:

REPORTING PERIOD: FROM (20-21) YEAR 78 (22-23) MO 04 (24-25) DAY 30 TO (26-27) YEAR 78 (28-29) MO 05 (30-31) DAY 31

1. Enter reported minimum, average and maximum values under "QUANTITY" and "CONCENTRATION" in the units specified for each parameter as appropriate. Do not enter values in boxes containing asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "___ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	500	714	2000	gpd							5/7	EST
	PERMIT CONDITION			10,000								5/7	EST
Temperature	REPORTED	50	51	52	°F							5/7	Grab
	PERMIT CONDITION			80								5/7	Grab
pH	REPORTED	8.2	8.3	8.3								5/7	Grab
	PERMIT CONDITION	6.0		9.0								5/7	Grab
Oil & Grease	REPORTED		~~2.1~~				2.1	2.1	2.1			1/7	Comp
	PERMIT CONDITION								10.0			1/7	Comp
Phenols	REPORTED						0.1	0.1	0.1			5/7	Grab
	PERMIT CONDITION								0.5			5/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
LAST Rassi FIRST Henry MI	Chemiste	78 06 14 (YEAR MO DAY)	I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate. Henry E. Rassi SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE OF

NWT 001018

OR / ST	2180-J	002			
	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE

REPORTING PERIOD: FROM (20-21) YEAR 74 (22-23) MO 04 (24-25) DAY 30 TO (26-27) YEAR 74 (28-29) MO 05 (30-31) DAY 31

1. Enter "MAXIMUM" and "MINIMUM" as extreme values observed during the reporting period.
2. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
3. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
4. Specify sample type ("grab" or "__ hr. composite") as applicable. If frequency was continuous, enter "NA".
5. Appropriate signature is required on bottom of this form.
6. Remove carbon and retain copy for your records.
7. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER (32-37)		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX.	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX.	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	-0-											
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E.	Chemist	74 05 14	I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Henry E. Rassi

EPA Form 3320-1 (10-72) PAGE OF

NWT 001019

DIS	SIC	LATITUDE	LONGITUDE
001			

FROM (20-21) YEAR 78 (22-23) MO 03 (24-25) DAY 31

TO (26-27) YEAR 78 (28-29) MO 04 (30-31) DAY 30

and "MINIMUM" are extreme values observed during the reporting period.

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

	(3 card only) QUANTITY					(4 card only) CONCENTRATION					FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
	MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO. EX (62-63)	MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO. EX (62-63)		
ORTED	500	1625	2000	gpd							5/7	EST
ERMIT DITI	~~70~~		10,000								5/7	EST
ORTED	50	51	51								5/7	Grab
ERMIT NDITION			80								5/7	Grab
ORTED	8.1	8.2	8.3								5/7	Grab
ERMIT NDITION	6.0		9.0								5/7	Grab
PORTED						2.2	2.2	2.2			1/7	Comp
ERMIT NDITION								10.0			1/7	Comp
PORTED						0.0	0.1	0.1			5/7	Grab
ERMIT NDITION						~~0.5~~		0.5			5/7	Grab
PORTED												
ERMIT NDITION												
PORTED												
ERMIT NDITION												
PORTED												
ERMIT NDITION												

ICER	TITLE OF THE OFFICER	DATE		
E	Chemist	78	05	10
MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E Rasin

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

PAGE OF

NWT 001020

	(17-19)			
	002			
	DIS	SIC	LATITUDE	LONGITUDE

D: FROM (20-21) YEAR 7|8 (22-23) MO 0|3 (24-25) DAY 3|1 TO (26-27) YEAR 7|8 (28-29) MO 0|4 (30-31) DAY 3|0

in the units specified for each parameter as appropriate. Do not enter values in boxes containing asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

	(3 card only) QUANTITY					*(4 card only)* CONCENTRATION					(64-68)	(69-70)
	(38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
PORTED		- 0 -										
ERMIT NDITION												
PORTED												
ERMIT NDITION												
PORTED												
ERMIT NDITION												
PORTED												
ERMIT DITION												
ORTED												
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RMIT DITION												
ORTED												
RMIT DITION												

ER	TITLE OF THE OFFICER	DATE		
E	Chemist	YEAR 7|8	MO 0|5	DAY 0|9
EI	TITLE			

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Rossi

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

PAGE OF

NWT 001021

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180-J	001			

REPORTING PERIOD: FROM (20-21) YEAR 78 (22-23) MO 03 (24-25) DAY 31 TO (26-27) YEAR 78 (28-29) MO 04 (30-31) DAY 30

1. Enter the minimum, average, and maximum daily discharge quantities and units, and the number of exceptions in the appropriate spaces.
2. Enter the minimum, average, and maximum daily concentrations and units, and the number of exceptions in the appropriate spaces. If only one sample was taken during the reporting period, enter that value under "MAXIMUM" and enter "NA" under "MINIMUM" and "AVERAGE". If no sample was taken during the reporting period, enter "NA" under "MINIMUM", "AVERAGE" and "MAXIMUM".
3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER (32-37)		QUANTITY (3 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO. EX (62-63)	CONCENTRATION (4 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Flow	REPORTED	500	1625	2000	gpd							5/7	EST
	PERMIT CONDITION	~~700~~		10,000								5/7	EST
Temperature	REPORTED	50	51	51								5/7	Grab
	PERMIT CONDITION			80								5/7	Grab
pH	REPORTED	8.1	8.2	8.3								5/7	Grab
	PERMIT CONDITION	6.0		9.0								5/7	Grab
Oil & Grease	REPORTED						2.2	2.2	2.2			1/7	Comp
	PERMIT CONDITION								10.0			1/7	Comp
Phenols	REPORTED						0.0	0.1	0.1			5/7	Grab
	PERMIT CONDITION						~~0.5~~		0.5			5/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	78 05 10	
LAST FIRST MI	TITLE	YEAR MO DAY	

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E Rassi
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE OF

NWT 001022

(2-3) ST: OR

(4-16) PERMIT NUMBER: 2170-J

(17-19) DIS: 002

SIC:

LATITUDE:

LONGITUDE:

REPORTING PERIOD: FROM (20-21) YEAR: 78 (22-23) MO: 03 (24-25) DAY: 31 TO (26-27) YEAR: 78 (28-29) MO: 04 (30-31) DAY: 30

1. Enter the permit number, discharge number, and reporting period.
2. Enter monitoring results in the units specified for each parameter as appropriate. Do not enter values in boxes containing asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED		-0-										
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
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	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER: Rassi (LAST) Henry (FIRST) E (MI)

TITLE OF THE OFFICER: Chemist (TITLE)

DATE: 78 (YEAR) 05 (MO) 09 (DAY)

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Rassi
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE OF

NWT 001023

	001			
	DIS	SIC	LATITUDE	LONGITUDE

D: FROM (20-21) YEAR 78 (22-23) MO 02 (24-25) DAY 28 TO (26-27) YEAR 78 (28-29) MO 03 (30-31) DAY 31

and "MINIMUM" are extreme values observed during the reporting period.

3. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "O".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "__ hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

	(3 card only) QUANTITY					(4 card only) CONCENTRATION					(64-68)	(69-70)
	(38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
PORTED		- O -										
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FFICER	TITLE OF THE OFFICER	DATE				
E	Chemist	78	03	04		
MI	TITLE	YEAR	MO	DAY		

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Rose

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

PAGE OF

NWT 001024

	007			
	DIS	SIC	LATITUDE	LONGITUDE

	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)
FROM	78	02	28	TO	78	03	31
	YEAR	MO	DAY		YEAR	MO	DAY

in the units specified for each parameter as appropriate. Do not enter values in boxes containing asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "O".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "___ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

	(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
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ER	TITLE OF THE OFFICER	DATE		
E	Chemist	78	03	04
MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry G. Rossi

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

PAGE OF

NWT 001025

asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "___ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2170-J	001			

REPORTING PERIOD: FROM (20-21) YEAR 78 (22-23) MO 02 (24-25) DAY 28 TO (26-27) YEAR 78 (28-29) MO 03 (30-31) DAY 31

PARAMETER (32-37)		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED		-0-										
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
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	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	78 03 04	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.* Henry E. Rassi
LAST, FIRST, MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE OF

NWT 001026

ST.	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180-J	002			

REPORTING PERIOD: FROM (20-21) YEAR 78 (22-23) MO 02 (24-25) DAY 28 TO (26-27) YEAR 78 (28-29) MO 03 (30-31) DAY 31

1. Enter the limits specified for each parameter as appropriate. Do not enter values in boxes containing asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.
2. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
3. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
4. Specify sample type *("grab" or "___ hr. composite")* as applicable. If frequency was continuous, enter "NA".
5. Appropriate signature is required on bottom of this form.
6. Remove carbon and retain copy for your records.
7. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER (32-37)		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED		-0-										
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
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	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	YEAR 78 MO 03 DAY 04	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*
LAST FIRST MI	TITLE		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Henry E. Rassi

EPA Form 3320-1 (10-72) PAGE OF

NWT 001027

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE

REPORTING PERIOD: FROM (20-21 YEAR / 22-23 MO / 24-25 DAY) 76 01 31 TO (26-27 YEAR / 28-29 MO / 30-31 DAY) 76 02 28

3. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days (e.g., "1/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "__ hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	-0-											
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
1	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	76 02 06	
LAST FIRST MI	TITLE	YEAR MO DAY	

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Rassi

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE ___ OF ___

NWT 001028

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OK	2160 - 0	001			

REPORTING PERIOD: FROM (20-21) YEAR 76 (22-23) MO 01 (24-25) DAY 31 TO (26-27) YEAR 76 (28-29) MO 02 (30-31) DAY 26

3. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "___ hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	500	1794	2000								5/7	E.T
	PERMIT CONDITION	10,000										5/7	C.T
Temperature	REPORTED	45	47	54								5/7	Grab
	PERMIT CONDITION	80										5/7	Grab
PH	REPORTED	8.2	8.3	8.3								5/7	Grab
	PERMIT CONDITION	6.0		9.0								5/7	Grab
1 Oil & Grease	REPORTED						2.0	2.2	2.4	mg/L		1/7	Comp
	PERMIT CONDITION						10.0					1/7	Comp
Phenols	REPORTED						0.1	0.2	0.4	mg/L		5/7	Grab
	PERMIT CONDITION						0.5					5/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
Rassi Henry E. (LAST FIRST MI)	Chemist (TITLE)	76 02 04 (YEAR MO DAY)

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Rassi
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE OF

NWT 001029

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
UK	2160-U	001			

REPORTING PERIOD: FROM (20-21) YEAR 78 (22-23) MO 01 (24-25) DAY 31 TO (26-27) YEAR 78 (28-29) MO 02 (30-31) DAY 28

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "___ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	500	1794	2000								5/7	EST
	PERMIT CONDITION	10,000.										5/7	EST
Temperature	REPORTED	45	47	54								5/7	Grab
	PERMIT CONDITION	80										5/7	Grab
PH	REPORTED	8.2	8.3	8.3								5/7	Grab
	PERMIT CONDITION	6.0		9.0								5/7	Grab
Oil & Grease	REPORTED						2.0	2.2	2.4	mg/L		1/7	Comp
	PERMIT CONDITION						10.0					1/7	Comp
Phenols	REPORTED						0.1	0.2	0.4	mg/L		5/7	Grab
	PERMIT CONDITION						0.5					5/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE		
Rassi Henry E	Chemist	78	02	06
LAST FIRST MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Rassi
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE OF

NWT 001030

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE

REPORTING PERIOD: FROM (20-21) YEAR 7|8 (22-23) MO 0|1 (24-25) DAY 3|1 TO (26-27) YEAR 7|8 (28-29) MO 0|2 (30-31) DAY 2|8

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "O".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "___ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	-0-											
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
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	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	YEAR 7|8 MO 0|2 DAY 0|6	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*
LAST FIRST MI	TITLE		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT: Henry E. Rassi

EPA Form 3320-1 (10-72)

PAGE OF

NWT 001031

ST: OK | PERMIT NUMBER: 0160-0 | DIS: 001 | SIC: | LATITUDE: | LONGITUDE:

REPORTING PERIOD: FROM (30-31) YEAR 77 (32-33) MO 12 (34-35) DAY 31 TO (36-37) YEAR 78 (38-39) MO 01 (40-41) DAY 31

"AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.

3. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "___ hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		QUANTITY (3 card only) (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	CONCENTRATION (4 card only) (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	500	1170	2000	gpd								
	PERMIT CONDITION	10,000											
Temperture	REPORTED	39	43	51	°F								
	PERMIT CONDITION	80											
pH	REPORTED	7.3	7.9	8.2									
	PERMIT CONDITION	6.0		9.0									
Oil & Grease	REPORTED						2.1	2.4	2.6	mg/L			
	PERMIT CONDITION						10.0						
Phenol	REPORTED						0.1	0.1	0.1	mg/L			
	PERMIT CONDITION						0.5						
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E.	Chemist	78 01 02	I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.
LAST FIRST MI	TITLE	YEAR MO DAY	Henry E. Rassi SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE OF

NWT 001032

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2166-J	004			

REPORTING PERIOD: FROM (20-21) YEAR 77, (22-23) MO 12, (24-25) DAY 31 TO (26-27) YEAR 78, (28-29) MO 01, (30-31) DAY 31

3. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "___ hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-69) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
flow	REPORTED	-0-											
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
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	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	78 02 02	I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE ___ OF ___

NWT 001033

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OK	2160-0	001			

REPORTING PERIOD: FROM (20-21) 77 (22-23) 12 (24-25) 31 (YEAR MO DAY) TO (26-27) 78 (28-29) 01 (30-31) 31 (YEAR MO DAY)

... in boxes containing asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "O".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "___ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER (32-37)		QUANTITY (3 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO. EX (62-63)	CONCENTRATION (4 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Flow	REPORTED	500	1170	2000	gpd								
	PERMIT CONDITION	10,000											
Temperture	REPORTED	39	43	51	°F								
	PERMIT CONDITION	80											
pH	REPORTED	7.3	7.9	8.2									
	PERMIT CONDITION	6.0		9.0									
Oil & Grease	REPORTED						2.1	2.4	2.6	mg/L			
	PERMIT CONDITION						10.0						
Phenol	REPORTED						0.1	0.1	0.1	mg/L			
	PERMIT CONDITION						0.5						
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
Rassi Henry E.	Chemist	78 02 02
LAST FIRST MI	TITLE	YEAR MO DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Rassi
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE OF

NWT 001034

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180-J	002			

REPORTING PERIOD: FROM (20-21) YEAR 77 (22-23) MO 12 (24-25) DAY 31 TO (26-27) YEAR 78 (28-29) MO 01 (30-31) DAY 31

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "___ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
flow	REPORTED	-0-											
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	78 02 02	I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate. Henry E. Rassi
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE OF

NWT 001035

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
GR	2180-J	001			

REPORTING PERIOD: FROM (20-21) YEAR 77, (22-23) MO 11, (24-25) DAY 30 TO (26-27) YEAR 77, (28-29) MO 12, (30-31) DAY 31

and "MINIMUM" are extreme values observed during the reporting period.

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "___hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	1000	1500	2000	gpd								
	PERMIT CONDITION	1[illegible]000											
Temperture	REPORTED	48	51	53									
	PERMIT CONDITION	80											
pH	REPORTED	7.5	7.5	7.6									
	PERMIT CONDITION	6.0		9.0									
Oil & Grease	REPORTED						1.8	2.0	2.2	mg/L			
	PERMIT CONDITION						10.0						
Phenol	REPORTED						0.1	0.1	0.1	mg/L			
	PERMIT CONDITION						0.5						
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rossi Henry E	Chemist	YEAR 78, MO 01, DAY 10	I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.
LAST FIRST MI	TITLE		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Henry E. Rossi

EPA Form 3320-1 (10-72) PAGE ___ OF ___

NWT 001036

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
01[illegible]	2180-J	002			

REPORTING PERIOD: FROM (20-21) YEAR 77 (22-23) MO 11 (24-25) DAY 30 TO (26-27) YEAR 77 (28-29) MO 12 (30-31) DAY 31

1. [illegible] and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "___ hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER (32-37)		QUANTITY (3 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO. EX (62-63)	CONCENTRATION (4 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
flow	REPORTED	0											
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E.	Chemist	78 01 10	I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Henry E. Rassi

EPA Form 3320-1 (10-72)

PAGE OF

NWT 001037

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
01	2180-J	002			

REPORTING PERIOD: FROM (20-21) YEAR 77 (22-23) MO 11 (24-25) DAY 31 TO (26-27) YEAR 77 (28-29) MO 12 (30-31) DAY 31

1. Specify each parameter in units and sampling frequency required by permit. Enter "NR" if not required this period.
2. For pollutants with limitations, report the quantity and concentration of the discharge during the period of operation. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
flow	REPORTED	0											
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E.	Chemist	78 01 10	
LAST FIRST MI	TITLE	YEAR MO DAY	

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Rassi

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE OF

NWT 001038

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180-J	001			

REPORTING PERIOD: FROM (20-21) YEAR 77 (22-23) MO 11 (24-25) DAY 30 TO (26-27) YEAR 77 (28-29) MO 12 (30-31) DAY 31

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "___ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	1000	1500	2000	gpd								
	PERMIT CONDITION	10,000											
Temperture	REPORTED	48	51	53									
	PERMIT CONDITION	80											
pH	REPORTED	7.5	7.5	7.6									
	PERMIT CONDITION	6.0		9.0									
Oil + Grease	REPORTED						1.8	2.0	2.2	mg/L			
	PERMIT CONDITION						10.0						
Phenol	REPORTED						0.1	0.1	0.1	mg/L			
	PERMIT CONDITION						0.5						
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	78 (YEAR) 01 (MO) 10 (DAY)	
LAST FIRST MI	TITLE		

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Rassi
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE OF

NWT 001039

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OK	2160-J	001			

REPORTING PERIOD: FROM (20-21) YEAR 77 (22-23) MO 10 (24-25) DAY 31 TO (26-27) YEAR 77 (28-29) MO 11 (30-31) DAY 30

asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "___ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (39-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(66-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	1000	1250	2000	gpd							5/7	Est
	PERMIT CONDITION											5/7	Est
Temperature	REPORTED	47	55	60	°F							5/7	Grab
	PERMIT CONDITION											5/7	Grab
pH	REPORTED	7.6	7.7	8.0								5/7	Grab
	PERMIT CONDITION											5/7	Grab
Oil & Grease	REPORTED						2.5	2.6	2.6			1/7	Comp
	PERMIT CONDITION											1/7	Comp
Phenol	REPORTED						0.1	0.1	0.1			5/7	Grab
	PERMIT CONDITION											5/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	77 12 07	I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE OF

NWT 001040

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
[illegible]	[illegible]	[illegible]			

REPORTING PERIOD: FROM (20-21 YEAR) 71 (22-23 MO) 11 (24-25 DAY) 31 TO (26-27 YEAR) 71 (28-29 MO) 11 (30-31 DAY) 30

8. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "__ hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
flow	REPORTED	C			gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	71 (YEAR)	12 (MO) 07 (DAY)
LAST FIRST MI	TITLE		

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Rassi
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE OF

NWT 001041

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180-J	001			

REPORTING PERIOD: FROM (20-21) YEAR 77 (22-23) MO 10 (24-25) DAY 31 TO (26-27) YEAR 77 (28-29) MO 11 (30-31) DAY 30

asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type (*"grab" or "___ hr. composite"*) as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	1000	1250	2000	gpd							5/7	Est
	PERMIT CONDITION											5/7	Est
Temperture	REPORTED	49	55	60	°F							5/7	Grab
	PERMIT CONDITION											5/7	Grab
pH	REPORTED	7.6	7.7	8.0								5/7	Grab
	PERMIT CONDITION											5/7	Grab
Oil & Grease	REPORTED						2.5	2.6	2.6			1/7	Comp
	PERMIT CONDITION											1/7	Comp
Phenol	REPORTED						0.1	0.1	0.1			5/7	Grab
	PERMIT CONDITION											5/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	77 12 07	
LAST FIRST MI	TITLE	YEAR MO DAY	

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Rassi
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE OF

NWT 001042

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OK	2760	002			

REPORTING PERIOD: FROM (20-21) YEAR 77 (22-23) MO 10 (24-25) DAY 31 TO (26-27) YEAR 77 (28-29) MO 11 (30-31) DAY 30

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER (32-37)		QUANTITY (3 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS (62-63)	NO. EX	CONCENTRATION (4 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS (62-63)	NO. EX	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
flow	REPORTED	0			gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	77 12 07	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Henry E. Rassi

EPA Form 3320-1 (10-72) PAGE OF

NWT 001043

YEAR | MO | DAY

YEAR | MO | DAY

8. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER		(3 card only) QUANTITY MINIMUM (39-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS (62-63)	NO. EX	(4 card only) CONCENTRATION MINIMUM (39-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS (62-63)	NO. EX	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Flow	REPORTED	500	500	500	gpd		-					5/7	est
	PERMIT CONDITION	~~52~~	~~52~~	~~52~~								5/7	est
Temperture	REPORTED	52	52	52	°F							5/7	Grab
	PERMIT CONDITION											5/7	Grab
pH	REPORTED	6 8	6 7	6 8								5/7	Grab
	PERMIT CONDITION											5/7	Grab
Oil & Grease	REPORTED						2.0	2.0	2.0			1/7	Comp
	PERMIT CONDITION											1/7	Comp
Phenol	REPORTED						0.1	0.1	0.1			5/7	Grab
	PERMIT CONDITION											5/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	7 7 | 1 1 | 0 2	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Henry E. Rassi

EPA Form 3320-1 (10-72)

PAGE OF

NWT 001044

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
NT	2116	002			

REPORTING PERIOD: FROM (20-21) YEAR 77 (22-23) MO 09 (24-25) DAY 30 TO (26-27) YEAR 77 (28-29) MO 10 (30-31) DAY 31

3. Specify the number of analyzed samples that exceed the maximum *(and or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "___ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-46) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
flow	REPORTED	0			gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi, Henry E.	Chemist	77/11/02	
LAST FIRST MI	TITLE	YEAR MO DAY	

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Rassi
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE OF

NWT 001045

YEAR	MO	DAY

YEAR	MO	DAY

6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	500	500	500	gpd		-					5/7	est
	PERMIT CONDITION	~~51~~	~~52~~	~~52~~								5/7	est
Temperture	REPORTED	52	52	52	°F							5/7	Grab
	PERMIT CONDITION											5/7	Grab
pH	REPORTED	6.8	6.8	6.8								5/7	Grab
	PERMIT CONDITION											5/7	Grab
Oil & Grease	REPORTED						2.0	2.0	2.0			1/7	Comp
	PERMIT CONDITION											1/7	Comp
Phenol	REPORTED						0.1	0.1	0.1			5/7	Grab
	PERMIT CONDITION											5/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE		
Rassi Henry E	Chemist	77	11	02
LAST FIRST MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Rassi
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE OF

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
	[illegible]	002			

REPORTING PERIOD: FROM (20-21) YEAR 77 (22-23) MO 09 (24-25) DAY 30 TO (26-27) YEAR 77 (28-29) MO 11 (30-31) DAY 31

and MINIMUM are extreme values observed during the reporting period.

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "O".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "___ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER (32-37)		QUANTITY (3 card only) (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS (62-63)	NO. EX	CONCENTRATION (4 card only) (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS (62-63)	NO. EX	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
flow	REPORTED	0			gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE		
Rassi Henry E	Chemist	77	11	02
LAST FIRST MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E Rassi
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

NWT 001047

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2186-J	001			

REPORTING PERIOD: FROM 77 08 31 (YEAR MO DAY) TO 77 09 30 (YEAR MO DAY)

3. Specify the number of analyzed samples that exceed the maximum (*and, or minimum as appropriate*) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (*e.g., "3/7" is equivalent to 3 analyses performed every 7 days.*) If continuous enter "CONT."
5. Specify sample type ("*grab*" or "*___ hr. composite*") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER		QUANTITY (3 card only) MINIMUM	QUANTITY AVERAGE	QUANTITY MAXIMUM	QUANTITY UNITS	QUANTITY NO. EX	CONCENTRATION (4 card only) MINIMUM	CONCENTRATION AVERAGE	CONCENTRATION MAXIMUM	CONCENTRATION UNITS	CONCENTRATION NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	REPORTED	500	1125	2000	gpd							5/7	est
	PERMIT CONDITION											5/7	est
Temperture	REPORTED	60	58	55								5/7	Grab
	PERMIT CONDITION											5/7	Grab
pH	REPORTED	68	70	72								5/7	Grab
	PERMIT CONDITION											5/7	Grab
oil Grease	REPORTED						2.4	2.4	2.4			1/7	Comp
	PERMIT CONDITION							20.0	30 C			1/7	Comp
Phenol	REPORTED						0.1	0.1	0.1			5/7	Grab
	PERMIT CONDITION											5/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
Rassi Henry E (LAST FIRST MI)	Chemist (TITLE)	77 09 30 (YEAR MO DAY)

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Rassi
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) ORIGINAL PAGE OF

NWT 001048

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180-J	002			

REPORTING PERIOD: FROM (YEAR 77, MO 08, DAY 31) TO (YEAR 77, MO 09, DAY 30)

and "MINIMUM" are extreme values observed during the reporting period.

3. Specify the number of analyzed samples that exceed the maximum *(and, or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type (*"grab" or "___ hr. composite"*) as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER		(3 card only) QUANTITY MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX	(4 card only) CONCENTRATION MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
~~No~~ flow	REPORTED	-0-			gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	77 09 30	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*
LAST FIRST MI	TITLE	YEAR MO DAY	Henry E. Rassi SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) ORIGINAL PAGE OF

NWT 001049

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180-J	001			

REPORTING PERIOD: FROM (20-21) YEAR 77 (22-23) MO 08 (24-25) DAY 31 TO (26-27) YEAR 77 (28-29) MO 09 (30-31) DAY 30

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	500	1125	2000	gpd							5/7	est
	PERMIT CONDITION											5/7	est
Temperture	REPORTED	60	58	55								5/7	Grab
	PERMIT CONDITION											5/7	Grab
pH	REPORTED	68	70	72								5/7	Grab
	PERMIT CONDITION											5/7	Grab
Oil Grease	REPORTED						2.4	2.4	2.4			1/7	Comp
	PERMIT CONDITION							20.0	30.0			1/7	Comp
Phenol	REPORTED						0.1	0.1	0.1			5/7	Grab
	PERMIT CONDITION											5/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	77 09 30	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*
LAST FIRST MI	TITLE	YEAR MO DAY	Henry E. Rassi SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

ORIGINAL

PAGE OF

NWT 001050

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180-J	002			

REPORTING PERIOD: FROM (20-21) YEAR 77 (22-23) MO 08 (24-25) DAY 31 TO (26-27) YEAR 77 (28-29) MO 09 (30-31) DAY 30

and "MINIMUM" are extreme values observed during the reporting period.

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		*(3 card only)* QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	*(4 card only)* CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
~~Avg~~ flow	REPORTED	- 0 -			gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE		
Rassi Henry E	Chemist	77	09	30
LAST FIRST MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Rassi
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

ORIGINAL

PAGE OF

NWT 001051

PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
[illegible]	002			

REPORTING PERIOD: FROM (20-21 YEAR) 77 (22-23 MO) 07 (24-25 DAY) 31 TO (26-27 YEAR) 77 (28-29 MO) 08 (30-31 DAY) 31

AVERAGE is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "___ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		QUANTITY (3 card only) (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	(62-63) UNITS	NO. EX	CONCENTRATION (4 card only) (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	0			gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
Rassi Henry E	Chemist	77 07 13
LAST FIRST MI	TITLE	YEAR MO DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E Rassi

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE OF

NWT 001052

PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
2180-J	001			

REPORTING PERIOD FROM (20-21 YEAR 22-23 MO 24-25 DAY): 7 | 7 | 04 | 31 TO (26-27 YEAR 28-29 MO 30-31 DAY): 7 | 7 | 08 | 31

1. Enter the minimum, average, and maximum daily discharge quantity and units, and the minimum, average, and maximum daily concentration and units, for each parameter listed. Enter "NODI (Q)" or "NODI (C)" if there was no discharge during the reporting period.
2. If you monitor more than once per day, report the average of all measurements taken during the day in the "AVERAGE" column and the extreme value for the day in the "MAXIMUM" and "MINIMUM" columns unless otherwise specified in the permit. Leave blank if only one sample per day was taken. For bacterial results, enter the geometric mean in the "AVERAGE" column.
3. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "___ hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER (32-37)		QUANTITY (3 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO. EX (62-63)	CONCENTRATION (4 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Flow	REPORTED	500	666	1000	gpd							5/7	est
	PERMIT CONDITION											5/7	est
Temperature	REPORTED	70	70	71	°F							5/7	Grab
	PERMIT CONDITION											5/7	Grab
pH	REPORTED	7.1	7.1	7.1								5/7	Grab
	PERMIT CONDITION											5/7	Grab
Oil & Grease	REPORTED						2.6	2.6	2.6			1/7	COMP
	PERMIT CONDITION							20.0	30.0			1/7	COMP
Phenol	REPORTED						0.1	0.1	0.1			5/7	Grab
	PERMIT CONDITION											5/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
Rassi Henry E	Chemist	77 04 13
LAST FIRST MI	TITLE	YEAR MO DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Rassi

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE OF

NWT 001053

PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
[redacted] 0100-0	002			

REPORTING PERIOD: FROM (20-21) YEAR 77 (22-23) MO 07 (24-25) DAY 31 TO (26-27) YEAR 77 (28-29) MO 08 (30-31) DAY 31

business. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	0			gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	77 09 13	I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Henry E. Rassi

EPA Form 3320-1 (10-72)

PAGE OF

NWT 001054

[redacted]	2180 - J	001			
	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE

REPORTING PERIOD FROM (20-21) YEAR 77 (22-23) MO 07 (24-25) DAY 31 TO (26-27) YEAR 77 (28-29) MO 08 (30-31) DAY 31

1. Enter the minimum, average, and maximum daily discharge quantity and units as specified in the permit. If the permit specifies only a maximum, enter it in the "MAXIMUM" column. If the permit specifies only an average, enter it in the "AVERAGE" column.
2. Enter the minimum, average, and maximum daily discharge concentration and units as specified in the permit. If the permit specifies only a maximum, enter it in the "MAXIMUM" column. If the permit specifies only an average, enter it in the "AVERAGE" column. If the permit specifies neither a maximum nor an average, but does specify a minimum, enter the minimum in the "MINIMUM" column. "AVERAGE" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER (32-37)		QUANTITY (3 card only) (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	(62-63) UNITS	NO. EX	CONCENTRATION (4 card only) (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	(62-63) UNITS	NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	500	666	1000	gpd							5/7	est
	PERMIT CONDITION											5/7	est
Temperture	REPORTED	70	70	70	°F							5/7	Grab
	PERMIT CONDITION											5/7	Grab
pH	REPORTED	7.9	7.9	7.9								5/7	Grab
	PERMIT CONDITION											5/7	Grab
Oil & Grease	REPORTED						2.6	2.6	2.6			1/7	Comp
	PERMIT CONDITION							20.0	30.0			1/7	Comp
Phenol	REPORTED						0.1	0.1	0.1			5/7	Grab
	PERMIT CONDITION											5/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
Rassi Henry E	Chemist	77 09 13
LAST FIRST MI	TITLE	YEAR MO DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Rassi
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE OF

NWT 001055

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OK	2186 - J	CC1			

REPORTING PERIOD: FROM (20-21) YEAR 77, (22-23) MO 06, (24-25) DAY 30 TO (26-27) YEAR 77, (28-29) MO 07, (30-31) DAY 31

and "MINIMUM" are extreme values observed during the reporting period.

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	0			gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	YEAR 77 MO 08 DAY 09	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*
LAST FIRST MI	TITLE		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Henry E. Rassi

EPA Form 3320-1 (10-72) PAGE OF

NWT 001056

67	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
		(20-21) (22-23) (24-25)		(26-27) (28-29) (30-31)	

REPORTING PERIOD: FROM 77 04 30 (YEAR MO DAY) - TO 77 07 31 (YEAR MO DAY)

3. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "___ hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(82-377)

PARAMETER		(3 card only) QUANTITY (30-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (30-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-66) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	0			gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Russi Henry E	Chemist	77 08 09	
LAST FIRST MI	TITLE	YEAR MO DAY	

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E Russi
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE OF

NWT 001057

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OK	2180 - J	001			

REPORTING PERIOD: FROM (20-21) YEAR 77 (22-23) MO 06 (24-25) DAY 30 TO (26-27) YEAR 77 (28-29) MO 07 (30-31) DAY 31

"average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	(62-63) UNITS	NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	(62-63) UNITS	NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	0			gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	77 05 09	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Henry E. Rassi

EPA Form 3320-1 (10-72)

PAGE OF

NWT 001058

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE

REPORTING PERIOD: FROM (20-21) YEAR 71 (22-23) MO 02 (24-25) DAY 30 TO (26-27) YEAR 71 (28-29) MO 07 (30-31) DAY 31

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "O".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	(62-63) UNITS	NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	(62-63) UNITS	NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	0			gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	71 07 09	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*
LAST FIRST MI	TITLE	YEAR MO DAY	Henry E Rassi SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

NWT 001059

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2720 - J	001			

REPORTING PERIOD: FROM 71 05 31 (YEAR / MO / DAY) TO 71 06 30 (YEAR / MO / DAY)

and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "___ hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER		QUANTITY (3 card only) MINIMUM	QUANTITY AVERAGE	QUANTITY MAXIMUM	QUANTITY UNITS	NO. EX	CONCENTRATION (4 card only) MINIMUM	CONCENTRATION AVERAGE	CONCENTRATION MAXIMUM	CONCENTRATION UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow, in MGD	REPORTED	0		0	gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	71 07 15	
LAST FIRST MI	TITLE	YEAR MO DAY	

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Rassi

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE OF

NWT 001060

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
NWT	2180-J	02			

REPORTING PERIOD: FROM (20-21 YEAR) 77 (22-23 MO) 05 (24-25 DAY) 31 TO (26-27 YEAR) 77 (28-29 MO) 06 (30-31 DAY) 30

and "MINIMUM" are extreme values observed during the reporting period.

3. Specify the number of analyzed samples that exceed the maximum *(and, or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER (32-37)		QUANTITY (3 card only) MINIMUM (38-45)	QUANTITY AVERAGE (46-53)	QUANTITY MAXIMUM (54-61)	QUANTITY UNITS (62-63)	QUANTITY NO. EX	CONCENTRATION (4 card only) MINIMUM (38-45)	CONCENTRATION AVERAGE (46-53)	CONCENTRATION MAXIMUM (54-61)	CONCENTRATION UNITS (62-63)	CONCENTRATION NO. EX	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Flow	REPORTED	-		-	GPD								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	77 07 15	I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.
LAST FIRST MI	TITLE	YEAR MO DAY	Henry E. Rassi — SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE OF

NWT 001061

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2720-J	001			

REPORTING PERIOD: FROM (20-21) YEAR 77 (22-23) MO 05 (24-25) DAY 31 TO (26-27) YEAR 77 (28-29) MO 06 (30-31) DAY 30

1. Enter the minimum, average, and maximum daily discharge quantity and units as specified in the permit. If the parameter is not limited in the permit, enter "NR" in the "Reported" row for minimum, average, and maximum.
2. Enter the minimum, average, and maximum daily discharge concentration and units as specified in the permit. If the parameter is not limited in the permit, enter "NR" in the "Reported" row for minimum, average, and maximum. If the parameter is limited in the permit to a maximum or minimum, enter "NR" in the "Reported" row for the unspecified value. If no discharge occurred during the reporting period, enter "NO DISCHARGE" in the "Reported" row for the first parameter listed. If more than one outfall is listed in the permit, the permittee must specify the outfall being reported. Leave blank the "Reported" and "Permit Condition" rows for "AVERAGE" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-65) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow, In MGD	REPORTED	0 -		0 -	gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	77 07 15	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Henry E. Rassi

EPA Form 3320-1 (10-72)

PAGE OF

NWT 001062

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180-J	002			

REPORTING PERIOD: FROM (20-21) YEAR 77 (22-23) MO 05 (24-25) DAY 31 TO (26-27) YEAR 77 (28-29) MO 06 (30-31) DAY 30

1. Enter the minimum and maximum as well as the average of all daily determinations made during the reporting period. If only one determination was made during the period, enter that value under "AVERAGE".
2. Enter the units used for the reported and permit condition values. If the parameter is expressed in concentration rather than quantity, enter "MG/L" under "UNITS". If no discharge occurred during the reporting period, the words "NO DISCHARGE" should be entered in the first column of this form. The "AVERAGE" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "O".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	-0-		-0-	gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E.	Chemist	77 07 15	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Henry E. Rassi

EPA Form 3320-1 (10-72)

PAGE OF

NWT 001063

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OK	2180 - J	001			

REPORTING PERIOD: FROM (20-21) YEAR 77 (22-23) MO 04 (24-25) DAY 30 TO (26-27) YEAR 77 (28-29) MO 05 (30-31) DAY 31

and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "___ hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	- 0 -	350	600								5/7	est
	PERMIT CONDITION											5/7	e.T
Temperture	REPORTED	69	71	72								5/7	Grab
	PERMIT CONDITION											5/7	Grab
pH	REPORTED	8.0	8.4	89								5/7	Grab
	PERMIT CONDITION	6.0		9.0								5/7	Grab
Oil & Grease	REPORTED						2.1	2.1	2.1			1/7	Comp
	PERMIT CONDITION							20.0	30.0			1/7	Comp
Phenol	REPORTED						0.1	0.1	0.1			5/7	Grab
	PERMIT CONDITION											5/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	77 05 14	I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.
LAST FIRST MI	TITLE	YEAR MO DAY	Henry E. Rassi SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE 1 OF

NWT 001064

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
NT	4180	002			

REPORTING PERIOD: FROM (20-21) YEAR 71 (22-23) MO 04 (24-25) DAY 30 TO (26-27) YEAR 71 (28-29) MO 05 (30-31) DAY 31

and "MINIMUM" are extreme values observed during the reporting period.

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	0		0	gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
1	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
Rassi Henry EARL	Chemist	71 05 14
LAST FIRST MI	TITLE	YEAR MO DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE OF

NWT 001065

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	218 - J	001			

REPORTING PERIOD: FROM (20-21) YEAR 77 (22-23) MO 04 (24-25) DAY 30 TO (26-27) YEAR 77 (28-29) MO 05 (30-31) DAY 31

and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "___ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	-0-	350	600								5/7	est
	PERMIT CONDITION											5/7	est
Temperture	REPORTED	69	71	72								5/7	Grab
	PERMIT CONDITION											5/7	Grab
pH	REPORTED	8.0	8.4	8.9								5/7	Grab
	PERMIT CONDITION	6.0		9.0								5/7	Grab
Oil & Grease	REPORTED						2.1	2.1	2.1			1/7	Comp
	PERMIT CONDITION							20.0	30.0			1/7	Comp
Phenol	REPORTED						0.1	0.1	0.1			5/7	Grab
	PERMIT CONDITION											5/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	77 05 14	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Henry E. Rassi

EPA Form 3320-1 (10-72) PAGE OF

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
NT	2180	002			

REPORTING PERIOD: FROM (20-21) YEAR 71 (22-23) MO 04 (24-25) DAY 30 TO (26-27) YEAR 71 (28-29) MO 05 (30-31) DAY 31

and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER (32-37)		QUANTITY *(3 card only)*					CONCENTRATION *(4 card only)*					FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO. EX (62-63)	MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO. EX (62-63)		
Flow	REPORTED	0		0	gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE		
Rassi Henry EARL	Chemist	YEAR 71	MO 05	DAY 14
LAST FIRST MI	TITLE			

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE OF

NWT 001067

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180 - J	001			

REPORTING PERIOD FROM (20-21 YEAR) 77 (22-23 MO) 03 (24-25 DAY) 31 TO (26-27 YEAR) 77 (28-29 MO) 04 (30-31 DAY) 30

3. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "__ hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER		QUANTITY (7 card only) MINIMUM (35-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS (62-65)	NO. EX	CONCENTRATION (4 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS (62-65)	NO. EX	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-72)
Flow	REPORTED	-0-	133	250	gpd							5/7	est
	PERMIT CONDITION											5/7	est
Temperture	REPORTED	65	67	70								5/7	Grab
	PERMIT CONDITION											5/7	Grab
pH.	REPORTED	8.0	8.1	8.3								5/7	Grab
	PERMIT CONDITION	6.0		9.0								5/7	Grab
O.I & Grease	REPORTED	~~2.1~~	~~2.15~~	~~2.2~~			2.1	2.1	2.2			1/7	Comp
	PERMIT CONDITION							20.0	30.0			1/7	Comp
Phenol	REPORTED	~~0.1~~	~~0.1~~	~~0.1~~			0.1	0.1	0.1			5/7	Grab
	PERMIT CONDITION											5/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rossi Henry E (LAST FIRST MI)	Chemist (TITLE)	77 05 13 (YEAR MO DAY)	I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E Rossi
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) ORIGINAL PAGE OF

NWT 001068

ST | PERMIT NUMBER | DIS | SIC | LATITUDE | LONGITUDE

REPORTING PERIOD FROM (20-21 YEAR, 22-23 MO, 24-25 DAY) 77 03 31 TO (26-27 YEAR, 28-29 MO, 30-31 DAY) 77 04 30

3. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "__ hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER (32-37)		QUANTITY (3 card only) (38-53)					CONCENTRATION (4 card only) (38-53)					FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		MINIMUM (46-53)	AVERAGE (54-61)	MAXIMUM (54-61)	UNITS (62-63)	NO. EX	MINIMUM (46-53)	AVERAGE (54-61)	MAXIMUM (54-61)	UNITS (62-63)	NO. EX		
Flow	REPORTED	-0-		-0-	gpd				--				
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	77 05 13	
LAST FIRST MI	TITLE	YEAR MO DAY	

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Henry E. Rassi
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) ORIGINAL PAGE OF

NWT 001069

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180 - J	001			

REPORTING PERIOD. FROM (20-21) YEAR 77 (22-23) MO 03 (24-25) DAY 31 TO (26-27) YEAR 77 (28-29) MO 04 (30-31) DAY 30

In the units specified for each parameter as appropriate. Do not enter values in boxes containing asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "O".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "___ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	-0-	133	250	gpd							5/7	est
	PERMIT CONDITION											5/7	est
Temperture	REPORTED	65	67	70								5/7	Grab
	PERMIT CONDITION											5/7	Grab
pH.	REPORTED	8.0	8.1	8.3								5/7	Grab
	PERMIT CONDITION	6.0		9.0								5/7	Grab
Oil & Grease	REPORTED	~~2.1~~	~~2.15~~	~~2.2~~			2.1	2.1	2.2			1/7	Comp
	PERMIT CONDITION							20.0	30.0			1/7	Comp
Phenol	REPORTED	~~0.1~~	~~0.1~~	~~0.1~~			0.1	0.1	0.1			5/7	Grab
	PERMIT CONDITION											5/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	77 05 13	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Henry E. Rassi

EPA Form 3320-1 (10-72) ORIGINAL PAGE OF

NWT 001070

ST | PERMIT NUMBER: 216 - 0 | DIS | SIC | LATITUDE | LONGITUDE

REPORTING PERIOD: FROM (20-21) YEAR 77 (22-23) MO 03 (24-25) DAY 31 TO (26-27) YEAR 77 (28-29) MO 04 (30-31) DAY 30

and MINIMUM are extreme values observed during the reporting period.

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "O".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER (32-37)		QUANTITY (3 card only) (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	(62-63) UNITS	NO. EX	CONCENTRATION (4 card only) (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	(62-63) UNITS	NO. EX	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Flow	REPORTED	-0-		-0-	gpd				---				
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	77 05 13	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Henry E. Rassi

EPA Form 3320-1 (10-72)

ORIGINAL

PAGE OF

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE

REPORTING PERIOD: FROM (20-21) YEAR 7|6 (22-23) MO 1|2 (24-25) DAY 3|1 TO (26-27) YEAR 7|7 (28-29) MO 0|1 (30-31) DAY 3|1

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37)

PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-65) FREQUENCY OF ANALYSIS	(66-71) SAMPLE TYPE
Flow	REPORTED	- 0 -		- 0 -	gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	7|7 (YEAR) 0|2 (MO) 1|4 (DAY)	
LAST FIRST MI	TITLE		

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

A Form 3320-1 (10-72)

PAGE OF

NWT 001072

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	21[illegible]0 J	002			

REPORTING PERIOD: FROM (20-21) YEAR 76 (22-23) MO 12 (24-28) DAY 31 TO (26-27) YEAR 77 (28-29) MO 01 (30-31) DAY 31

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (39-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (39-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	-0-		-0-									
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E.	Chemist	77 01 14	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE OF

NWT 001073

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE

REPORTING PERIOD: FROM (20-21) YEAR 76 (22-23) MO 12 (24-25) DAY 31 TO (26-27) YEAR 77 (28-29) MO 01 (30-31) DAY 31

1. Enter the reporting period dates.
2. "MINIMUM" and "MAXIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "O".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	- 0 -		- 0 -	gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	77 01 14	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

A Form 3320-1 (10-72)

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NWT 001074

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180 J	002			

REPORTING PERIOD: FROM (20-21) YEAR 76 (22-23) MO 12 (24-25) DAY 31 TO (26-27) YEAR 77 (28-29) MO 01 (30-31) DAY 31

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "O".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	-0-		-0-									
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E.	Chemist	77 01 14	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Carol W. Rudt

EPA Form 3320-1 (10-72)

PAGE OF

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180 - J	001			

REPORTING PERIOD: FROM (20-21) YEAR 76 (22-23) MO 11 (24-25) DAY 30 TO (26-27) YEAR 76 (28-29) MO 12 (30-31) DAY 31

asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "O".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37)

PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-69) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	-0-	412	1000	gpd							5/7	Est
	PERMIT CONDITION											5/7	Est
Temperture	REPORTED	41	47	54	°F							5/7	Grab
	PERMIT CONDITION											5/7	Grab
pH	REPORTED	7.2	7.5	7.8								5/7	Grab
	PERMIT CONDITION	6.0		9.0								5/7	Grab
oil - Grease	REPORTED						29	2[illegible]	2[illegible]			1/7	Comp
	PERMIT CONDITION							20	30			1/7	Comp
Phenols	REPORTED						0.4	0.6	0.8			5/7	Grab
	PERMIT CONDITION											5/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
Rassi Henry E	Chemist	77 01 15
LAST FIRST MI	TITLE	YEAR MO DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE OF

NWT 001076

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180 - J	002			

REPORTING PERIOD: FROM (20-21) YEAR 76 (22-23) MO 11 (24-25) DAY 31 TO (26-27) YEAR 76 (28-29) MO 12 (30-31) DAY 31

and "MINIMUM" are extreme values observed during the reporting period.

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "O".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "___ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	-0-			gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	79 01 13	
LAST FIRST MI	TITLE	YEAR MO DAY	

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Paul Rassi

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE OF

NWT 001077

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180 - J	001			

REPORTING PERIOD: FROM (20-21) YEAR 76 (22-23) MO 11 (24-25) DAY 30 TO (26-27) YEAR 76 (28-29) MO 12 (30-31) DAY 31

1. Enter the minimum, average, and maximum daily discharge quantities and units as specified in the permit, and the number of exceptions to the permit conditions during the reporting period. Enter "-0-" if none.
2. Enter the minimum, average, and maximum daily discharge concentrations and units as specified in the permit, and the number of exceptions to the permit conditions during the reporting period. Enter "-0-" if none. Results of all analyses shall be reported, unless otherwise specified in the permit, even if the frequency of analysis is not increased. Use the proper number of significant figures. Limit data reported to two significant figures except for data reported in engineering units. Report actual values for flow rates and percentages. Report five significant figures for pH. Report the monthly average value in the space provided for daily maximum, and indicate by use of appropriate asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "O".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	(62-63) UNITS	NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	(62-63) UNITS	NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	-0-	412	1000	gpd							5/7	EST
	PERMIT CONDITION											5/7	EST
Temperture	REPORTED	41	47	54	°F							5/7	Grab
	PERMIT CONDITION											5/7	Grab
pH	REPORTED	7.2	7.5	7.8								5/7	Grab
	PERMIT CONDITION	6.0		9.0								5/7	Grab
oil - Grease	REPORTED						2.9	2.9	2.9			1/7	Comp
	PERMIT CONDITION							20.0	30.0			1/7	Comp
Phenols	REPORTED						0.4	0.6	0.8			5/7	Grab
	PERMIT CONDITION											5/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
Russi Henry E	Chemist	77 01 13
LAST FIRST MI	TITLE	YEAR MO DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Paul Smith

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE OF

NWT 001078

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180 - J	002			

REPORTING PERIOD: FROM (20-21) YEAR 76 (22-23) MO 11 (24-25) DAY 31 TO (26-27) YEAR 76 (28-29) MO 12 (30-31) DAY 31

1. Enter the minimum, average, and maximum daily discharge quantity and units as specified in the permit. If the discharge is continuous, enter the minimum, average, and maximum daily discharge concentration and units as specified in the permit. If the discharge is neither continuous nor daily, enter the minimum, average, and maximum discharge concentration and units as specified in the permit during the period of discharge. Enter "NA" in the "No. Ex." column.
2. Under "AVERAGE" enter the long term average of daily discharges over the reporting period. For quantity, this is the total quantity discharged during the reporting period divided by the number of days in the period that the facility was operating. For concentration, this is the sum of all daily concentrations measured during the reporting period divided by the number of daily measurements made during the reporting period. Flow rate measurements of instantaneous maximum and average discharge are not required unless specified in the permit. Leave blank if not applicable. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER (32-37)		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	(62-63) UNITS	NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	(62-63) UNITS	NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	-0-			gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	7 17 01 1 13	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE OF

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180 - J	001			

REPORTING PERIOD: FROM 76 10 31 TO 76 11 30

	YEAR	MO	DAY
FROM	76	10	31
TO	76	11	30

3. Specify the number of analyzed samples that exceed the maximum (and, or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type "grab" or "___ hr. composite" as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER		QUANTITY (3 card only) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX	CONCENTRATION (4 card only) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	REPORTED	- 0 -	661	1000	GPD							5/7	Cont
	PERMIT CONDITION											1/7	Cont
Temperture	REPORTED	54	58		°F							1/7	Grab
	PERMIT CONDITION											1/7	Grab
pH	REPORTED	7	7.2	8.1								1/7	Grab
	PERMIT CONDITION	6.0		9.0								1/7	Grab
Oil & Grease	REPORTED						[illegible]	2.7	3.1	mg/L		1/7	Comp
	PERMIT CONDITION							200	300			1/7	Comp
Phenol	REPORTED											1/7	Grab
	PERMIT CONDITION						[illegible]	0.5	[illegible]			1/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
Rust, Henry E	Chemist	76 11 30
LAST, FIRST, MI	TITLE	YEAR MO DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Carl W. Smith

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE OF

NWT 001080

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OK	2182-J	002			

REPORTING PERIOD: FROM 76 10 31 (YEAR MO DAY) TO 76 11 30 (YEAR MO DAY)

asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.

3. Specify the number of analyzed samples that exceed the maximum (and or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "__ hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER		(3 card only) QUANTITY MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX	(4 card only) CONCENTRATION MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	REPORTED	-			GPD								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	76 12 06	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE OF

NWT 001081

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180 - J	001			

REPORTING PERIOD: FROM (20-21) YEAR 76 (22-23) MO 10 (24-25) DAY 31 TO (26-27) YEAR 76 (28-29) MO 11 (30-31) DAY 30

and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "O".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER (32-37)		QUANTITY (3 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS (62-63)	NO. EX	CONCENTRATION (4 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS (62-63)	NO. EX	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Flow	REPORTED	-0-	661	1000	GPD							5/7	CT
	PERMIT CONDITION											5/7	CT
Temperature	REPORTED	54	58	6	°F							5/7	Grab
	PERMIT CONDITION											5/7	Grab
pH	REPORTED	7.1	7.7	8.6								5/7	Grab
	PERMIT CONDITION	6.0		9.0								5/7	Grab
Oil Grease	REPORTED						2.6	2.7	2.9	mg/L		1/7	Comp
	PERMIT CONDITION							20.0	30.0			1/7	Comp
Phenol	REPORTED											5/7	Grab
	PERMIT CONDITION						0.4	0.5	0.6			5/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
Rossi Henry C	Chemist	76 11 09
LAST FIRST MI	TITLE	YEAR MO DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Carl W. Smith

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE OF

NWT 001082

ST	PERMIT NUMBER	DIS	LATITUDE	LONGITUDE
OR	2180-J	002		

REPORTING PERIOD: FROM (20-21) YEAR 76 (22-23) MO 11 (24-25) DAY 01 TO (26-27) YEAR 76 (28-29) MO 11 (30-31) DAY 30

asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	(62-63) UNITS	NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	(62-63) UNITS	NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	0			gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	76 12 06	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE OF

NWT 001083

OR / ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
	2160 - ✓	001			

REPORTING PERIOD: FROM (YEAR 74, MO 09, DAY 30) TO (YEAR 74, MO 10, DAY 31)

3. Specify the number of analyzed samples that exceed the maximum (and or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "__ hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER		QUANTITY (3 card only) MINIMUM	QUANTITY AVERAGE	QUANTITY MAXIMUM	QUANTITY UNITS	NO. EX	CONCENTRATION (4 card only) MINIMUM	CONCENTRATION AVERAGE	CONCENTRATION MAXIMUM	CONCENTRATION UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	REPORTED	- 0 -	90	100	MGD							5/7	EST
	PERMIT CONDITION											5/7	EST
Temperture	REPORTED	59	65	70	oF							5/7	Grab
	PERMIT CONDITION											5/7	Grab
pH	REPORTED	7.5	7.9	12								5/7	Grab
	PERMIT CONDITION											5/7	Grab
Oil & Grease	REPORTED						2.2	2.3	2.6			1/7	Comp
	PERMIT CONDITION											1/7	Comp
Phenol	REPORTED						0.6	0.6	0.6			5/7	Grab
	PERMIT CONDITION											5/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Bassi Henry E	Chemist	74 11 12	I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Paul W. Ruth

EPA Form 3320-1 (10-72) PAGE OF

NWT 001084

OR	2150 - J				
ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE

REPORTING PERIOD FROM (15-21) YEAR 76 MO 04 DAY 01 (22-23) (24-25) TO (26-27) YEAR 76 MO 10 DAY 31 (28-29) (30-31)

and "MINIMUM" the extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to "three analyses performed every seven days"). If continuous enter "CONT."
5. Specify sample type ("grab" or "24 hr. composite") as applicable. If frequency was continuous, enter "CONT".
6. Appropriate signature is required on Letter of this form.
7. Retain carbon and remain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER		QUANTITY (3 card only) (39-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	CONCENTRATION (4 card only) (39-45) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	REPORTED	- 0 -			gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE		
Rassi Henry E	Chemist	76	11	12
LAST FIRST MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Paul W. Keith
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE OF

NWT 001085

OR ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
	2160 - J	001			

REPORTING PERIOD: FROM (20-21) YEAR 76 (22-23) MO 09 (24-25) DAY 30 TO (26-27) YEAR 76 (28-29) MO 11 (30-31) DAY 31

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "O".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER (32-37)		QUANTITY (3 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS (62-63)	NO. EX	CONCENTRATION (4 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS (62-63)	NO. EX	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Flow	REPORTED	-0-	90	100	GPD							5/7	Calc
	PERMIT CONDITION											5/7	Calc
Temperture	REPORTED	59	65	76	°F							5/7	Grab
	PERMIT CONDITION											5/7	Grab
pH	REPORTED	7.8	7.9	8.0								5/7	Grab
	PERMIT CONDITION											5/7	Grab
Oil & Grease	REPORTED						2.2	2.3	2.6			1/7	Comp
	PERMIT CONDITION											1/7	Comp
Phenol	REPORTED						0.6	0.6	0.6			5/7	Grab
	PERMIT CONDITION											5/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rossi Henry E	Chemist	76 11 12	I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Paul W Ruth

EPA Form 3320-1 (10-72) PAGE OF

NWT 001086

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2150 - J	002			

REPORTING PERIOD: FROM (20-21) YEAR 76 (22-23) MO 04 (24-25) DAY 30 TO (26-27) YEAR 76 (28-29) MO 10 (30-31) DAY 31

and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER		(3 card only) QUANTITY (39-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	(62-63) UNITS	NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX	(64-69) FREQUENCY OF ANALYSIS	(70-71) SAMPLE TYPE
Flow	REPORTED	- 0 -			gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE		
Rassi Henry E	Chemist	76	11	12
LAST FIRST MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Carol W. Heath
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE OF

NWT 001087

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180-J	002			

REPORTING PERIOD: FROM (20-21) YEAR 76 (22-23) MO 07 (24-25) DAY 31 TO (26-27) YEAR 76 (28-29) MO 08 (30-31) DAY 31

and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "__ hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER (32-37)		QUANTITY (3 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO. EX (62-63)	CONCENTRATION (4 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Flow	REPORTED	-0-	-0-	-0-	gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
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	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	76 09 14	
LAST FIRST MI	TITLE	YEAR MO DAY	

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Carl Smith
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE OF

NWT 001088

ST: OR | PERMIT NUMBER: 2180-J | DIS: 001 | SIC: | LATITUDE: | LONGITUDE:

REPORTING PERIOD: FROM (20-21 YEAR 22-23 MO 24-25 DAY) 76 07 31 TO (26-27 YEAR 28-29 MO 30-31 DAY) 76 08 31

and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses, No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "__ hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER (32-37)		QUANTITY (3 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS (62-63)	NO EX (64)	CONCENTRATION (4 card only) MINIMUM (33-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS (62-63)	NO. EX (64)	FREQUENCY OF ANALYSIS (65-68)	SAMPLE TYPE (69-70)
Flow	REPORTED	0	0	0	gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
1	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
LAST Rossi FIRST Henry MI E.	TITLE Chemist	YEAR 76 MO 09 DAY 14

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Paul Smith
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE OF

NWT 001089

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180-J	002			

REPORTING PERIOD: FROM (20-21) YEAR 76, (22-23) MO 07, (24-25) DAY 31 TO (26-27) YEAR 76, (28-29) MO 08, (30-31) DAY 31

1. Enter the minimum, average, and maximum daily discharge quantity and units as specified in the permit. If the discharge is continuous, enter the minimum, average, and maximum daily concentration and units as specified in the permit.
2. Enter the number of samples for the reporting period. If only one sample was taken, enter "1" in the "AVERAGE" column. If no discharge occurred during the reporting period, enter "NODI (Q)" in the "AVERAGE" column. If the parameter is not applicable, enter "NA" in the "AVERAGE" column. If only one sample was taken, enter the same value in the "AVERAGE" and "MAXIMUM" columns unless more than one analysis was performed, in which case the "AVERAGE" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		*(3 card only)* QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	*(4 card only)* CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	-0-	-0-	-0-	gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	76 09 14	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

NWT 001090

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180-J	001			

REPORTING PERIOD: FROM (20-21) YEAR 76 (22-23) MO 07 (24-25) DAY 31 TO (26-27) YEAR 76 (28-29) MO 08 (30-31) DAY 31

and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., *"3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type (*"grab" or "__ hr. composite"*) as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	(62-63) UNITS	NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	(62-63) UNITS	NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	0	0	0	gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE		
LAST Rassi FIRST Henry MI E.	Chemist TITLE	76 YEAR	09 MO	14 DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Paul Huth
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE . OF

NWT 001091

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OK	2186-U	001			

REPORTING PERIOD: FROM 76 05 31 (YEAR MO DAY) TO 76 07 31 (YEAR MO DAY)

and "MAXIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum (and or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "__ hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER		(3 card only) QUANTITY MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX	(4 card only) CONCENTRATION MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	REPORTED	-0-	-0-	-0-	gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
1	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry Earl	Chemist	76 08 04	
LAST FIRST MI	TITLE	YEAR MO DAY	

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE ___ OF ___

NWT 001092

OR	2120-J	002			
ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE

REPORTING PERIOD FROM (20-21) 76 (22-23) 06 (24-25) 31 (YEAR MO DAY) TO (26-27) 76 (28-29) 07 (30-31) 31 (YEAR MO DAY)

... and maximum values under "QUANTITY" and "CONCENTRATION" in the units specified for each parameter as appropriate. Do not enter values in boxes containing asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "O".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "___ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER (32-37)		QUANTITY (3 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO. EX (62-63)	CONCENTRATION (4 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Flow	REPORTED	-0-	-0-	-0-	gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
1	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
Rassi Henry Earl (LAST FIRST MI)	Chemist (TITLE)	74 08 04 (YEAR MO DAY)

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

[signature]
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE ___ OF ___

NWT 001093

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OK	2186-O	001			

REPORTING PERIOD: FROM (20-21) YEAR 76 (22-23) MO 06 (24-25) DAY 31 TO (26-27) YEAR 76 (28-29) MO 07 (30-31) DAY 31

1. Enter the minimum, average, and maximum daily discharge quantities and units as specified in the permit, for each parameter listed. Enter "-0-" if none is discharged.
2. Enter the minimum, average, and maximum concentrations and units as specified in the permit, for each parameter listed. Enter "-0-" if none is discharged. "AVERAGE" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum (*and/or minimum as appropriate*) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (*e.g., "3/7" is equivalent to 3 analyses performed every 7 days.*) If continuous enter "CONT."
5. Specify sample type (*"grab" or "__ hr. composite"*) as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER (32-37)		QUANTITY (3 card only) MINIMUM (38-45)	QUANTITY AVERAGE (46-53)	QUANTITY MAXIMUM (54-61)	UNITS (62-63)	NO. EX	CONCENTRATION (4 card only) MINIMUM (38-45)	CONCENTRATION AVERAGE (46-53)	CONCENTRATION MAXIMUM (54-61)	UNITS (62-63)	NO. EX	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Flow	REPORTED	-0-	-0-	-0-	gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry Earl	Chemist	76 08 04	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE OF

NWT 001094

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180-J	002			

REPORTING PERIOD: FROM (20-21) YEAR 76 (22-23) MO 06 (24-25) DAY 31 TO (26-27) YEAR 76 (28-29) MO 07 (30-31) DAY 31

1. Enter the average and maximum values under "QUANTITY" and "CONCENTRATION" in the units specified for each parameter as appropriate. Do not enter values in boxes containing asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	-0-	-0-	-0-	gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry Carl	Chemist	71 08 04	
LAST FIRST MI	TITLE	YEAR MO DAY	

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE OF

NWT 001095

(2-3) ST: OR

(4-16) PERMIT NUMBER: 2180-J

(17-19) DIS: 001

SIC:

LATITUDE / LONGITUDE:

REPORTING PERIOD: FROM (20-21) YEAR 76 (22-23) MO 05 (24-25) DAY 31 TO (26-27) YEAR 76 (28-29) MO 06 (30-31) DAY 30

1. Enter reported minimum, average and maximum values under "QUANTITY" and "CONCENTRATION" in the units specified for each parameter as appropriate. Do not enter values in boxes containing asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum (*and/or minimum as appropriate*) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (*e.g., "3/7" is equivalent to 3 analyses performed every 7 days.*) If continuous enter "CONT."
5. Specify sample type (*"grab" or "___ hr. composite"*) as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

cc RLS 7-22-76

(32-37) PARAMETER

PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	(62-63) UNITS	NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	0	128	1000	gpd							5/7	EST
	PERMIT CONDITION											5/7	EST
Temperture	REPORTED	68	71	79	°F.							5/7	Grab
	PERMIT CONDITION											5/7	Grab
pH	REPORTED	7.3	7.5	7.9								5/7	Grab
	PERMIT CONDITION											5/7	Grab
Oil & Grease	REPORTED						2.3	2.4	2.5			1/7	Comp
	PERMIT CONDITION											1/7	Comp
Phenol	REPORTED						0.6	0.6	0.6			5/7	Grab
	PERMIT CONDITION											5/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
Rassi Henry E.	Chemist	76 07 15
LAST FIRST MI	TITLE	YEAR MO DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Paul W Rath

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72) PAGE ___ OF ___

NWT 001096

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180-J	002			

REPORTING PERIOD: FROM 76 05 31 (YEAR MO DAY) TO 76 06 30 (YEAR MO DAY)

in the units specified for each parameter as appropriate. Do not enter values in boxes containing asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.

3. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex.". If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "___ hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER		QUANTITY (3 card only) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX	CONCENTRATION (4 card only) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	REPORTED	0			gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER (LAST, FIRST, MI)	TITLE OF THE OFFICER (TITLE)	DATE (YEAR MO DAY)	
Rassi Henry E	Chemist	76 07 15	I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate. Paul W Seth — SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE ___ OF ___

NWT 001097

(2-3) ST	(4-16) PERMIT NUMBER	(17-19) DIS	SIC	LATITUDE	LONGITUDE
OR	2180-J	007			

REPORTING PERIOD: FROM (20-21) YEAR 76 (22-23) MO 05 (24-25) DAY 31 TO (26-27) YEAR 76 (28-29) MO 06 (30-31) DAY 30

1. Enter information in the units specified for each parameter as appropriate. Do not enter values in boxes containing asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum *(and or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "O".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("Grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) (38-45) QUANTITY MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) (38-45) CONCENTRATION MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	O			gpd								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
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	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	76 07 15	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Paul W. Fielth

EPA Form 3320-1 (10-72)

PAGE OF

(2-3)	(4-16)	(17-19)			
OR	2180-J	001			
ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE

REPORTING PERIOD: FROM (20-21) (22-23) (24-25) 76 05 31 (YEAR MO DAY) TO (26-27) (28-29) (30-31) 76 06 30 (YEAR MO DAY)

2. Enter reported minimum, average and maximum values under "QUANTITY" and "CONCENTRATION" in the units specified for each parameter as appropriate. Do not enter values in boxes containing asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "O".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "___ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

cc RLS
7-22-76

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	0	158	1000	gpd							5/7	EST
	PERMIT CONDITION											5/7	EST
Temperture	REPORTED	68	71	79	°F							5/7	Grab
	PERMIT CONDITION											5/7	Grab
pH	REPORTED	7.3	7.5	7.9								5/7	Grab
	PERMIT CONDITION											5/7	Grab
Oil & Grease	REPORTED						2.3	2.4	2.5			1/7	Comp
	PERMIT CONDITION											1/7	Comp
Phenol	REPORTED						0.6	0.6 ~~2.4~~	0.6			5/7	Grab
	PERMIT CONDITION											5/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
Rassi Henry E.	Chemist	76 07 15
LAST FIRST MI	TITLE	YEAR MO DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Paul W. Goth
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE OF

NWT 001099

PARAMETER		QUANTITY (if const only)				NO. EX	CONCENTRATION (if const only)				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		MINIMUM	AVERAGE	MAXIMUM	UNITS		MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	REPORTED	100	1110	6000	gpd							5/7	EST
	PERMIT CONDITION											5/7	EST
Temperature	REPORTED	57	63	79	°F							5/7	Grab
	PERMIT CONDITION											5/7	Grab
pH	REPORTED	6.9	7.0	7.2								5/7	Grab
	PERMIT CONDITION											5/7	Grab
Oil & Grease	REPORTED						2.0	2.5	2.6	mg/l		1/7	Comp
	PERMIT CONDITION											1/7	Comp
Phenol	REPORTED						0.2	0.4	0.6	mg/l		1/7	Grab
	PERMIT CONDITION											1/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Ruth Carl W	Cit Supt	YEAR MO DAY	
LAST FIRST MI	TITLE		

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Carl W. Ruth

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-78)

NWT 001100

	QUANTITY					CONCENTRATION (4 card only)						
	MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX	MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
REPORTED	0			gpd								
PERMIT CONDITION												
REPORTED												
PERMIT CONDITION												

Flow

1

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E	Chemist	76 05 10	
LAST FIRST MI	TITLE	YEAR MO DAY	

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Paul W. Smith

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

ORIGINAL

PAGE 2 OF 2

NWT 001101

PARAMETER		QUANTITY (3 card only) (33-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	CONCENTRATION (4 card only) (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	REPORTED	100	1110	6000	gpd							5/7	EST
	PERMIT CONDITION											5/7	EST
Temperature	REPORTED	57	63	79	°F							5/7	Grab
	PERMIT CONDITION											5/7	Grab
pH	REPORTED	6.9	7.0	7.2								5/7	Grab
	PERMIT CONDITION											5/7	Grab
Oil & Grease	REPORTED						2.0	2.5	2.6	mg/l		1/7	Comp
	PERMIT CONDITION											1/7	Comp
Phenol	REPORTED						0.2	0.4	0.6	mg/l		5/7	Grab
	PERMIT CONDITION											5/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE		
Guth C. Paul W.	Pit Supt.			
LAST FIRST MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Paul W. Guth
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

Flow.

	QUANTITY (39-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	CONCENTRATION (4 card only) (39-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
REPORTED	0			gpd								
PERMIT CONDITION												
REPORTED												
PERMIT CONDITION												
REPORTED												
PERMIT CONDITION												
REPORTED												
PERMIT CONDITION												
REPORTED												
PERMIT CONDITION												
REPORTED												
PERMIT CONDITION												
REPORTED												
PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER AND TITLE

Rassi Henry E. Chemist
LAST

DATE: YEAR 76 MO 05 DAY 10

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Paul W. Guth
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-73)

ORIGINAL.

NWT 001103

LATITUDE | LONGITUDE

REPORTING PERIOD FROM 76 03 31 (YEAR MO DAY) TO 76 04 30 (YEAR MO DAY)

4. Specify frequency of analysis for each parameter as No. analyses/No. days (e.g. "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "___ hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER		QUANTITY MINIMUM	QUANTITY AVERAGE	QUANTITY MAXIMUM	UNITS	NO. EX	CONCENTRATION MINIMUM	CONCENTRATION AVERAGE	CONCENTRATION MAXIMUM	UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	REPORTED	200	4071	10000	gpd							5/7	EST
	PERMIT CONDITION											5/7	EST
Temperature	REPORTED	48	~~55~~	61	°F							5/7	Grab
	PERMIT CONDITION											5/7	Grab
pH	REPORTED	6.9	[illegible]	6.7								5/7	Grab
	PERMIT CONDITION	6.0	–	1								5/7	Grab
Oil & Grease	REPORTED						2.0	2.2	3.1	mg/L		1/7	Comp
	PERMIT CONDITION											1/7	Comp
Phenol	REPORTED						0.1	0.2	0.3	mg/L		5/7	Grab
	PERMIT CONDITION											5/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rossi Henry E (LAST FIRST MI)	Chemist (TITLE)	76 05 11 (YEAR MO DAY)	

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Paul W. Huth
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

NWT 001104

PERMIT NUMBER | DIS | SO | LATITUDE | LONGITUDE

REPORTING PERIOD FROM 76 03 31 (YEAR MO DAY) TO 76 04 30 (YEAR MO DAY)

3. Specify the number of analyses that exceed the maximum and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "___ hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER		QUANTITY (3 card only) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO EX	CONCENTRATION (4 card only) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	REPORTED	0			gpd								
	PERMIT CONDITION												
	REPORTED	✓			cf								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
1	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
Rassi Henry E. (LAST FIRST MI)	Chemist (TITLE)	(YEAR MO DAY)

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Paul W. Rutter
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

ORIGINAL

PERMIT NUMBER | LAT | LONG | LATITUDE | LONGITUDE

REPORTING PERIOD: FROM 76 03 31 (YEAR MO DAY) TO 76 04 30 (YEAR MO DAY)

1. Enter monitoring info. in the columns labeled "Quantity" and "Concentration" as required by your permit. If you have no discharge during the reporting period, enter "NO DISCHARGE" in the first column under "Quantity."
2. If you monitor more frequently than required by your permit, use actual data rather than permit requirements.
3. Indicate in the column labeled "No. Ex." the number of exceptions to permit conditions. If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (*e.g., "3/7" is equivalent to 3 analyses performed every 7 days.*) If continuous enter "CONT."
5. Specify sample type (*"grab" or "... hr. composite"*) as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER		QUANTITY (MINIMUM)	QUANTITY (AVERAGE)	QUANTITY (MAXIMUM)	UNITS	NO. EX.	CONCENTRATION (MINIMUM)	CONCENTRATION (AVERAGE)	CONCENTRATION (MAXIMUM)	UNITS	NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	REQUIRED	200	4021	10000	gpd							5/7	EST
	PERMIT CONDITION											5/7	EST
Temperture	REQUIRED	41	~~45~~ 55	61	°F							5/7	Grab
	PERMIT CONDITION											5/7	Grab
pH	REQUIRED	6.9	7.1	6.3								5/7	Grab
	PERMIT CONDITION	6.0	–	9								5/7	Grab
O.I.G.	REQUIRED						2.0	2.2	3.1	mg/L		1/7	Comp
	PERMIT CONDITION											1/7	Comp
Phenol	REQUIRED						0.1	0.2	0.3	mg/L		5/7	Grab
	PERMIT CONDITION											5/7	Grab
	REQUIRED												
	PERMIT CONDITION												
	REQUIRED												
	PERMIT CONDITION												
	REQUIRED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rassi Henry E VI (LAST FIRST)	Chemist (TITLE)	76 05 11 (YEAR MO DAY)	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*

Gerald W. Huth
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

NWT 001106

PERMIT NUMBER | DIS | S C | LATITUDE | LONGITUDE

REPORTING PERIOD FROM 76 03 31 (YEAR MO DAY) TO 76 04 30 (YEAR MO DAY)

3. Specify the number of analyzed samples that exceed the maximum (and or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "O".
4. Specify frequency of analysis for each parameter as No. analyses/No. days (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "___ hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

	QUANTITY (3 card only) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX (62-63)	CONCENTRATION (4 card only) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX	FREQUENCY OF ANALYSIS (54-68)	SAMPLE TYPE (69-70)
Flow	0			gpd								
	✓			°F								

NAME OF PRINCIPAL EXECUTIVE OFFICER: Rassi Henry E. (LAST / FIRST)

TITLE OF THE OFFICER: Chemist (TITLE) DATE: YEAR MO DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Paul W. Guth
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

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ORIGINAL

NWT 001107

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
01	[illegible]				

REPORTING PERIOD: FROM 76 02 27 (YEAR MO DAY) TO 76 03 31 (YEAR MO DAY)

3. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "O".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "___ hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER		QUANTITY (3 card only) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX.	CONCENTRATION (4 card only) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	REPORTED	500	3,609	10000	gpd							5/7	EST
	PERMIT CONDITION											5/7	EST
Temperture	REPORTED	44	45	47	°F							5/7	Grab
	PERMIT CONDITION	✓	✓	110								5/7	Grab
pH	REPORTED	6.9	6.9	6.9								5/7	Grab
	PERMIT CONDITION	6.0	.	9.0								5/7	Grab
Oil & Grease	REPORTED						2.2	2.5	2.8	mg/L		1/7	Comp
	PERMIT CONDITION											1/7	Comp
Phenol	REPORTED						0.1	[illegible]	0.[illegible]	mg/L		5/7	Grab
	PERMIT CONDITION											5/7	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER			TITLE OF THE OFFICER	DATE		
Rassi	Henry	E.	Chemist	76	04	12
LAST	FIRST	MI	TITLE	YEAR	MO	DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

[signature]
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE 1 of 1

ORIGINAL

NWT 001108

[illegible] computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.

3. Specify the number of analyzed samples that exceed the maximum (and or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT".
5. Specify sample type ("grab" or "___ hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
[illegible]	[illegible]			

REPORTING PERIOD FROM 76 02 27 (YEAR MO DAY) TO 76 03 31 (YEAR MO DAY)

PARAMETER		QUANTITY MINIMUM	QUANTITY AVERAGE	QUANTITY MAXIMUM	UNITS	NO. EX.	CONCENTRATION MINIMUM	CONCENTRATION AVERAGE	CONCENTRATION MAXIMUM	UNITS	NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	REPORTED	-0-	-0-	-0-	gpd								
	PERMIT CONDITION												
Temperture	REPORTED	—	—	—	°F								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
Russ Henry E. (LAST FIRST MI)	Chemist (TITLE)	76 04 12 (YEAR MO DAY)

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Paul W. [illegible]
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-73)

PAGE 2 OF 2

ORIGINAL

NWT 001109

OR ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE

REPORTING PERIOD: FROM (20-21) 76 YEAR (22-23) 02 MO (24-25) 27 DAY TO (26-27) 76 YEAR (28-29) 03 MO (30-31) 31 DAY

3. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "O".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "... hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER		QUANTITY (3 card only) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX.	CONCENTRATION (4 card only) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	REPORTED	500	3,609	10000	gpd							5/7	Est
	PERMIT CONDITION											5/7	Est
Temperature	REPORTED	44	45	47	°F							5/7	Grab
	PERMIT CONDITION			110								5/7	Grab
pH	REPORTED	6.9	6.9	6.9								5/7	Grab
	PERMIT CONDITION	6.0		9.0								5/7	Grab
Oil & Grease	REPORTED						2.2		2.2	mg/l		1/7	Comp
	PERMIT CONDITION											1/7	Comp
Phenols	REPORTED						0.1			mg/l		[illegible]	Grab
	PERMIT CONDITION											[illegible]	Grab

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
Rassi [illegible] LAST	Chemist TITLE	76 YEAR 04 MO 12 DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

[illegible]
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

ORIGINAL

NWT 001110

PERMIT NUMBER | D.S. | S/C | LATITUDE | LONGITUDE

REPORTING PERIOD FROM 76 02 27 (YEAR MO DAY) TO 76 03 31 (YEAR MO DAY)

1. ... AVERAGE ... is average computed over actual time discharge ... operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum (and ... as appropriate) permit conditions in the columns labeled "No. Ex." If true, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses N... day, ... "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT".
5. Specify sample type ("grab" or "... hr. composite") as applicable. If ... was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in ...

PARAMETER		QUANTITY MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX.	CONCENTRATION (4 card only) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX.	SAMPLE TYPE
Flow	REPORTED	-	-	- 0 -	gpd							
	PERMIT CONDITION											
Temperature	REPORTED	-	-	-	°F							
	PERMIT CONDITION											
	REPORTED											
	PERMIT CONDITION											
	REPORTED											
	PERMIT CONDITION											
	REPORTED											
	PERMIT CONDITION											
	REPORTED											
	PERMIT CONDITION											
	REPORTED											
	PERMIT CONDITION											
	REPORTED											
	PERMIT CONDITION											

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
Rassi, Henry E. (LAST FIRST MI)	Chemist (TITLE)	76 04 12 (YEAR MO DAY)

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Paul W. Hutt
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 1320-1 (10-72)

ORIGINAL

NWT 001111

PERMIT NUMBER | DIS | SUB | LATITUDE | LONGITUDE

REPORTING PERIOD FROM 76 11 31 (YEAR MO DAY) TO 76 12 29 (YEAR MO DAY)

3. Specify the number of analyzed samples that exceed the maximum (and or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "___ hr. composite") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER		QUANTITY MINIMUM	QUANTITY AVERAGE	QUANTITY MAXIMUM	QUANTITY UNITS	NO. EX	CONCENTRATION MINIMUM	CONCENTRATION AVERAGE	CONCENTRATION MAXIMUM	CONCENTRATION UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	REPORTED	0	2333	6210	gpd							5/7	Est
	PERMIT CONDITION											5/7	Est
Temperature	REPORTED	46	65	85	°F							5/7	Grab
	PERMIT CONDITION	—	—	NL								5/7	Grab
pH	REPORTED	6.1	6.5	6.7								5/7	Grab
	PERMIT CONDITION	6.0		9.0								5/7	Grab
Oil & Grease	REPORTED						2.3	2.6	2.8	mg/L		1/2	Comp
	PERMIT CONDITION											1/2	Comp
Phenol	REPORTED						Trace	0.4	0.6	mg/L		1/7	Grab
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER: Rassi Henry E (LAST FIRST MI)

TITLE OF THE OFFICER: Chemist (TITLE)

DATE: 76 03 02 (YEAR MO DAY)

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE 1 OF 2

ORIGINAL

NWT 001112

PERMIT NUMBER | DIS | SEC | LATITUDE | LONGITUDE

REPORTING PERIOD FROM: YEAR 76 MO 01 DAY 31 TO: YEAR 76 MO 02 DAY 29

1. Enter permit conditions in the columns labeled "No. Ex." If none, enter "0".
2. Specify frequency of analysis for each parameter as No. analyses/No. days (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
3. Specify sample type ("grab" or "___ hr. composite") as applicable. If frequency was continuous, enter "NA".
4. Appropriate signature is required on bottom of this form.
5. Remove carbon and retain copy for your records.
6. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER		QUANTITY (3 card only) MINIMUM	QUANTITY AVERAGE	QUANTITY MAXIMUM	UNITS	NO. EX	CONCENTRATION (4 card only) MINIMUM	CONCENTRATION AVERAGE	CONCENTRATION MAXIMUM	CONCENTRATION UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	REPORTED	-0-	-0-	-0-	MGD								
	PERMIT CONDITION												
Temperature	REPORTED	-	-	-	°F								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER (LAST, FIRST, MI): Rassi, Henry E.

TITLE OF THE OFFICER: Chemist

DATE: YEAR 76 MO 03 DAY 12

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT: Henry E. Rassi

EPA Form 3320-1 (10-72)

PAGE ___ OF ___

NWT 001113

PERMIT NUMBER | DD | MM | LATITUDE | LONGITUDE

REPORTING PERIOD FROM YEAR 76 MO 03 DAY 01 TO YEAR 76 MO 12 DAY 29

1. Enter the permit number, reporting period, and latitude and longitude of the outfall.
2. Under "Quantity" enter the minimum, average, and maximum values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum (*and or minimum as appropriate*) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. (*e.g., "3/7" is equivalent to 3 analyses performed every 7 days.*) If continuous enter "CONT."
5. Specify sample type (*"grab" or "... hr. composite"*) as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines; staple and mail Original to office specified in permit.

PARAMETER		QUANTITY (4 card only) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX.	CONCENTRATION (4 card only) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	REPORTED	0	2222	4500	gpd							5/7	Calc
	PERMIT CONDITION											24/7	Calc
Temperature	REPORTED				°F							1/1	Grab
	PERMIT CONDITION			100								2/7	Grab
pH	REPORTED	6.0	6.5									5/7	Grab
	PERMIT CONDITION											1/7	Grab
Residual Chlorine	REPORTED						2.3	2.5		mg/l		1/7	Grab
	PERMIT CONDITION												
Fecal Coliform	REPORTED						Trace	0.4	0.8	mg/l		1/7	Grab
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER: LAST [illegible] FIRST [illegible] MI E

TITLE OF THE OFFICER: TITLE [illegible]

DATE: YEAR 76 MO 12 DAY 12

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

ORIGINAL

NWT 001114

PERMIT NUMBER	DIS	SUC	LATITUDE	LONGITUDE
	(20-21)	(22-23)	(24-27)	(28-29) (30-31)
REPORTING PERIOD FROM	76 (YEAR)	01 (MO)	31 (DAY)	TO 76 (YEAR) 02 (MO) 29 (DAY)

1. Enter the permit number, discharge number, station number, latitude and longitude as required.
2. Enter the reporting period.
3. Enter the number of exceptions to permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days (e.g., "3/7" *is equivalent to 3 analyses performed every 7 days.*) If continuous enter "CONT."
5. Specify sample type ("*Grab*" or "*__ hr. composite*") as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER		QUANTITY (If card only) (38-45) MINIMUM	QUANTITY (If card only) (38-45) AVERAGE	QUANTITY (If card only) (38-45) MAXIMUM	QUANTITY (If card only) (38-45) UNITS	QUANTITY (If card only) (38-45) NO. EX (62-63)	CONCENTRATION (38-45) MINIMUM	CONCENTRATION (38-45) AVERAGE	CONCENTRATION (38-45) MAXIMUM	CONCENTRATION (38-45) UNITS	CONCENTRATION (38-45) NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Flow	REPORTED	-0-	-0-	-0-	gpd								
	PERMIT CONDITION												
Temperature	REPORTED	—	—	—	°F								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Rossi, Henry E.	Chemist	76 (YEAR) 03 (MO) 12 (DAY)	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*
LAST FIRST MI	TITLE		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE ___ OF ___

NWT 001115

[illegible] "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.

3. Specify the number of analyzed samples that exceed the maximum (and or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days (e.g., "3/7" is equivalent to 3 analyses performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "__ hr. composite") as applicable. If frequency was continuous, enter "NA"
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PERMIT NUMBER	DIS	SUB	LATITUDE	LONGITUDE

REPORTING PERIOD FROM 75 12 31 (YEAR MO DAY) TO 76 01 31 (YEAR MO DAY)

PARAMETER		QUANTITY MINIMUM	QUANTITY AVERAGE	QUANTITY MAXIMUM	UNITS	NO. EX.	CONCENTRATION MINIMUM	CONCENTRATION AVERAGE	CONCENTRATION MAXIMUM	UNITS	NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	REPORTED	-0-	4955	12000	gpd							5/7	EST
	PERMIT CONDITION											5/7	EST
Temperature	REPORTED	43	44	45	°F							5/7	Grab
	PERMIT CONDITION	—	—	110								5/7	Grab
pH	REPORTED	6.7	6.7	6.7								5/7	Grab
	PERMIT CONDITION	[illegible]		[illegible]								5/7	Grab
Oil + Grease	REPORTED						2.2	2.3	2.6	Mg/L		1/7	Comp
	PERMIT CONDITION											1/7	Comp
Phenol	REPORTED						Trace	Less Than 1.0	Less Than 1.0	Mg/L		5/7	Grab
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
Rassi Henry E. (LAST / FIRST / MI)	Chemist (TITLE)	76 02 06 (YEAR MO DAY)

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Paul W. [illegible]
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

NWT 001116

		MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX.	MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX.	OF ANALYSIS	SAMPLE TYPE
Fl...	REPORTED	-0-	-0-	-0-	gpd								
	PERMIT CONDITION												
Temperature	REPORTED	—	—	—	°F								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER | TITLE OF THE OFFICER | DATE

Rass... Henry E. Cl...m... 7 ... YEAR MO DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief, such information is true, complete, and accurate.

PRINCIPAL EXECUTIVE OFFICER AGENT

EPA Form 3320-1 (10-72)

PAGE 2 OF 2

NWT 001117

PERMIT NUMBER [illegible] | DSS | SEC | LATITUDE | LONGITUDE

REPORTING PERIOD FROM 75/12/31 TO 76/01/31
YEAR MO DAY YEAR MO DAY

1. Use a separate line for each effluent parameter. Use additional sheets if necessary.
2. Under "QUANTITY" report daily discharge over actual time discharge occurred during reporting period. Under "CONCENTRATION" report "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum *(and or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/No. days (e.g., *"3/7" is equivalent to 3 analyses performed every 7 days.*) If continuous enter "CONT."
5. Specify sample type (*"grab" or "__ hr. composite"*) as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER	QUANTITY (AVERAGE)	QUANTITY (MAXIMUM)	UNITS	NO. EX	CONCENTRATION (4 card only) MINIMUM	CONCENTRATION AVERAGE	CONCENTRATION MAXIMUM	UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	-0-	4755	12000	gpd						5/7	EST
										5/7	EST
Temperature	43	44	45	°F						5/7	Grab
	—	—	10							5/7	Grab
pH	[illegible]	[illegible]	6.7							5/7	Grab
	[illegible]		7.0							5/7	Grab
Chloride					2.2	2.3	2.6	mg/L		1/7	Comp
										1/7	Comp
Phenol					Trace	Less than 1.0	Less than 1.0	mg/L		5/7	Grab

NAME OF PRINCIPAL EXECUTIVE OFFICER (LAST, FIRST, MI): Russi Henry C.
TITLE OF PRINCIPAL EXECUTIVE OFFICER: Chemist
DATE: 76/02/06 (YEAR MO DAY)

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Paul H. Russi
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

NWT 001118

		MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX	MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX	OF ANALYSIS	SAMPLE TYPE
Flow	REPORTED	-0-	-0-	-0-	gpd								
	PERMIT CONDITION												
Temperature	REPORTED	—	—	—	°F								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER — TITLE OF THE OFFICER — DATE

Rasor H[illegible] E[illegible] [illegible] 7 6 [illegible] 6

LAST — YEAR MO DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief [illegible] mation is true, complete, and accurate.

[illegible] EXECUTIVE [illegible] AGENT

EPA Form 3320-1 (10-79)

2 OF 2

NWT 001119

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180-J	001			

REPORTING PERIOD: FROM 75 11 30 (YEAR MO DAY) TO 75 12 31 (YEAR MO DAY)

asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "O".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "___ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER		QUANTITY (5 card only) MINIMUM	QUANTITY AVERAGE	QUANTITY MAXIMUM	QUANTITY UNITS	NO. EX	CONCENTRATION (4 card only) MINIMUM	CONCENTRATION AVERAGE	CONCENTRATION MAXIMUM	CONCENTRATION UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	REPORTED	-0-	10,842	24,000	gpd							5/7	EST
	PERMIT CONDITION											5/7	EST
Temperature	REPORTED	42	46	50	°F							5/7	Grab
	PERMIT CONDITION											5/7	Grab
pH	REPORTED	6.9	6.9	6.9								5/7	Grab
	PERMIT CONDITION	6.0		9.0								5/7	Grab
Oil & Grease	REPORTED						2.3	2.6	3	mg/l		1/7	Comp
	PERMIT CONDITION						—	20.0	30.0			1/7	Comp
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
Rassi Henry E (LAST FIRST MI)	Chemist (TITLE)	76 01 05 (YEAR MO DAY)

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Paul W Keith
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

NWT 001120

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
[illegible]	2100-0	[illegible]			

REPORTING PERIOD: FROM (20-21) (22-23) (24-25) YEAR MO DAY TO (26-27) (28-29) (30-31) YEAR MO DAY

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropri* permit conditions in the columns labeled "No. Ex." If none, enter "O".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is e lent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "___ hr. composite")* as applicable. If frequency was continu enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER (32-37)		QUANTITY (3 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS (62-63)	NO. EX	CONCENTRATION (4 card only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS (62-63)	NO. EX	FREQUENCY OF ANALYSIS (64-68)	SAMPL TYPE (69-70)
Flow	REPORTED	[illegible]	[illegible]	[illegible]	[illegible]								
	PERMIT CONDITION												
Temperature	REPORTED	[illegible]	[illegible]	[illegible]	°F								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
Rossi Henry E	Chemist	76 01 05
LAST FIRST MI	TITLE	YEAR MO DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

[signature]
SIGNATURE OF PRINCIPAL EXECUTI OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE ___ OF ___

ORI

NWT 001121

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
OR	2180-J	001			

REPORTING PERIOD: FROM (20-21) YEAR 75 (22-23) MO 11 (24-25) DAY 30 TO (26-27) YEAR 75 (28-29) MO 12 (30-31) DAY 31

1. Enter "-0-" for zero discharge. Leave blank if sample was not collected.
2. Values in boxes containing asterisks. "AVERAGE" is average computed over actual time discharge is operating. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriate)* permit conditions in the columns labeled "No. Ex." If none, enter "O".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is equivalent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "__ hr. composite")* as applicable. If frequency was continuous, enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	-0-	10,842	24,000	gpd							5/7	Est
	PERMIT CONDITION											5/7	Est
Temperature	REPORTED	42	46	50	°F							5/7	Grab
	PERMIT CONDITION											5/7	Grab
pH	REPORTED	6.9	6.9	6.9								5/7	Grab
	PERMIT CONDITION	6.0		9.0								5/7	Grab
O/G Grease	REPORTED						2.3	2.6	2.9	mg/L		1/7	Comp
	PERMIT CONDITION						—	20.0	30.0			1/7	Comp
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
Rassi Henry E (LAST FIRST MI)	Chemist (TITLE)	76 01 05 (YEAR MO DAY)

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Paul W Heath
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

NWT 001122

ST	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
	2100-0	002			

REPORTING PERIOD: FROM (20-21) YEAR 75 (22-23) MO 11 (24-25) DAY 30 TO (26-27) YEAR 75 (28-29) MO 12 (30-31) DAY 31

3. Specify the number of analyzed samples that exceed the maximum *(and/or minimum as appropriat* permit conditions in the columns labeled "No. Ex." If none, enter "O".
4. Specify frequency of analysis for each parameter as No. analyses/No. days. *(e.g., "3/7" is eq lent to 3 analyses performed every 7 days.)* If continuous enter "CONT."
5. Specify sample type *("grab" or "___ hr. composite")* as applicable. If frequency was continuou enter "NA".
6. Appropriate signature is required on bottom of this form.
7. Remove carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

(32-37) PARAMETER		(3 card only) QUANTITY (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(4 card only) CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO. EX	(64-68) FREQUENCY OF ANALYSIS	(69-70) SAMPLE TYPE
Flow	REPORTED	.0	.0	.0	MGD								
	PERMIT CONDITION												
Temperature	REPORTED				°F								
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE
Rossi Norma S	Chemist	76 01 15
LAST FIRST MI	TITLE	YEAR MO DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Paul W. Stutt
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA Form 3320-1 (10-72)

PAGE 2 OF 2

ORIGI

NWT 001123

NW-W-8

NEIL GOLDSCHMIDT
GOVERNOR

Department of Environmental Quality

811 S.W. SIXTH AVENUE, PORTLAND, OREGON 97204 PHONE: (503) 229-5696

JAN 08 1988

Koppers Company, Inc.
Attn: John Oxford, Terminal Manager
7540 N.W. St. Helens Road
Portland, OR 97229

Re: Waste Discharge Permit
File No. 47430
Multnomah County

We have completed our review of your permit application and the comments received regarding the preliminary draft permit which was mailed to you for review on July 31, 1987 and have issued the enclosed NPDES Waste Discharge Permit. This permit will be considered as the final action on permit application number 200077-9.

The final permit has some changes in the monitoring requirements. As per your request, the minimum frequency for sampling PAH has been changed from monthly to annually. Copies of monitoring report forms will be sent to you by our regional office under separate cover.

You are urged to carefully read the permit and take all possible steps to comply with the conditions contained therein so our Oregon environment can be preserved. If you have questions regarding the permit, please contact this office.

Sincerely,

Fred Hansen
Director

FH:p
RP1132
Enclosure
c: U.S. Environmental Protection Agency
Northwest Region, DEQ

KOPPERS CO.
PORTLAND, OR
RECEIVED
JAN 13 1988

EQ-1A (2-86)

NW-W-8

REVISED: 1/30/88
PLANT: Northwest Terminal
CHARGE NUMBER: 455700-00
REQESTED BY: Susanne Hartley
SAMPLING POINTS: 1 Storage tank
SAMPLING DATES: 2/4/88

The following is a list of parameters for which samples are analyzed:

NoPres. 1 liter amber
PAH

NaHSO4 1 qt.
Phenol
Oil & Grease

Notes:
Pack and ship bottles, chain of custody, and instructions for sampling. Also include shipping forms labels and all other items needed it insure a successful sampling.

Must be on site 2/2/88 for sampling 2/4/88.

RECEIVED
FEB 1 - 1988
Environmental Resources

REVISED: 1/30/88
PLANT: Northwest Terminal
CHARGE NUMBER: 455700-00
REQUESTED BY: Susanne Hartley
SAMPLING POINTS: 1 Storage tank
SAMPLING DATES: 2/4/88

Sampling Procedure

FROM A VALVE:

The liquid must be allowed to discharge from the valve for a period of time sufficient to purge all standing liquid from the line. This will insure that fresh sample will be collected. The liquid that is purged from the line must be collected and either returned to the system or disposed of properly.

The sample can then be collected. The containers should be filled close to the top DO NOT OVERFLOW. Try to avoid aerating the sample during filling as this will drive off the volatile.

FROM A TANK:

There is a wide mouth quart jar included with the other sample containers, this should be used to collect the sample. The collection jar should be lowered into the tank and retrieved, the contents should then be poured into the sample containers. The containers should be filled close to the top DO NOT OVERFLOW. Try to avoid aerating the sample during filling as this will drive off the volatile.

Shipping:

Once the sample is collected and placed in the cooler and packed with ice. The chain of custody MUST be filled out properly or the samples may be rejected by the lab. The samples should be shipped via overnight air to the lab. Forms are enclosed for all documentation and shipped.

If you have any questions call me. #412 733-9424

respectfully,

Eugene Huth

Sent 8-11-87
NW-10-8

KEYSTONE
ENVIRONMENTAL RESOURCES, INC.

Interoffice Correspondence

To	John Oxford	From	J. M. Dern
Location	Northwest	Location	K-1928
Subject	NPDES Permit Consent	Date	August 11, 1987

Please sign the attached letter and forward by Certified Mail Return Receipt Requested to Mr. Ashbaker at Oregon DEQ.

Jordan M. Dern

Enclosure

JMD/mrw

cc: L. F. Flaherty
A. I. Domanico
M. R. Urbassik
J. Blundon

Koppers Company, Inc.
436 Seventh Avenue
Pittsburgh, PA 15219
Telephone 412-227-2000

KOPPERS

August 11, 1987 CERTIFIED MAIL
Return Receipt
Requested

Mr. Charles K. Ashbaker
Industrial Wastes Section
Water Quality Division
Oregon Department of Environmental
Quality
811 Southwest 6th Ave.
Portland, OR 97204-1334

Subject: Koppers Company, Inc.
Portland, Oregon
Waste Disposal Permit
#47430

Dear Mr. Ashbaker:

This letter is submitted in response to your request for comments dated July 31, 9187.

Our comment concerns the requirement to perform a PAH analysis of the effluent as part of the normal monitoring of the outfall in addition to phenols, which is already required. Special Condition #4 indicates that the PAH analysis may supplant the phenol analysis at some time in the future. We feel that the imposition of the PAH analysis is not justified at this time. As our monitoring reports demonstrate, phenols are not a problem in the effluent. We have never had an excursion for phenols over the life of the existing permit.

The PAH analysis also places a financial burden on the plant. The cost of the PAH analysis is about $200 compared to about $20 for phenols analysis. Furthermore, the PAH analysis would be performed at the laboratory of Keystone Environmental Resources, our environmental consultant in Monroeville, Pa, which would be a significant burden both from a cost and time standpoint.

In summary, considering the size of the discharge and the potential for PAH in the effluent, an ongoing requirement for PAH analysis should not be required. If one is necessary, semiannual sampling should suffice.

We also wish to call to your attention to the fact that operations at the terminal are being expanded and will in the future involve the following two additional processes:

1. The production of sodium sulfite solution which involves the addition of water to solid sodium sulfite. The resulting liquid is shipped to our customer.

2. The manufacture of wood preservative chemicals by the mixing of arsenic acid, chromic acid and copper oxide.

We request that you modify our permit application to reflect these two additional processes.

Thank you for your consideration.

Sincerely yours,

John Oxford
Terminal Manager

JO/JMD/mrw

NW-W-8

NEIL GOLDSCHMIDT
GOVERNOR

Department of Environmental Quality

811 SW SIXTH AVENUE, PORTLAND, OREGON 97204-1334 PHONE (503) 229-5696

JUL 31 1987

KOPPERS COMPANY, INC.
Attn: John Oxford, Terminal Manager
7540 NW St. Helens Road
Portland, OR 97229

Final Date for Submission
of Written Comments: AUG 14 1987

Re: Waste Disposal Permit
File No. 47430
Multnomah County

Your application for a National Pollutant Discharge Elimination System (NPDES) permit has been reviewed by the Department and a proposed NPDES permit has been drafted. You are invited to review the attached copy and submit any comments you may have in writing prior to the date indicated above.

After that date, all comments received will be evaluated by the Department of Environmental Quality and final action on your application will be taken in accordance with the procedures set forth in Oregon Administrative Rules, Chapter 340, Section 14-025. You will be advised of the action taken as soon as possible after the final date for submission of written comments.

If you have any questions, please contact this office.

Sincerely,

Charles K. Ashbaker, Manager
Industrial Waste Section
Water Quality Division

CKA:mjb
Enclosure

cc: Northwest Region, DEQ

AUG 3 1987

DEQ-1

PRELIMINARY DRAFT

Permit Number:
Expiration Date: 8/31/92
File Number: 47430

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

WASTE DISCHARGE PERMIT

Department of Environmental Quality
811 Southwest Sixth Avenue, Portland, OR

Telephone: (503) 229-5696

Issued pursuant to ORS 468.740 and The Federal Clean Water Act

ISSUED TO:

Koppers Company, Inc.
7540 N.W. St. Helens Rd.
Portland, OR 97229

SOURCES COVERED BY THIS PERMIT:

Type of Waste	Outfall Number	Outfall Location
Tank Farm Runoff and Boiler Blowdown	001	R.M. 6.5

PLANT TYPE AND LOCATION:

Creosote Terminal
7540 N.W. St. Helens Rd.
Portland, Oregon

RECEIVING STREAM INFORMATION:

Major Basin: Willamette
Minor Basin: --
Receiving Stream: Willamette River
County: Multnomah
Applicable Standards: OAR 340-41-445

EPA REFERENCE NO: OR-000077-9

Issued in response to Application No. 200077-9 received July 19, 1984.

This permit is issued based on the land use findings in the permit record.

Fred Hansen, Director _____ Date _____

PERMITTED ACTIVITIES

Until this permit expires or is modified or revoked, the permittee is authorized to construct, install, modify or operate a waste water collection, treatment, control and disposal system and discharge to public waters adequately treated waste waters only from the authorized discharge point or points established in Schedule A and only in conformance with all the requirements, limitations, and conditions set forth in the attached schedules as follows:

	Page
Schedule A - Waste Discharge Limitations not to be Exceeded..	2
Schedule B - Minimum Monitoring and Reporting Requirements...	3
Schedule C - Compliance Conditions and Schedules.....	-
Schedule D - Special Conditions.....	4
General Conditions.....	Attached

Each other direct and indirect waste discharge to public waters is prohibited.

This permit does not relieve the permittee from responsibility for compliance with any other applicable federal, state, or local law, rule, standard, ordinance, order, judgment, or decree.

SCHEDULE A

1. Waste Discharge Limitations not to be Exceeded After Permit Issuance Date

Outfall Number 001

	Concentrations Monthly Ave. mg/1	Daily Max. mg/1
Oil & Grease	10	15
Phenols	0.5	0.7

Other Parameters	Limitations
pH	Shall be within the range of 6.0-9.0
Temperature	Shall not exceed 110° F

2. Notwithstanding the effluent limitations established by this permit, no wastes shall be discharged and no activities shall be conducted which will violate Water Quality Standards as adopted in OAR 340-41-445 except in the following defined mixing zone:

The allowable mixing zone is defined as that portion of the Willamette River within 200 feet of the point of discharge.

SCHEDULE B

Minimum Monitoring and Reporting Requirements (unless otherwise approved in writing by the Department)

Outfall Number 001

Item or Parameter	Minimum Frequency	Type of Sample
Flow	Daily	Estimate
Temperature	Daily	Grab
pH	Daily	Grab
Oil & Grease	Weekly	Grab
Phenols*	Monthly	Grab
Polynuclear Aromatic Hydrocarbons (PAH)**	Monthly	Grab

* Test procedures for phenols should conform with Standard Methods No. 510, 16th edition.

** Test procedures for polynuclear aromatic hydrocarbons (PAH) should conform with EPA Method 610.

Reporting Procedures

Monitoring results shall be reported on approved forms. The reporting period is the calendar year. Reports must be submitted to the Department by January 15th of the following year.

SCHEDULE D

Special Conditions

1. Sanitary wastes shall be disposed of to the City of Portland municipal sewage system.

2. An adequate contingency plan for prevention and handling of spills and unplanned discharges shall be in force at all times. A continuing program of employee orientation and education shall be maintained to ensure awareness of the necessity of good inplant control and quick and proper action in the event of a spill or accident.

3. No emulsifying agents or detergents shall be discharged into or otherwise be allowed to enter into the oil-water separator.

4. Thirty days following the issuance of the permit, the permittee shall initiate sampling of polynuclewar aromatic hydrocarbons (PAH) as required in Schedule B. Upon review of the data, the Department may change the phenol limits to PAH of this permit in accordance with procedures in OAR 340-45-055.

NWT 001134

NPDES
GENERAL CONDITIONS

SECTION A. STANDARD CONDITIONS

1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of Oregon Revised Statutes (ORS) 468.720 and is grounds for enforcement action; for permit termination; suspension, or modification; or for denial of a permit renewal application.

2. Penalties for Violations of Permit Conditions

Oregon Law (ORS 468.990) classifies a willful or negligent violation of the terms of a permit or failure to get a permit as a misdemeanor and a person convicted thereof shall be punishable by a fine of not more than $25,000 or by imprisonment for not more than one year, or by both. Each day of violation constitutes a separate offense.

In addition to the criminal penalties specified above, Oregon Law (ORS 468.140) also allows the Director to impose civil penalties up to $10,000 per day for violation of the terms or conditions of a permit.

3. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment or human health resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

4. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and have the permit renewed. The application should be submitted at least 180 days before the expiration date of this permit. The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date.

5. Permit Actions

This permit may be modified, suspended, or terminated for cause including, but not limited to, the following:

a. Violation of any terms or conditions of this permit, rule, or statute;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or

NWT 001135

c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

The filing of a request by the permittee for a permit modification or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

6. Toxic Pollutants

The permittee shall comply with any applicable effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

7. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any violation of federal, state or local laws or regulations.

SECTION B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

2. Duty to Halt or Reduce Activity

Upon reduction, loss, or failure of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with its permit, control production or all discharges or both until the facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power of the treatment facility fails or is reduced or lost. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

NWT 001136

3. Bypass of Treatment Facilities

a. Definitions

(1) "Bypass" means diversion of waste streams from any portion of the conveyance system or treatment facility.

(2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Prohibition of bypass.

(1) Bypass is prohibited and the Director may take enforcement action against a permittee for bypass, unless:

(a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(b) There were no feasible alternatives to the bypass, such as the use of auxiliary pumping, conveyance, or treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and

(c) The permittee submitted notices and requests as required under paragraph c of this section.

(2) The Director may approve an anticipated bypass, after considering its adverse effects, when the Director determines that it will meet the three conditions listed above in paragraph b(1) of this section.

c. Notice and request for bypass.

(1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

(2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section D, Paragraph D-5 (24-hour notice).

NWT 001137

d. Bypass not exceeding limitations.

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs b and c of this section.

4. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment of control of wastewaters shall be disposed of in such a manner as to prevent any pollutant from such materials from entering public waters, causing nuisance conditions, or creating a public health hazard.

SECTION C. MONITORING AND RECORDS

1. Representative Sampling

Sampling and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this permit and shall be taken, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Director.

2. Flow Measurements

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to insure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to insure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than $\pm$ 10% from true discharge rates throughout the range of expected discharge volumes.

3. Monitoring Procedures

Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.

4. Penalties of Tampering

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

NWT 001138

5. Reporting of Monitoring Results

Monitoring results shall be summarized each month on a Discharge Monitoring Report form approved by the Department. The reports shall be submitted monthly and are to be postmarked by the 14th day of the following month unless specifically approved otherwise in Schedule B of this permit.

6. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Such increased frequency shall also be indicated.

7. Averaging of Measurements

Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean, except for coliform and fecal coliform bacteria which shall be averaged based on a geometric or log mean.

8. Retention of Records

The permittee shall retain records of all monitoring information, including all calibration and maintenance records of all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, or report of application. This period may be extended by request of the Director at any time.

9. Records Contents

Records of monitoring information shall include:

a. The date, exact place, time and methods of sampling or measurements;

b. The individual(s) who performed the sampling or measurements;

c. The date(s) analyses were performed;

d. The individual(s) who performed the analyses;

e. The analytical techniques or methods used; and

f. The results of such analyses.

NWT 001139

10. Inspection and Entry

The permittee shall allow the Director, or an authorized representative upon the presentation of credentials to:

a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, and

d. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by state law, any substances or parameters at any location.

SECTION D. REPORTING REQUIREMENTS

1. Planned Changes

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility which will result in a change in the character of pollutants to be discharged or which will result in a new or increased discharge of pollutants.

2. Anticipated Noncompliance

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

3. Transfers

This permit may be transferred to a new permittee provided the transferee acquires a property interest in the permitted activity and agrees in writing to fully comply with all the terms and conditions of the permit and the rules of the Commission. No permit shall be transferred to a third party without prior written approval from the Director. The permittee shall notify the Department when a transfer of property interest takes place.

4. Compliance Schedule

Reports of compliance or noncompliance with, or any progress reports on interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date. Any reports of noncompliance shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirements.

NWT 001140

9. Falsification of Reports

State law provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than $1,000 per violation, or by imprisonment for not more than six months per violation, or by both.

SECTION E. DEFINITIONS AND ACRONYMS

1. BOD means five-day biochemical oxygen demand.

2. TSS means total suspended solids (non-filterable residue).

3. mg/l means milligrams per liter.

4. kg means kilograms.

5. m^3/d means cubic meters per day.

4. MGD means million gallons per day.

5. Composite sample means a combination of samples collected, generally at equal intervals over a 24-hour period, and apportioned according to the volume of the flow at the time of the sampling.

6. FC means fecal coliform bacteria.

NWT 001141

5. Twenty-Four Hour Reporting

The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally (by telephone) within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain:

a. A description of the noncompliance and its cause;

b. The period of noncompliance, including exact dates and times;

c. The estimated time noncompliance is expected to continue if it has not been corrected; and

d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

The following shall be included as information which must be reported within 24 hours:

a. Any unanticipated bypass which exceeds any effluent limitation in the permit.

b. Any upset which exceeds any effluent limitation in the permit.

6. Other Noncompliance

The permittee shall report all instances of noncompliance not reported under Section D, Paragraphs D-4 and D-5, at the time monitoring reports are submitted. The reports shall contain the information listed in Paragraph D-5.

7. Duty to Provide Information

The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine compliance with this permit. The permittee shall also furnish to the Department, upon request, copies of records required to be kept by this permit.

Other Information: When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Department, it shall promptly submit such facts or information.

8. Signatory Requirements

All applications, reports or information submitted to the Department shall be signed and certified in accordance with 40 CFR 122.22.

NWT 001142

file: NW-W-8

KOPPERS
Interoffice Memo

To John A. Oxford
Location Northwest Terminal
Subject NPDES Permit Renewal

From Jordan M. Dern
Location Pittsburgh, K-901
Date May 8, 1986

Please sign the attached letter and attach a copy of the signed renewal application to it and forward by Certified Mail Return Receipt Requested to Oregon DEQ.

Jordan M. Dern/jsw
Jordan M. Dern

JMD/jsw

Attachments

cc: L. F. Flaherty
M. R. Urbassik
Temp. Smith

Koppers Company, Inc., Science and Technology
436 Seventh Avenue, Pittsburgh, P[illegible]219
Telephone 412-227-2000

KOPPERS

CERTIFIED MAIL
Return Receipt
Requested

May 8, 1986

Oregon Dept. of Environmental Quality
1234 S. W. Morrison Street
Portland, OR 97205

RE: Koppers Company, Inc.
Portland, Oregon
Permit No. OR-100011-9

Gentlemen:

This letter is to advise you of a minor change which has been made in our method of handling effluent water prior to discharge. The discharge which is made up of storm water is collected in a storage tank prior to discharge. The tank is sampled to verify that it is in compliance with our NPDES Permit prior to discharge. This differs from our previous practice of pumping the storm water directly to the outfall.

Neither the operations at our facility nor the characteristics of the effluent have changed. The only alteration has been to establish the practice of testing the effluent before discharge rather than after.

In reviewing our files, we are unable to locate a discharge permit which was issued as a result of the application which we submitted on/about July 1, 1984. A copy of the application is attached. We would appreciate your sending us a copy of the final permit.

Thank you for your cooperation.

Sincerely yours,

John A. Oxford
Plant Manager

JAO/JMD/jsw

Attachment

Koppers Company, In

MEMO ROUTING SLIP

To	Location	Date Received	Initial
John Oxford			

☐ Note & Forward ☐ Prepare Reply for my Signature

☐ Note & Return ☐ Comment & Return

☐ Note & File ☐ Take Appropriate Action

Remarks:

This is the copy we had in our files. You should have one in your files with your signature on it. Attach a copy of the one with the signature on it to the Oregon DEQ letter and forward by Certified Mail. Thanks

From: Jordan Dern - Pgh. Phone: Date:

K-17

Filed-W-NPDES permit

KOPPERS

Interoffice Correspondence

To John Oxford

Location Northwest Terminal

Subject NPDES Permit Renewal

From J. M. Dern

Location K-12

Date June 28, 1984

Please find attached a completed application to renew the NPDES Permit for the Northwest Terminal. You should sign and date the certification at the bottom of the form since you are the duly authorized representative. It should then be forwarded then with a check for $200.00 ($50.00 for filing fee and $150.00 for processing fee) by Certified Mail, Return Receipt Requested to Mr. Charles K. Ashbaker, Source Control Section, Water Quality Division, Oregon Dept. of Environmental Quality, 522 Southwest 5th Avenue, P. O. Box 1760 Portland, Oregon 97207.

If you have any questions, please give me a call.

Jordan M. Dern

JMD/s
cc: L. L. Nagel
K. R. Caldwell
T. Leake

REV 2

DEPARTMENT OF ENVIRONMENTAL QUALITY - Fiscal
P. O. Box 1760
Portland, OR 97207

APPLICATION FOR RENEWAL OF A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
NPDES-R

Appl. _____
File No. _____
Received:

A. REFERENCE INFORMATION:

Official Name and Address of Applicant (Owner)	Present Permit No. 3077J Date Expires 11/30/84
Koppers Company, Inc. 7540 Northwest St. Helens Road Portland, OR. 97229	
Responsible Official (Name, Title, Address, Phone) *Change * John Oxford - Terminal Manager 7540 Northwest St. Helens Rd. Portland, Oregon 97229 503-286-3681	**Alternate Responsible Official or Chief Operator**

Description of activities requiring a permit from the Department: (Check all that apply)

___ Construct, install, or modify waste collection, treatment, or disposal facilities.
___ Operate waste collection, treatment, or disposal facilities.
___ Discharge treated waste waters into the waters of _____
X Other Discharge non-contaminated streams to Willamette River

B. GENERAL QUESTIONS:

1. Have the treatment or disposal methods employed, as indicated in previous applications, been altered in any way since the last application was submitted? ___YES X NO
If yes, explain.

2. Has the quantity or quality of wastes discharged, as indicated in previous applications, been significantly changed in any way since the last application was submitted?
___YES X NO If yes, explain.

C. SPECIAL QUESTIONS AND REQUESTED INFORMATION

1. If any changes in operations or waste quantity or quality are anticipated in the near future, please attach an explanation or proposal. No change anticipated.
2. Please attach a brief report which indicates your progress in meeting the requirements and limitations of your present permit. Permit limits are being met on a consistent basis.

I hereby certify that the information contained in this application is true and correct to the best of my knowledge and belief.

Signature of owner (or legally authorized representative)

Title Terminal Manager Date _____

NWT 001147

VICTOR ATIYEH
GOVERNOR

Department of Environmental Quality

522 S.W. FIFTH AVENUE, BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5696

May 30, 1984

KOPPERS COMPANY, INC.
Attention: Paul W. Guth, Plant Superintendent
7540 NW St. Helens Road
Portland, OR 97229

Re: Permit 3077-J
File No. 47430
(Creosote Terminal)

Gentlemen:

Our records indicate that your present waste water disposal permit will expire on November 30, 1984.

The enclosed application form must be completed, signed by your responsible official and returned to the Department of Environmental Quality as soon as possible for permit renewal.

A filing fee of $50 and a processing fee of $ 150 are required to accompany this application. No action can be taken on the application until the fees are paid.

If you request a significant increase in effluent discharge or disposal limitations, the processing fee will be $ 250.

If you have any questions regarding the renewal application or the associated fees, please contact this office. An invoice for the amount of the fees will be sent to you upon request. Copies of the permit fee regulations are attached.

Sincerely,

Harold Sawyer
for Charles K. Ashbaker
Supervisor
Source Control Section
Water Quality Division

RECEIVED
MAY 31 1984
KOPPERS CO., INC.
INDUSTRIAL PRODUCTS DIV.
PORTLAND, OREGON

CKA:mjb
Enclosures (2)

cc: Northwest Region, DEQ

DEQ-1

INSTRUCTIONS - PERMIT RENEWAL APPLICATION

A. Reference Information: Complete the required information in detail. If there has been a name change, address change or change in personnel since the last application, please make a special note to that effect.

B. General Questions: If more space is needed than provided on the application form, please attach as many additional pages as necessary in order to supply whatever explanation or diagrams are needed to update the treatment and disposal methods used and the characteristics of the waste discharged or otherwise disposed.

C. Special Questions and Requested Information:

1. Please elaborate on any proposed expansions, cutbacks, improvements or changes of any kind which will or may affect the quantity or quality of pollutants discharged.

2. Each condition of your present permit should be reviewed and an assessment made as to the success you have had in meeting the requirements and limitations.

Signature on Application

The person who signs the application form will often be the applicant himself; when another person signs on behalf of the applicant, his title or relationship to the applicant should be shown in the space provided. In all cases, the person signing the form should be authorized to do so by the applicant. An application submitted by a corporation must be signed by a principal executive officer of at least the level of vice president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge(s) described in the form originate. In the case of a partnership or a sole proprietorship, the application must be signed by a general partner or the proprietor, respectively. In the case of a municipal, State, Federal or other public facility, the application must be signed by either a principal executive officer, ranking elected official or other duly authorized employee.

Other Instructions

Submit this application as soon as possible. It should be submitted at least 180 days prior to the expiration of your present permit.

All NPDES Permit Applications are to be submitted to:

Department of Environmental Quality
WATER QUALITY DIVISION - Permit Program
P. O. Box 1760
Portland, OR 97207

TABLE 2

(340-45-070)

PERMIT FEE SCHEDULE

(1) Filing Fee. A filing fee of $50 shall accompany any application for issuance, renewal, modification, or transfer of an NPDES Waste Discharge Permit or Water Pollution Control Facilities Permit. This fee is non-refundable and is in addition to any application processing fee or annual compliance determination fee which might be imposed.

(2) Application Processing Fee. An application processing fee varying between $50 and $1,000 shall be submitted with each application. The amount of the fee shall depend on the type of facility and the required action as follows:

(a) New Applications

(A) Major industries[1] -- $1000
(B) Minor industries -- $500
(C) Major domestic[2] -- $500
(D) Minor domestic -- $250
(E) Agricultural -- $250

(b) Permit Renewals (including request for effluent limit modification):

(A) Major industries[1] -- $500
(B) Minor industries -- $250
(C) Major domestic[2] -- $250
(D) Minor Domestic -- $125
(E) Agricultural -- $125

(c) Permit Renewals (without request for effluent limit modification):

(A) Major industries[1] -- $250
(B) Minor industries -- $150
(C) Major domestic[2] -- $150
(D) Minor domestic -- $100
(E) Agricultural -- $100

EXCERPTS FROM WATER QUALITY RULES
CHAPTER 340
REGULATIONS PERTAINING TO PERMIT FEES

45-070

(1) Beginning July 1, 1976 all persons required to have a Water Pollution Control Facilities Permit or NPDES Waste Discharge Permit shall be subject to a three-part fee consisting of a uniform non-refundable filing fee, an application processing fee and an annual compliance determination fee which are obtained from Table A. The amount equal to the filing fee, application processing fee and the first year's annual compliance determination fee shall be submitted as a required part of any application for a new NPDES or WPCF permit. The amount equal to the filing fee and application processing fee, if applicable, shall be submitted as a required part of any application for renewal or modification of an NPDES or WPCF permit.

(2) The annual compliance determination fee, as listed in Table 2 Section 3., must be paid for each year a disposal system is in operation or during which a discharge to public waters occurs. The fee period shall correspond with the state's fiscal year (July 1 through June 30) and shall be paid annually during the month of July. Any annual compliance determination fee submitted as part of an application for a new NPDES or WPCF permit shall apply to the fiscal year the permitted facility is put into operation. For the first year's operation, the full fee shall apply if the facility is placed into operation on or before May 1. Any new facility placed into operation after May 1 shall not owe a compliance determination fee until the following July. The Director may alter the due date for the annual compliance determination fee upon receipt of a justifiable request from a permittee. The Commission may reduce or suspend the annual compliance determination fee in the event of a proven hardship.

(3) Modifications of existing, unexpired permits which are instituted by the Department due to changing conditions or standards, receipts of additional information or any other reason pursuant to applicable statutes and do not require re-filing or review of an application or plans and specifications shall not require submission of the filing fee or the application processing fee.

(4) Upon the Department accepting an application for filing, the filing fee shall be non-refundable.

(5) The application processing fee may be refunded in whole or in part when submitted with an application if either of the following conditions exist:
   (a) The Department determines that no permit will be required.
   (b) The Department determines that the wrong application has been filed.

(6) All fees shall be made payable to the Department of Environmental Quality.

WG742 (1)
DEQ 12/81

(d) Permit Modifications (involving increase in effluent limitations):

(A) Major industries[1] -- $500
(B) Minor industries -- $250
(C) Major domestic[2] -- $250
(D) Minor domestic -- $125
(E) Agricultural -- $125

(e) Permit Modifications (not involving an increase in effluent limits): All categories -- $75

(3) Annual Compliance Determination Fee Schedule:

(a) Domestic Waste Sources (Select only one category per permit) (Category, Dry Weather Design Flow, and Initial and Annual Fee):

(A) Sewage Disposal -- 10 MGD or more -- $1050
(B) Sewage Disposal -- At least 5 but less than 10 MGD -- $825
(C) Sewage Disposal -- At least 1 but less than 5 MGD -- $425
(D) Sewage Disposal -- Less than 1 MGD -- $225
(E) Non-overflow sewage lagoons -- $100
(F) On-Site sewage disposal systems larger than 5000 gallons per day -- $60

(b) Industrial, Commercial and Agricultural Sources (Source and Initial and Annual Fee:

(For multiple sources on one application select only the one with highest fee)

(A) Major pulp, paper, paperboard, hardboard, and other fiber pulping industry -- $1325
(B) Major sugar beet processing, potato and other vegetable processing, and fruit processing industry -- $1325
(C) Fish Processing Industry:

(i) Bottom fish, crab, and/or oyster processing -- $125
(ii) Shrimp processing -- $150
(iii) Salmon and/or tuna canning -- $225

(D) Electroplating industry (excludes facilities which do anodizing only):

(i) Rectifier output capacity of 15,000 Amps or more -- $1325

NWT 001152

(ii) Rectifier output capacity of less than 15,000 Amps, but more than 5000 Amps -- $650

(E) Primary Aluminum Smelting -- $1325
(F) Primary smelting and/or refining of non-ferrous metals utilizing sand chlorination separation facilities -- $1325
(G) Primary smelting and/or refining of ferrous and non-ferrous metals not elsewhere classified above -- $650
(H) Alkalies, chlorine, pesticide, or fertilizer manufacturing with discharge of process waste waters -- $1325
(I) Petroleum refineries with a capacity in excess of 15,000 barrels per day discharging process waste water -- $1325
(J) Cooling water discharges in excess of 20,000 BTU/sec. -- $650
(K) Milk products processing industry which processes in excess of 250,000 pounds of milk per day -- $1325
(L) Major mining operators -- $1325
(M) Small mining operations which:

(i) Discharge directly to public waters -- $150
(ii) Do not discharge to public waters -- $100

(N) All facilities not elsewhere classified with disposal of process waste water -- $225
(O) All facilities not elsewhere classified which dispose of non-process waste waters (i.e. small cooling water discharges, boiler blowdown, filter backwash, log ponds, etc.) -- $125
(P) Dairies and other confined feeding operations -- $100
(Q) All facilities which dispose of waste waters only by evaporation from watertight ponds or basins -- $100

1 Major Industries Qualifying Factors:
-1- Discharges large BOD loads; or
-2- Is a large metals facility; or
-3- Has significant toxic discharges; or
-4- Has a treatment system which, if not operated properly, will have a significant adverse impact on the receiving stream; or
-5- Any other industry which the Department determines needs special regulatory control.

2 Major Domestic Qualifying Factors:
-1- Serving more than 10,000 people; or
-2- Serving industries which can have a significant impact on the treatment system.

NWT 001153

VICTOR ATIYEH
GOVERNOR

Department of Environmental Quality

522 S.W. 5th AVENUE, P.O. BOX 1760, PORTLAND, OREGON 97207

DEC 14 1979

Koppers Company, Inc.
7540 Northwest St. Helens Road
Portland, OR 97229

Re: Waste Discharge Permit
File No. 47430

We have completed our review of your permit application and the comments received regarding the preliminary draft permit which was mailed to you for review on September 20, 1979.
and have issued the attached NPDES Waste Discharge Permit.

This permit will be considered as the final action on permit application number OR 100077-9.

Copies of monitoring report forms will be sent to you by our regional office under separate cover.

You are urged to carefully read the permit and take all possible steps to comply with the conditions contained therein so that our Oregon environment can be preserved. If you have questions regarding the permit, please contact this office.

Sincerely,

William H. Young

WILLIAM H. YOUNG
Director

CKA: pn
Attachment

cc: Northwest Region, DEQ

RECEIVED
DEC 19 1979
KOPPERS CO., INC.
TAR & CHEMICAL DIV.
PORTLAND, OREGON

Contains Recycled Materials

DEQ-1

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

WASTE DISCHARGE PERMIT
Department of Environmental Quality
522 Southwest Fifth Avenue, Portland, OR
Mailing Address: Box 1760, Portland, OR 97207
Telephone: (503) 229-5696

Issued pursuant to ORS 468.740 and The Federal Clean Water Act

---

ISSUED TO:

Koppers Company, Inc.
7540 Northwest St. Helens Road
Portland, OR 97229

SOURCES COVERED BY THIS PERMIT:

Type of Waste	Outfall Number	Outfall Location
Tank farm run-off and boiler blow-down	001	Willamette River
Noncontact cooling water	002	Willamette River

PLANT TYPE AND LOCATION:

Creosote Terminal
7540 Northwest St. Helens Road
Portland, OR 97229

RECEIVING STREAM INFORMATION:

Major Basin: Willamette
Minor Basin:
Receiving Stream: Willamette
County: Multnomah
Applicable
Standards: OAR 340-41-445

Issued in response to Application Number OR 100077-9 received June 21, 1979.

William H. Young
William H. Young, Director

DEC 14 1979
Date

PERMITTED ACTIVITIES

Until this permit expires or is modified or revoked, the permittee is authorized to construct, install, modify or operate a waste water collection, treatment, control and disposal system and discharge adequately treated waste waters in conformance with requirements, limitations, and conditions set forth in attached schedules as follows:

Page

Schedule A - Waste Discharge Limitations not to be Exceeded.....2
Schedule B - Minimum Monitoring and Reporting Requirements.....3
Schedule C - Compliance Conditions and Schedules.....-
Schedule D - Special Conditions.....4
General Conditions.....5

All other direct and indirect waste discharges to public waters are prohibited.

This permit does not relieve the permittee from responsibility for compliance with other applicable Federal, state, or local laws, rules, or standards.

SCHEDULE A

1. Waste Discharge Limitations not to be Exceeded After Permit Issuance Date

Outfall Number 001

	Concentrations		Loadings	
	Monthly Ave. mg/l	Daily Max. mg/l	Monthly Ave. kg/day (lb/day)	Daily Max. kg/day (lb/day)
Oil & grease	10	15	-	-
Phenols	0.5	0.7	-	-

Other Parameters	Limitations
pH	Shall be outside the range 6.0 - 9.0
Temperature	Shall not exceed 43°C (110°F)

Outfall Number 002

Parameters	Limitations
Flow	Shall not exceed 38 m^3/day (10,000 GPD)
Temperature	Shall not exceed 27°C (80°F)

2. Notwithstanding the effluent limitations established by this permit, no wastes shall be discharged and no activities shall be conducted which will violate Water Quality Standards as adopted in OAR 340-41-445 except in the following defined mixing zone:

The allowable mining zone is defined as that portion of the Willamette River within 200 feet from the point of discharge.

SCHEDULE B

Minimum Monitoring and Reporting Requirements (unless otherwise approved in writing by the Department)

Outfall Number 001, 002

Item or Parameter	Minimum Frequency	Type of Sample
Flow (001 & 002)	Daily	Estimate
Temperature (001 & 002)	Daily	Grab
pH (001)	Daily	Grab
Oil & Grease (001)	Weekly	Composite*
Phenols (001)	Monthly	Composite*

Reporting Procedures

Monitoring results shall be reported on approved forms. The reporting period is the calendar year. Reports must be submitted to the Department by January 15th of the following year.

*The composite sample shall consist of not less than three samples taken at regular intervals over an eight hour period.

SCHEDULE D

Special Conditions

1. Sanitary wastes shall be disposed of to the city of Portland municipal sewage system.

2. An adequate contingency plan for prevention and handling of spills and unplanned discharges shall be in force at all times. A continuing program of employee orientation and education shall be maintained to ensure awareness of the necessity of good inplant control and quick and proper action in the event of a spill or accident.

3. The flow rate of wastewater discharged through the oil-water separator shall not exceed the hydraulic design capacity of the separator.

4. No emulsifying agents or detergents shall be discharged into or otherwise be allowed to enter into the oil-water separator.

GENERAL CONDITIONS

G1. All discharges and activities authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant more frequently than or at a level in excess of that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit.

G2. Monitoring records:

a. All records of monitoring activities and results, including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records, shall be retained by the permittee for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the permittee or when requested by the Director.

b. The permittee shall record for each measurement or sample taken pursuant to the requirements of this permit the following information: (1) the date, exact place, and time of sampling; (2) the dates the analyses were performed; (3) who performed the analyses; (4) the analytical techniques or methods used; and (5) the results of all required analyses.

c. Samples and measurements taken to meet the requirements of this condition shall be representative of the volume and nature of the monitored discharge.

d. All sampling and analytical methods used to meet the monitoring requirements specified in this permit shall, unless approved otherwise in writing by the Department, conform to the Guidelines Establishing Test Procedures for the Analysis of Pollutants as specified in 40 CFR, Part 136.

G3. All waste solids, including dredgings and sludges, shall be utilized or disposed of in a manner which will prevent their entry, or the entry of contaminated drainage or leachate therefrom, into the waters of the state, and such that health hazards and nuisance conditions are not created.

G4. The diversion or bypass of any discharge from facilities utilized by the permittee to maintain compliance with the terms and conditions of this permit is prohibited, except (a) where unavoidable to prevent loss of life or severe property damage, or (b) where excessive storm drainage or runoff would damage any facilities necessary for compliance with the terms and conditions of this permit. The permittee shall immediately notify the Department in writing of each such diversion or bypass in accordance with the procedure specified in Condition G12.

G5. The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws, or regulations.

G6. Whenever a facility expansion, production increase, or process modification is anticipated which will result in a change in the character of pollutants to be discharged or which will result in a new or increased discharge that will exceed the conditions of this permit, a new application must be submitted together with the necessary reports, plans, and specifications for the proposed changes. No change shall be made until plans have been approved and a new permit or permit modification has been issued.

G7. After notice and opportunity for a hearing this permit may be modified, suspended, or revoked in whole or in part during its term for cause including but not limited to the following:

a. Violation of any terms or conditions of this permit or any applicable rule, standard, or order of the Commission;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;

c. A change in the condition of the receiving waters or any other condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

G8. If a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Federal Act for a toxic pollutant which is present in the discharge authorized herein and such standard or prohibition is more stringent than any limitation upon such pollutant in this permit, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition and the permittee shall be so notified.

G9. The permittee shall, at all reasonable times, allow authorized representatives of the Department of Environmental Quality:

a. To enter upon the permittee's premises where an effluent source or disposal system is located or in which any records are required to be kept under the terms and conditions of this permit;

b. To have access to and copy any records required to be kept under the terms and conditions of this permit;

c. To inspect any monitoring equipment or monitoring method required by this permit; or

d. To sample any discharge of pollutants.

G10. The permittee shall maintain in good working order and operate as efficiently as practicable all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

G11. The Department of Environmental Quality, its officers, agents, of employees shall not sustain any liability on account of the issuance of this permit or on account of the construction or maintenance of facilities because of this permit.

G12. In the event the permittee is unable to comply with all the conditions of this permit because of a breakdown of equipment or facilities, an accident caused by human error or negligence, or any other cause such as an act of nature, the permittee shall:

a. Immediately take action to stop, contain, and clean up the unauthorized discharges and correct the problem.

b. Immediately notify the Department of Environmental Quality so that an investigation can be made to evaluate the impact and the corrective actions taken and determine additional action that must be taken.

c. Submit a detailed written report describing the breakdown, the actual quantity and quality of resulting waste discharges, corrective action taken, steps taken to prevent a recurrence, and any other pertinent information.

Compliance with these requirements does not relieve the permittee from responsibility to maintain continuous compliance with the conditions of this permit or the resulting liability for failure to comply.

G13. Definitions of terms and abbreviations used in this permit:

a. BOD means five-day biochemical oxygen demand.
b. TSS means total suspended solids.
c. mg/l means milligrams per liter.
d. kg means kilograms.
e. m^3/d means cubic meters per day.
f. MGD means million gallons per day.
g. Composite sample means a combination of samples collected, generally at equal intervals over a 24-hour period, and apportioned according to the volume of flow at the time of sampling.
h. FC means fecal coliform bacteria.
i. Averages for BOD, TSS, and Chemical parameters based on arithmetic mean of samples taken.
j. Average Coliform or Fecal Coliform is based on geometric mean of samples taken.

LP:o
PW4743.0

FILE NORTHWEST-WATER-NPDES permit

Permit Number: 2180-J
Expiration Date: 11/30/79
Page 1 of 7

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

WASTE DISCHARGE PERMIT

Department of Environmental Quality
1234 S. W. Morrison Street
Portland, Oregon 97205
Telephone: (503) 229-5696

Issued in accordance with the provisions of
ORS 449.083 (Recodified as 468.740)
and
Federal Water Pollution Control Act Amendments of 1972,
P.L. 92-500, Oct. 18, 1972 (33 U.S.C. § 1251 et seq.)
(Hereinafter referred to as the "Federal Act").

ISSUED TO:

Koppers Company, Inc.
1201 Koppers Building
Pittsburg, Pennsylvania 15219

PLANT SITE:

7540 N. W. St. Helens Road
Portland, Oregon 97229

ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY

Kessler R. Cannon
Director

6-23-75
Date

REFERENCE INFORMATION

File Number: 47430

Appl. No.: Received
OR-000077-9

Major Basin: Willamette

Minor Basin:

Receiving Stream: Willamette

River Mile: 6.2

County: Multnomah

PERMITTED ACTIVITIES

Until such time as this permit expires or is modified or revoked, Koppers Company, Portland Plant is herewith permitted to:

a. Construct, operate and maintain waste water control facilities.
b. Discharge treated tank farm runoff, treated contaminated storm runoff and boiler blowdown to the Willamette River.
c. Discharge uncontaminated cooling water and uncontaminated storm runoff to the Willamette River

All of the above activities must be carried out in conformance with the requirements, limitations and conditions which follow.

All other waste discharges are prohibited.

SPECIAL CONDITIONS

1. Prior to July 1, 1976, the permittee shall submit detailed engineering plans for providing, prior to July 1, 1977, such wastewater control facilities as are necessary to accomplish the following:

   a. Contain and treat all contaminated storm runoff to meet the effluent limitations specified in condition 5 of this permit.

   b. Treat all tank farm runoff and boiler blowdown to meet the effluent limitations specified in condition 5 of this permit.

2. The permittee is expected to meet the compliance schedules and interim dates which have been established in condition 1 of this permit. Either prior to or no later than 14 days following any lapsed compliance date the permittee shall submit to the Department a notice of compliance or non-compliance with the established schedule. The Director may revise a schedule of compliance if he determines good and valid cause resulting from events over which the permittee has little or no control.

3. Prior to constructing or modifying any waste water control facilities, detailed plans and specifications shall be approved in writing by the Department.

4. Beginning on the date of issuance of this permit and ending June 30, 1977, the quantity and quality of boiler blowdown and tank farm effluent discharged directly or indirectly to the Willamette River shall be limited not to exceed the following:

Parameter	Monthly Average	Daily Maximum
Oil and grease	20 mg/l	30 mg/l

Other Parameters	Limitations
pH	Shall not be outside the range 6.0 - 9.0
Temperature	Shall not exceed 110°F

5. Beginning July 1, 1977, the quantity and quality of treated boiler blowdown, tank farm runoff, and contaminated runoff shall be limited not to exceed the following:

Parameter	Monthly Average	Daily Maximum
Oil and Grease	10 mg/l	15 mg/l
Phenols	0.5 mg/l	0.7 mg/l

Other Parameters	Limitations
pH	Shall not be outside the range 6.0 - 9.0
Temperature	Shall not exceed 110°F

6. The quantity and quality of uncontaminated cooling water discharged to the Willamette River shall be limited not to exceed the following:

Parameter	Limitations
Flow	Shall not exceed 10,000 gpd
Temperature	Shall not exceed 80°F

7. The flow rate of waste water discharged through the oil-water separator shall not exceed the hydraulic design capacity of the separator.

8. No emulsifying agents or detergents shall be discharged into or otherwise be allowed to enter the oil-water separator.

9. Notwithstanding the effluent limitations established by this permit, no wastes shall be discharged and no activities shall be conducted after June 30, 1977 which will violate Water Quality Standards as adopted in OAR 340-41-045 except in the following defined mixing zone:

   The allowable mixing zone is defined as that portion of the Willamette River within 200 feet from the point of discharge.

10. Sanitary wastes shall be disposed of to the City of Portland municipal sewerage system.

11. Unless approved otherwise in writing by the Department the permittee shall observe and inspect all waste handling, treatment and disposal facilities and the receiving stream above and below each point of discharge at least daily to insure compliance with the conditions of this permit. A written record of all such observations shall be maintained at the plant and shall be made available to the Department of Environmental Quality staff for inspection and review upon request.

12. The permittee shall monitor the operation and efficiency of all treatment and control facilities and the quantity and quality of the wastes discharged. A record of all such data shall be maintained and submitted to the Department of Environmental Quality at the end of each calendar month. Unless otherwise agreed to in writing by the Department of Environmental Quality, data collected and submitted shall include but not necessarily be limited to the following parameters and minimum frequencies:

Parameter	Source**	Minimum Frequency
Flow	001, 002	Daily estimate
Temperature	001, 002	Daily grab sample
pH	001	Daily grab sample
Oil and grease	001	Weekly composite sample*
Phenols	001	Monthly composite sample*

*The composite sample shall consist of three grab samples taken at regular intervals over an eight hour period.

**001 is the discharge which includes the tank farm runoff, boiler blowdown, and treated storm water effluents. 002 is the discharge which includes the uncontaminated cooling water effluent.

13. Within 30 days of the issuance of this permit the permittee shall submit a detailed description of the sampling procedures used, sample analysis techniques and exact location of sampling stations.

14. Prior to June 1, 1976, the permittee shall provide an alternative power source sufficient to operate all facilities utilized by the permittee to maintain compliance with the terms and conditions of this permit. In lieu of this requirement the permittee may certify in writing to the Department within 30 days of the issuance of the permit that in the event of a reduction, loss, or failure of a power source the permittee shall halt, reduce or otherwise control production and/or all discharges in order to maintain compliance with the terms and conditions of this permit.

15. The permittee shall prepare, submit to the Department and implement a suggested spill prevention and contingency plan for the facility covered by this permit within 90 days of the date of its issuance. Such plan shall include at least the following information and procedures relative to the prevention and handling of spills and unplanned discharges of oil, chemicals and other hazardous substances:

    a. A description of the reporting system which will be used to alert responsible facility management and appropriate legal authorities;

    b. A description of the facilities which prevent, contain or treat spills and unplanned discharges;

    c. A list of all oil and hazardous materials used, processed or stored at the facility which may be spilled and could conceivably be discharged to state waters;

    d. A brief description of recent spills and changes made to prevent their occurrence; and

    e. An implementation schedule for additional facilities which may be required to prevent the spillage of oil, chemicals and other hazardous materials and subsequent discharge to state waters.

16. The permittee shall, during all times of disposal, provide personnel whose responsibilities include assuring the continuous performance of the disposal system within the limitations of this permit.

GENERAL CONDITIONS

G1. All discharges and activities authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant more frequently than or at a level in excess of that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit.

G2. Monitoring procedures:

a. Monitoring shall begin on the first day of the month following issuance of this permit.

b. Monitoring reports shall be submitted by the 15th day of each following month unless otherwise approved in writing by the Department.

c. Monitoring reports shall be submitted on approved NPDES report forms.

d. All records of monitoring activities and results, including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records, shall be retained by the permittee for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the permittee or when requested by the Director.

e. The permittee shall record for each measurement or sample taken pursuant to the requirements of this permit the following information: (1) the date, exact place and time of sampling; (2) the dates the analyses were performed; (3) who performed the analyses; (4) the analytical techniques or methods used and (5) the results of all required analyses.

f. Samples and measurements taken to meet the requirements of this condition shall be representative of the volume and nature of the monitored discharge.

g. All sampling and analytical methods used to meet the monitoring requirements specified in this permit shall, unless approved otherwise in writing by the Department, conform to the Guidelines Establishing Test Procedures for the Analysis of Pollutants as specified in 40 CFR, Part 136.

G3. All waste solids, including dredgings and sludges, shall be utilized or disposed of in a manner which will prevent their entry, or the entry of contaminated drainage or leachate therefrom, into the waters of the state and such that health hazards and nuisance conditions are not created.

G4. The diversion or bypass of any discharge from facilities utilized by the permittee to maintain compliance with the terms and conditions of this permit is prohibited, except (a) where unavoidable to prevent loss of life or severe property damage or (b) where excessive storm drainage or runoff would damage any facilities necessary for compliance with the terms and conditions of this permit. The permittee shall immediately notify the Department in writing of each such diversion or bypass in accordance with the procedure specified in Condition G12.

G5. The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

G6. Whenever a facility expansion, production increase or process modification is anticipated which will result in a change in the character of pollutants to be discharged or which will result in a new or increased discharge that will exceed the conditions of this permit, a new application must be submitted together with the necessary reports, plans and specifications for the proposed changes. No change shall be made until plans have been approved and a new permit or permit modification has been issued.

G7. After notice and opportunity for a hearing this permit may be modified, suspended or revoked in whole or in part during its term for cause including but not limited to the following:

a. Violation of any terms or conditions of this permit or any applicable rule, standard, or order of the Commission;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;

c. A change in the condition of the receiving waters or any other condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

G8. If a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Federal Act for a toxic pollutant which is present in the discharge authorized herein and such standard or prohibition is more stringent than any limitation upon such pollutant in this permit, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition and the permittee shall be so notified.

G9. The permittee shall, at all reasonable times, allow authorized representatives of the Department of Environmental Quality:

a. To enter upon the permittee's premises where an effluent source or disposal system is located or in which any records are required to be kept under the terms and conditions of this permit;

b. To have access to and copy any records required to be kept under the terms and conditions of this permit;

c. To inspect any monitoring equipment or monitoring method required by this permit; or

d. To sample any discharge of pollutants.

G10. The permittee shall maintain in good working order and operate as efficiently as practicable all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

G11. The Department of Environmental Quality, its officers, agents and employees shall not sustain any liability on account of the issuance of this permit or on account of the construction or maintenance of facilities because of this permit.

G12. In the event the permittee is unable to comply with all of the conditions of this permit because of a breakdown of equipment or facilities, an accident caused by human error or negligence, or any other cause such as an act of nature, the permittee shall:

a. Immediately take action to stop, contain and clean up the unauthorized discharges and correct the problem.

b. Immediately notify the Department of Environmental Quality so that an investigation can be made to evaluate the impact and the corrective actions taken and determine additional action that must be taken.

c. Submit a detailed written report describing the breakdown, the actual quantity and quality of resulting waste discharges, corrective action taken, steps taken to prevent a recurrence and any other pertinent information.

Compliance with these requirements does not relieve the permittee from responsibility to maintain continuous compliance with the conditions of this permit or the resulting liability for failure to comply.

File: NW-WATER NPDES permit

SEP 27 1979

VICTOR ATIYEH
GOVERNOR

Department of Environmental Quality

522 SOUTHWEST 5TH AVE. PORTLAND, OREGON

MAILING ADDRESS: P.O. BOX 1760, PORTLAND, OREGON 97207

SEP 20 1979

Koppers Company Incorporated
7540 Northwest St. Helens Road
Portland, OR 97229

Final Date for Submission
of Written Comments: OCT 04 1979

Re: Waste Discharge Permit
File No. 47430

Gentlemen:

Your application for a National Pollutant Discharge Elimination System (NPDES) permit has been reviewed by the Department and a proposed NPDES permit has been drafted. You are invited to review the enclosed copy and submit any comments you may have in writing prior to the date indicated above.

After your comments, if any, have been received, the Public Notice regarding your application will be circulated to interested individuals and organizations. The proposed permit will also be made available to those persons requesting it. After the public review and participation period is over the final NPDES permit will be issued.

If you have any comments or questions, please contact this office.

Sincerely,

Harold L. Sawyer
Administrator
Water Quality Division

CKA:o
WO2190
Enclosures
cc: Northwest Region, DEQ

RECEIVED

KOPPERS CO., INC.

EQ-2

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

WASTE DISCHARGE PERMIT

PRELIMINARY DRAFT

Department of Environmental Quality
522 Southwest Fifth Avenue, Portland, OR
Mailing Address: Box 1760, Portland, OR 97207
Telephone: (503) 229-5696

Issued pursuant to ORS 468.740 and The Federal Clean Water Act

---

ISSUED TO:

Koppers Company, Inc.
7540 Northwest St. Helens Road
Portland, OR 97229

SOURCES COVERED BY THIS PERMIT:

Type of Waste	Outfall Number	Outfall Location
Tank farm run-off and boiler blow-down	001	Willamette River
Noncontact cooling water	002	Willamette River

PLANT TYPE AND LOCATION:

Creosote Terminal
7540 Northwest St. Helens Road
Portland, OR 97229

RECEIVING STREAM INFORMATION:

Major Basin: Willamette
Minor Basin:
Receiving Stream: Willamette
County: Multnomah
Applicable Standards: OAR 340-41-445

Issued in response to Application Number OR 100077-9 received June 21, 1979.

William H. Young, Director _____ Date _____

PERMITTED ACTIVITIES

Until this permit expires or is modified or revoked, the permittee is authorized to construct, install, modify or operate a waste water collection, treatment, control and disposal system and discharge adequately treated waste waters in conformance with requirements, limitations, and conditions set forth in attached schedules as follows:

Page

Schedule A - Waste Discharge Limitations not to be Exceeded.....2
Schedule B - Minimum Monitoring and Reporting Requirements.....3
Schedule C - Compliance Conditions and Schedules.....-
Schedule D - Special Conditions.....4
General Conditions.....5

All other direct and indirect waste discharges to public waters are prohibited.

This permit does not relieve the permittee from responsibility for compliance with other applicable Federal, state, or local laws, rules, or standards.

SCHEDULE A

1. Waste Discharge Limitations not to be Exceeded After Permit Issuance Date

Outfall Number 001

	Concentrations		Loadings	
	Monthly Ave. mg/l	Daily Max. mg/l	Monthly Ave. kg/day (lb/day)	Daily Max. kg/day (lb/day)
Oil & grease	10	15	-	-
Phenols	0.5	0.7	-	-

Other Parameters	Limitations
pH	Shall be outside the range 6.0 - 9.0
Temperature	Shall not exceed 43°C (110°F)

Outfall Number 002

Parameters	Limitations
Flow	Shall not exceed 38 m^3/day (10,000 GPD)
Temperature	Shall not exceed 27°C (80°F)

2. Notwithstanding the effluent limitations established by this permit, no wastes shall be discharged and no activities shall be conducted which will violate Water Quality Standards as adopted in OAR 340-41-445 except in the following defined mixing zone:

The allowable mining zone is defined as that portion of the Willamette River within 200 feet from the point of discharge.

SCHEDULE B

Minimum Monitoring and Reporting Requirements (unless otherwise approved in writing by the Department)

Outfall Number 001, 002

Item or Parameter	Minimum Frequency	Type of Sample
Flow (001 & 002)	Daily	Estimate
Temperature (001 & 002)	Daily	Grab
pH (001)	Daily	Grab
Oil & Grease (001)	Weekly	Composite*
Phenols (001)	Monthly	Composite*

Reporting Procedures

Monitoring results shall be reported on approved forms. The reporting period is the calendar year. Reports must be submitted to the Department by January 15th of the following year.

*The composite sample shall consist of not less than three samples taken at regular intervals over an eight hour period.

SCHEDULE D

Special Conditions

1. Sanitary wastes shall be disposed of to the city of Portland municipal sewage system.

2. An adequate contingency plan for prevention and handling of spills and unplanned discharges shall be in force at all times. A continuing program of employee orientation and education shall be maintained to ensure awareness of the necessity of good inplant control and quick and proper action in the event of a spill or accident.

3. The flow rate of wastewater discharged through the oil-water separator shall not exceed the hydraulic design capacity of the separator.

4. No emulsifying agents or detergents shall be discharged into or otherwise be allowed to enter into the oil-water separator.

GENERAL CONDITIONS

G1. All discharges and activities authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant more frequently than or at a level in excess of that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit.

G2. Monitoring records:

a. All records of monitoring activities and results, including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records, shall be retained by the permittee for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the permittee or when requested by the Director.

b. The permittee shall record for each measurement or sample taken pursuant to the requirements of this permit the following information: (1) the date, exact place, and time of sampling; (2) the dates the analyses were performed; (3) who performed the analyses; (4) the analytical techniques or methods used; and (5) the results of all required analyses.

c. Samples and measurements taken to meet the requirements of this condition shall be representative of the volume and nature of the monitored discharge.

d. All sampling and analytical methods used to meet the monitoring requirements specified in this permit shall, unless approved otherwise in writing by the Department, conform to the Guidelines Establishing Test Procedures for the Analysis of Pollutants as specified in 40 CFR, Part 136.

G3. All waste solids, including dredgings and sludges, shall be utilized or disposed of in a manner which will prevent their entry, or the entry of contaminated drainage or leachate therefrom, into the waters of the state, and such that health hazards and nuisance conditions are not created.

G4. The diversion or bypass of any discharge from facilities utilized by the permittee to maintain compliance with the terms and conditions of this permit is prohibited, except (a) where unavoidable to prevent loss of life or severe property damage, or (b) where excessive storm drainage or runoff would damage any facilities necessary for compliance with the terms and conditions of this permit. The permittee shall immediately notify the Department in writing of each such diversion or bypass in accordance with the procedure specified in Condition G12.

G5. The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws, or regulations.

G6. Whenever a facility expansion, production increase, or process modification is anticipated which will result in a change in the character of pollutants to be discharged or which will result in a new or increased discharge that will exceed the conditions of this permit, a new application must be submitted together with the necessary reports, plans, and specifications for the proposed changes. No change shall be made until plans have been approved and a new permit or permit modification has been issued.

G7. After notice and opportunity for a hearing this permit may be modified, suspended, or revoked in whole or in part during its term for cause including but not limited to the following:

a. Violation of any terms or conditions of this permit or any applicable rule, standard, or order of the Commission;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;

c. A change in the condition of the receiving waters or any other condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

G8. If a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Federal Act for a toxic pollutant which is present in the discharge authorized herein and such standard or prohibition is more stringent than any limitation upon such pollutant in this permit, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition and the permittee shall be so notified.

G9. The permittee shall, at all reasonable times, allow authorized representatives of the Department of Environmental Quality:

a. To enter upon the permittee's premises where an effluent source or disposal system is located or in which any records are required to be kept under the terms and conditions of this permit;

b. To have access to and copy any records required to be kept under the terms and conditions of this permit;

c. To inspect any monitoring equipment or monitoring method required by this permit; or

d. To sample any discharge of pollutants.

G10. The permittee shall maintain in good working order and operate as efficiently as practicable all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

G11. The Department of Environmental Quality, its officers, agents, of employees shall not sustain any liability on account of the issuance of this permit or on account of the construction or maintenance of facilities because of this permit.

G12. In the event the permittee is unable to comply with all the conditions of this permit because of a breakdown of equipment or facilities, an accident caused by human error or negligence, or any other cause such as an act of nature, the permittee shall;

a. Immediately take action to stop, contain, and clean up the unauthorized discharges and correct the problem.

b. Immediately notify the Department of Environmental Quality so that an investigation can be made to evaluate the impact and the corrective actions taken and determine additional action that must be taken.

c. Submit a detailed written report describing the breakdown, the actual quantity and quality of resulting waste discharges, corrective action taken, steps taken to prevent a recurrence, and any other pertinent information.

Compliance with these requirements does not relieve the permittee from responsibility to maintain continuous compliance with the conditions of this permit or the resulting liability for failure to comply.

G13. Definitions of terms and abbreviations used in this permit:

a. BOD means five-day biochemical oxygen demand.
b. TSS means total suspended solids.
c. mg/l means milligrams per liter.
d. kg means kilograms.
e. m^3/d means cubic meters per day.
f. MGD means million gallons per day.
g. Composite sample means a combination of samples collected, generally at equal intervals over a 24-hour period, and apportioned according to the volume of flow at the time of sampling.
h. FC means fecal coliform bacteria.
i. Averages for BOD, TSS, and Chemical parameters based on arithmetic mean of samples taken.
j. Average Coliform or Fecal Coliform is based on geometric mean of samples taken.

LP:o
PW4743.0

VICTOR ATIYEH
GOVERNOR

Department of Environmental Quality

522 SOUTHWEST 5TH AVE. PORTLAND, OREGON

MAILING ADDRESS: P.O. BOX 1760, PORTLAND, OREGON 97207

Appl. No. OR 100077-9
File No. 47430
County: Multnomah

PUBLIC NOTICE

Notice of Application for NPDES Waste Discharge Permit

Koppers Company, Inc., has applied for renewal of a National Pollutant Discharge Elimination System Waste Discharge Permit in accordance with Oregon Revised Statutes 449.083 (recodified as 468.740) and the Federal Water Pollution Control Act Amendments of 1972, P.L. 92-500, October 18, 1972.

DESCRIPTION OF FACILITY AND DISCHARGE

Koppers Company, Inc., operates a creosote terminal located at 7540 Northwest St. Helens Road, Portland, Oregon.

Wastewater discharged to the Willamette River consists of less than 6,000 gallons per day of storm runoff, boiler blowdown, and noncontact cooling water.

The discharge contains less than 10 mg/l of oil and grease with a maximum summertime temperature of 110°F. There have not been any reported adverse effects on water quality or aquatic life in the receiving stream.

TENTATIVE DETERMINATION

On the basis of preliminary staff review, the Department proposes to renew a permit to operate waste water control facilities and to discharge to public waters subject to certain effluent limitations and special conditions. This proposed determination is tentative.

LP:o
PW4743.0L

KOPPERS

Interoffice Correspondence

To P. W. Guth

Location Northwest Plant

Subject NPDES PERMIT RENEWAL

From Organic Materials Group

Location K 1201

Date June 6, 1979

Please sign the attached letter and date and sign the application (after you have checked the information) on page 2. Enclose a check for $25.00 and forward by Certified Mail, Return Receipt Requested to:

Administrator, Water Quality Division
Department of Environmental Quality
P.O. Box 1760
Portland, Oregon 97207

Jordan M. Dern

JMD:em
Attachment

cc: K. R. Caldwell
R. L. Shannon
A. W. Lawrence
A. C. Middleton

Koppers Company, Inc., Organic Materials Group
Pittsburgh, PA 15219, Telephone 412-227-2000

KOPPERS

June 13, 1979

Administrator, Water Quality Division
Department of Environmental Quality
P.O. Box 1760
Portland, OR 97207

Subject: NPDES Renewal
Permit No. 8120 J
Koppers Company, Inc.
Portland, Muttnomack, Oregon

Dear Sir:

Enclosed is an application for renewal of the subject NPDES permit and a check for $25.00 processing fee. Since the original NPDES permit was issued, the plant has changed from a manufacturing facility to a terminal operation. The only discharge at the present time is stormwater runoff. I hope that this will be reflected in a reduced monitoring requirement.

Very truly yours,

P. W. Guth
Plant Superintendent

Writer's Direct Dial Number _____

NWT 001179

Form Approved
OMB No. 158-R0096

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
APPLICATION FOR PERMIT TO DISCHARGE - SHORT FORM C

FOR AGENCY USE

APPLICATION NUMBER								
DATE RECEIVED								
YEAR			MO.			DAY		

To be filed only by persons engaged in manufacturing and mining

Do not attempt to complete this form before reading accompanying instructions

Please print or type

1. Name, address, location, and telephone number of facility producing discharge

A. Name Koppers Company, Inc., Northwest Plant

B. Mailing address

1. Street address 7540 N.W. St. Helens Road
2. City Portland
3. State Oregon
4. County Muttnomack
5. ZIP 97229

C. Location:

1. Street 7540 N.W. St. Helens Road
2. City Portland
3. County Muttnomack
4. State Oregon

D. Telephone No. 503 (Area Code) 286-3681

2. SIC [| | | |] (Leave blank)

3. Number of employees 8

If all your waste is discharged into a publicly owned waste treatment facility and to the best of your knowledge you are not required to obtain a discharge permit, proceed to item 4. Otherwise proceed directly to item 5.

4. If you meet the condition stated above, check here ☐ and supply the information asked for below. After completing these items, please complete the date, title, and signature blocks below and return this form to the proper reviewing office without completing the remainder of the form.

A. Name of organization responsible for receiving waste

B. Facility receiving waste:

1. Name
2. Street address
3. City
4. County
5. State
6. ZIP

5. ☒ Principal product, ☐ raw material (Check one) Creosote

6. Principal process Terminal

7. Maximum amount of principal product produced or raw material consumed per (Check one)

Basis	Amount							
	1-99 (1)	100-199 (2)	200-499 (3)	500-999 (4)	1000-4999 (5)	5000-9999 (6)	10,000-49,999 (7)	50,000 or more (8)
A. Day								
B. Month								X
C. Year								

EPA Form 7550-3 (Rev. 3-74) PREVIOUS EDITION MAY BE USED UNTIL SUPPLY IS EXHAUSTED

9. Maximum amount of principal product produced or raw material consumed, reported in item 7, above, is measured in (Check one):

A.☐ pounds B.☐ tons C.☐ barrels D.☐ bushels E.☐ square feet

F.☒ gallons G.☐ pieces or units H.☐ other, specify _____

9. (a) Check here if discharge occurs all year ☒, or

(b) Check the month(s) discharge occurs:

1.☐ January 2.☐ February 3.☐ March 4.☐ April 5.☐ May 6.☐ June

7.☐ July 8.☐ August 9.☐ September 10.☐ October 11.☐ November 12.☐ December

(c) Check how many days per week: 1.☐ 1 2.☐ 2-3 3.☐ 4-5 4.☒ 6-7

10. Types of waste water discharged to surface waters only (check as applicable)

Discharge per operating day	Flow, gallons per operating day					Volume treated before discharging (percent)				
	0.1-999	1000-4999	5000-9999	10,000-49,999	50,000- or more	None	0.1-29.9	30-64.9	65-94.9	95-100
Storm water	(1) X	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10) X
A. Sanitary, daily average N/A										
B. Cooling water, etc. daily average N/A										
C. Process water, daily average N/A										
D. Maximum per operating day for total discharge (all types)			X							

11. If any of the three types of waste identified in item 10, either treated or untreated, are discharged to places other than surface waters, check below as applicable.

Waste water is discharged to:	Average flow, gallons per operating day				
	0.1-999 (1)	1000-4999 (2)	5000-9999 (3)	10,000-49,999 (4)	50,000 or more (5)
A. Municipal sewer system		X			
B. Underground well					
C. Septic tank					
D. Evaporation lagoon or pond					
E. Other, specify					

12. Number of separate discharge points: A.☐ 1 B.☒ 2-3 C.☐ 4-5 D.☐ 6 or more

13. Name of receiving water or waters Williamette River

14. Does your discharge contain or is it possible for your discharge to contain one or more of the following substances added as a result of your operations, activities, or processes: ammonia, cyanide, aluminum, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, zinc, phenols, oil and grease, and chlorine (residual). A.☒ yes B.☐ no

I certify that I am familiar with the information contained in the application and that to the best of my knowledge and belief such information is true, complete, and accurate.

Paul W. Guth — Printed Name of Person Signing

Plant Superintendent — Title

Date Application Signed

Signature of Applicant

18 U.S.C. Section 1001 provides that:

Whoever, in any matter within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact, or makes any false, fictitious, or fraudulent statements or representations; or makes or uses any false writing or document knowing same to contain any false, fictitious, or fraudulent statement or entry, shall be fined not more than $10,000 or imprisoned not more than 5 years, or both.

cc RLS
9-13-76

DEPARTMENT OF ENVIRONMENTAL QUALITY

PORTLAND REGION

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5263

ROBERT W. STRAUB
GOVERNOR

September 1, 1976

Mr. Paul W. Guth
Plant Superintendent
Koppers Company, Inc.
7540 N. W. St. Helens Road
Portland, Oregon 97229

Re: PERMIT ACTION
WQ - Koppers Company, Inc.
Multnomah County

Dear Mr. Guth:

This is in response to your letter of June 28, 1976, in which you stated that Koppers Company, Inc. is presently operating with the 1977 effluent limitations as set forth in Condition S5 of your National Pollutant Discharge Elimination System (NPDES) Waste Discharge Permit No. 2180-J.

On the basis of your plant's demonstrated ability to comply with the projected waste discharge limitations, the requirement for submittal of engineering plans as detailed in Condition S1 is hereby waived. This change is made on the condition that wastewater discharged from your plant continues to consistently meet criteria stated in Special Condition 5.

If you have any questions or if we can be of further assistance, please feel free to contact this office at 229-5348.

Sincerely,

LOREN KRAMER
Director

RECEIVED
SEP - 7 1976
KOPPERS CO., INC.
TAR & CHEMICAL DIV.
PORTLAND, OREGON

SMW/jm

cc: Environmental Protection Agency, Oregon Operations
Water Quality Division - DEQ

NWT 001182

Organic Materials Division, Koppers Company, Inc.
Pittsburgh, Pa. 15219, Telephone 412-391-3300

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

KOPPERS

June 28, 1976

Oregon Department of Environmental Quality
1234 S.W. Morrison Street
Portland, Oregon 97205

Gentlemen:

Special Condition No. 1 of Permit No. 2180-J issued to this facility specified that plans for compliance with the effluent limitations of that permit be submitted by July 1, 1976.

As shown by the Discharge Monitoring Reports, maintenance of existing effluent equipment at this facility has been sufficient to achieve compliance with the limitations of the permit.

Very truly yours,

P. W. Guth
Plant Superintendent
Koppers Company, Inc.
7540 N.W. St. Helens Road
Portland, Oregon 97229

NWT 001183

KOPPERS

Interoffice Correspondence

To J. M. Anderson

Location K-2050

Subject NPDES Permit 2180-J
Northwest Plant

From Organic Materials

Location Engineering Dept.

Date October 6, 1975

Today I received a call from P. W. Guth who said he had been called by Mr. Larry Patterson of the DEQ about our failure to submit a spill prevention plan within 90 days of the issuance of the permit. I cannot find any record in our files that we filed a spill plan. I instructed Mr. Guth to write a letter to the DEQ stating that we are revising our spill plan to comply with special condition 15, page 4 of the permit and will submit it by October 31, 1975.

R J Shannon

R. L. Shannon

RLS:jfc

cc: P. W. Guth
J. Little

sent 10-16-75
see SPCC file

K 43- REV. 5 100M 2-75

OCTOBER 6, 1975

DEPARTMENT OF ENVIRONMENTAL QUALITY
1234 S.W. MORRISON STRRET
PORTLAND, OREGON 97205

ATTN: MR. LARRY PATTERSON

DEAR SIR:

WE ARE IN THE PROCESS OF REVISING OUR SPILL PREVENTION, AND CONTINGENCY PLAN TO CONFORM TO OUR WASTE WATER PERMIT. THE PLAN WILL BE COMPLETED BY OCTOBER 31, 1975.

SINCERELY

Paul W. Guth

PAUL W. GUTH
PLANT SUPERINTENDENT

PWG:ip

cc - RL Shannon

KOPPERS

Interoffice Correspondence

To P. W. Guth

Location Northwest

Subject DEQ LETTER

From Organic Materials Division

Location Manufacturing Services

Date August 15, 1975

Please sign the attached letter and forward by Certified Mail, Return Receipt Requested.

Jon M. Anderson

JMA:em
Attachment

cc: R. L. Shannon (With Attachment)
J. Little " "

KS REV 2

Certified Mail
Return Receipt Requested

KOPPERS

August 20, 1975

Oregon Department of Environmental Quality
1234 S.W. Morrison St.
Portland, OR 97205

Attn: Mr. Larry Patterson

Dear Sir:

With respect to paragraph 14 on page 4 of 7 of Permit No. 2180-J issued to Koppers Company, Inc., this is to certify that in the event of a reduction, loss or failure of a power source, Koppers Company shall halt, reduce or otherwise control production and/or all discharges in order to maintain compliance with the terms and conditions of Permit No. 2180-J.

Very truly yours,

P. W. Guth
Plant Superintendent

KOPPERS

Interoffice Correspondence

To Paul Guth

Location Northwest

Subject DEQ LETTER

From Organic Materials Division

Location Manufacturing Services

Date July 28, 1975

Please sign the attached letter and forward by Certified Mail, Return Receipt Requested. The first report is due August 15, 1975.

JMA

Jon M. Anderson

JMA:em
Attachment

cc: R. L. Shannon (With Attachment)

K-5 REV. 2

Pittsburgh, Pa. 15219, Telephone 412-391-3300

Certified Mail
Return Receipt Requested

KOPPERS

July 29, 1975

Department of Environmental Quality
1234 S.W. Morrison Street
Portland, Oregon 97205

Re: Koppers Company, Inc.
7540 N.W. St. Helens Road
Portland, Oregon 97229
Permit No. 2180-J

Gentlemen:

Sampling and analytical procedures will be according to the Standard Methods of the Environmental Protection Agency and the Department of Environmental Quality. For 001, the boiler blowdown sample will be taken at the south end of the boiler house, the tank farm runoff sample at the southwest corner of the plant, and storm water runoff sample at the center catch basin in the parking area. For 002, the cooling water sample will be taken at the base of the dike wall at the southeast corner of the tank farm, and the air compressor cooling water sample will be taken at the east side of the boiler house.

Very truly yours,

Paul W. Guth
Plant Superintendent

Interoffice Correspondence

To P. W. Guth

Location Northwest

Subject DEQ WATER PERMIT

From Organic Materials Division

Location Manufacturing Services

Date July 7, 1975

Paragraph 13 of the water discharge permit just issued by the DEQ requires submission of information on sampling. Please advise me of the sampling locations for outfalls 001 and 002, and what laboratory will be analyzing for phenol and oil and grease, so that I may prepare a letter for your signature.

Jon M. Anderson

JMA:em

cc: J. Little
R. L. Shannon

K-5 REV. 2

DEPARTMENT OF ENVIRONMENTAL QUALITY

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-

ROBERT W. STRAUB
GOVERNOR

KESSLER R. CANNON
Director

MEMORANDUM

To: NPDES Permittees

From: Waste Discharge Permit Program

Subject: NPDES Discharge Monitoring Program

Federal regulations promulgated pursuant to the Federal Water Pollution Control Act Amendments of 1972 (P. L. 92-500) require that all National Pollutant Discharge Elimination System (NPDES) permittees submit monitoring information on official NPDES Discharge Monitoring Report forms. These monitoring reports must be submitted in addition to and not in lieu of the existing State monitoring report forms.

At the end of each required reporting period applicable data should be summarized and transferred to the NPDES report form. Please list each parameter in the same order it appears in the monitoring condition of your permit. The original of the NPDES report form should be included with your regular report form and submitted with it rather than mailed separately. The copy can be retained by you for your records.

A few sets of NPDES report forms are enclosed. One of the forms has been partially filled out for your guidance. Please follow the instructions and fill them out as completely as possible.

If you have any questions about the monitoring report forms or procedures, please contact:

Department of Environmental Quality
Water Quality Division
Waste Discharge Permit Program
1234 S. W. Morrison Street
Portland, Oregon 97205

Phone: 229-5325

Printed on Recycled Materials

DEQ-1

J. Anderson
rec'd 7-3-75

cc CHT, JL
7-3-75

DEPARTMENT OF ENVIRONMENTAL QUALITY

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5696

ROBERT W. STRAUB
GOVERNOR

KESSLER R. CANNON
Director

May 30, 1975

Koppers
Organic Materials Division
7540 N. W. St. Helens Road
Portland, Oregon 97229

Attention: Mr. Paul W. Guth, Plant Superintendent

Re: W. Q. - Koppers
Multnomah County

Gentlemen:

This letter will refer to your letter, dated May 20, 1975, concerning your comments relative to the proposed NPDES Waste Discharge Permit for your Portland plant.

The phenol effluent discharge limitations of 0.5 mg/l (monthly average) and 0.7 mg/l (daily maximum) as required in the permit beginning July 1, 1977, are the minimum levels which we believe we can allow from your plant. The Water Quality Standards for the Willamette River for phenols is 0.001 mg/l. Even with a discharge level of 0.5 mg/l from your plant, your waste will have to be diluted 500 times to meet the standards.

Furthermore, we believe your Company can practicably install a waste water control system which can reliably meet these effluent limitations. It is true that an oil-water separator alone will probably not be able to achieve these limits, but a separator followed by a small aerated lagoon should provide sufficient treatment.

In regards to your comment relative to the oil and grease effluent discharge limitations, it should be pointed out that oil terminals in the Portland area can consistently meet oil grease limits of 10 mg/l (monthly average) and 15 mg/l (daily maximum). Most of these terminals use only a gravity separator for treatment. Consequently, we can find no reason for increasing the daily maximum oil and grease limitation to 20 mg/l.

cc J Anderson
R Shannon

Recycled Paper

DEQ-1

NWT 001192

Finally, as proposed, the permit does not prohibit you from discharging your waste water to the City of Portland sewerage system. Should your Company be granted permission from the City to discharge wastes to the City's sewerage system, you could connect your wastes to that system without violating the permit or receiving Departmental approval. Consequently, there is no need to add a condition to the permit to allow you to connect to the City of Portland sewerage system.

Should you have questions relative to this matter, please feel free to contact Mr. Dick Nichols in this office at 229-5309.

Very truly yours,

KESSLER R. CANNON
Director

Charles K. Ashbaker, Administrator
Water Pollution Control Division
Water Quality Program

RJN:rb

cc: NWRO (DEQ)

cc CHT
JL
6-27-75
final permit identical to draft permit

DEPARTMENT OF ENVIRONMENTAL QUALITY

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5301

ROBERT W. STRAUB
GOVERNOR

KESSLER R. CANNON
Director

JUN 24 1975

Koppers Company, Inc.
7540 N. W. St. Helens Road
Portland, Oregon 97229

Attention: Mr. Paul W. Guth, Plant Superintendent

Gentlemen:

Re: Waste Discharge Permit
File No. 47430

The Department of Environmental Quality has completed its review of your permit application and the comments received regarding the preliminary draft permit which was mailed to you for review on March 19, 1975 and has issued the attached NPDES Waste Discharge Permit.

In accordance with the requirements of regulations promulgated pursuant to the Federal Water Pollution Control Act Amendments of 1972 (P.L. 92-500) the Environmental Protection Agency has reviewed this NPDES permit and approved its issuance by letter dated June 19, 1975.

This permit will be considered as the final action on permit application number OR-000077-9.

Copies of NPDES monitoring report forms will be sent to you by our regional office under separate cover.

You are urged to carefully read the permit and take all possible steps to comply with the conditions contained therein so that our Oregon environment can be preserved. Any questions regarding the permit should be addressed to DEQ Portland Region, 1010 N. E. Couch Street, Portland, Oregon 97232, or telephone 238-8471.

Cordially,

KESSLER R. CANNON
Director

RECEIVED
JUN 25 1975
KOPPERS CO., INC.
TAR & CHEMICAL DIV.
PORTLAND, OREGON

CKA:ak
Attachment

cc: Portland Region
RL Shannon
T Anderson

Contains Recycled Materials

DEQ-1

NWT 001194

DEPARTMENT OF ENVIRONMENTAL QUALITY

PORTLAND REGION

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5263

ROBERT W. STRAUB
GOVERNOR

June 14, 1976

Koppers Company, Inc.
7540 N. W. St. Helens Road
Portland, Oregon 97229

Re: WQ - Koppers Company, Inc.
Multnomah County

Gentlemen:

This will remind you that your National Pollutant Discharge Elimination System (NPDES) Waste Discharge Permit includes a compliance date of July 1, 1976.

Please review your permit, and in particular Condition E1.

If you have any questions or if we can be of any assistance, please feel free to contact this office at 229-5348.

Sincerely,

LOREN KRAMER
Director

Stephen M. Willingham
Assistant Regional Engineer
Portland Region

SMW/jrs

KOPPERS CO INC
TAR & CHEMICAL DIV

NWT 001195

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

WASTE DISCHARGE PERMIT

Department of Environmental Quality
1234 S. W. Morrison Street
Portland, Oregon 97205
Telephone: (503) 229-5696

Issued in accordance with the provisions of
ORS 449.083 (Recodified as 468.740)
and
Federal Water Pollution Control Act Amendments of 1972,
P.L. 92-500, Oct. 18, 1972 (33 U.S.C. § 1251 et seq.)
(Hereinafter referred to as the "Federal Act").

ISSUED TO:

Koppers Company, Inc.
1201 Koppers Building
Pittsburg, Pennsylvania 15219

PLANT SITE:

7540 N. W. St. Helens Road
Portland, Oregon 97229

ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY

Kessler R. Cannon
Director

6-23-75
Date

REFERENCE INFORMATION

File Number: 47430

Appl. No.: Received
OR-000077-9

Major Basin: Willamette

Minor Basin:

Receiving Stream: Willamette

River Mile: 6.2

County: Multnomah

PERMITTED ACTIVITIES

Until such time as this permit expires or is modified or revoked, Koppers Company, Portland Plant is herewith permitted to:

a. Construct, operate and maintain waste water control facilities.
b. Discharge treated tank farm runoff, treated contaminated storm runoff and boiler blowdown to the Willamette River.
c. Discharge uncontaminated cooling water and uncontaminated storm runoff to the Willamette River

All of the above activities must be carried out in conformance with the requirements, limitations and conditions which follow.

All other waste discharges are prohibited.

SPECIAL CONDITIONS

1. Prior to July 1, 1976, the permittee shall submit detailed engineering plans for providing, prior to July 1, 1977, such wastewater control facilities as are necessary to accomplish the following:

   a. Contain and treat all contaminated storm runoff to meet the effluent limitations specified in condition 5 of this permit.

   b. Treat all tank farm runoff and boiler blowdown to meet the effluent limitations specified in condition 5 of this permit.

2. The permittee is expected to meet the compliance schedules and interim dates which have been established in condition 1 of this permit. Either prior to or no later than 14 days following any lapsed compliance date the permittee shall submit to the Department a notice of compliance or non-compliance with the established schedule. The Director may revise a schedule of compliance if he determines good and valid cause resulting from events over which the permittee has little or no control.

3. Prior to constructing or modifying any waste water control facilities, detailed plans and specifications shall be approved in writing by the Department.

4. Beginning on the date of issuance of this permit and ending June 30, 1977, the quantity and quality of boiler blowdown and tank farm effluent discharged directly or indirectly to the Willamette River shall be limited not to exceed the following:

Parameter	Monthly Average	Daily Maximum
Oil and grease	20 mg/l	30 mg/l

Other Parameters	Limitations
pH	Shall not be outside the range 6.0 - 9.0
Temperature	Shall not exceed 110°F

5. Beginning July 1, 1977, the quantity and quality of treated boiler blowdown, tank farm runoff, and contaminated runoff shall be limited not to exceed the following:

Parameter	Monthly Average	Daily Maximum
Oil and Grease	10 mg/l	15 mg/l
Phenols	0.5 mg/l	0.7 mg/l

Other Parameters	Limitations
pH	Shall not be outside the range 6.0 - 9.0
Temperature	Shall not exceed 110°F

6. The quantity and quality of uncontaminated cooling water discharged to the Willamette River shall be limited not to exceed the following:

Parameter	Limitations
Flow	Shall not exceed 10,000 gpd
Temperature	Shall not exceed 80°F

7. The flow rate of waste water discharged through the oil-water separator shall not exceed the hydraulic design capacity of the separator.

8. No emulsifying agents or detergents shall be discharged into or otherwise be allowed to enter the oil-water separator.

9. Notwithstanding the effluent limitations established by this permit, no wastes shall be discharged and no activities shall be conducted after June 30, 1977 which will violate Water Quality Standards as adopted in OAR 340-41-045 except in the following defined mixing zone:

   The allowable mixing zone is defined as that portion of the Willamette River within 200 feet from the point of discharge.

10. Sanitary wastes shall be disposed of to the City of Portland municipal sewerage system.

11. Unless approved otherwise in writing by the Department the permittee shall observe and inspect all waste handling, treatment and disposal facilities and the receiving stream above and below each point of discharge at least daily to insure compliance with the conditions of this permit. A written record of all such observations shall be maintained at the plant and shall be made available to the Department of Environmental Quality staff for inspection and review upon request.

12. The permittee shall monitor the operation and efficiency of all treatment and control facilities and the quantity and quality of the wastes discharged. A record of all such data shall be maintained and submitted to the Department of Environmental Quality at the end of each calendar month. Unless otherwise agreed to in writing by the Department of Environmental Quality, data collected and submitted shall include but not necessarily be limited to the following parameters and minimum frequencies:

Parameter	Source**	Minimum Frequency
Flow	001, 002	Daily estimate
Temperature	001, 002	Daily grab sample
pH	001	Daily grab sample
Oil and grease	001	Weekly composite sample*
Phenols	001	Monthly composite sample*

*The composite sample shall consist of three grab samples taken at regular intervals over an eight hour period.

**001 is the discharge which includes the tank farm runoff, boiler blowdown, and treated storm water effluents. 002 is the discharge which includes the uncontaminated cooling water effluent.

13. Within 30 days of the issuance of this permit the permittee shall submit a detailed description of the sampling procedures used, sample analysis techniques and exact location of sampling stations.

14. Prior to June 1, 1976, the permittee shall provide an alternative power source sufficient to operate all facilities utilized by the permittee to maintain compliance with the terms and conditions of this permit. In lieu of this requirement the permittee may certify in writing to the Department within 30 days of the issuance of the permit that in the event of a reduction, loss, or failure of a power source the permittee shall halt, reduce or otherwise control production and/or all discharges in order to maintain compliance with the terms and conditions of this permit.

15. The permittee shall prepare, submit to the Department and implement a suggested spill prevention and contingency plan for the facility covered by this permit within 90 days of the date of its issuance. Such plan shall include at least the following information and procedures relative to the prevention and handling of spills and unplanned discharges of oil, chemicals and other hazardous substances:

a. A description of the reporting system which will be used to alert responsible facility management and appropriate legal authorities;

b. A description of the facilities which prevent, contain or treat spills and unplanned discharges;

c. A list of all oil and hazardous materials used, processed or stored at the facility which may be spilled and could conceivably be discharged to state waters;

d. A brief description of recent spills and changes made to prevent their occurrence; and

e. An implementation schedule for additional facilities which may be required to prevent the spillage of oil, chemicals and other hazardous materials and subsequent discharge to state waters.

16. The permittee shall, during all times of disposal, provide personnel whose responsibilities include assuring the continuous performance of the disposal system within the limitations of this permit.

GENERAL CONDITIONS

G1. All discharges and activities authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant more frequently than or at a level in excess of that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit.

G2. Monitoring procedures:

a. Monitoring shall begin on the first day of the month following issuance of this permit.

b. Monitoring reports shall be submitted by the 15th day of each following month unless otherwise approved in writing by the Department.

c. Monitoring reports shall be submitted on approved NPDES report forms.

d. All records of monitoring activities and results, including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records, shall be retained by the permittee for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the permittee or when requested by the Director.

e. The permittee shall record for each measurement or sample taken pursuant to the requirements of this permit the following information: (1) the date, exact place and time of sampling; (2) the dates the analyses were performed; (3) who performed the analyses; (4) the analytical techniques or methods used and (5) the results of all required analyses.

f. Samples and measurements taken to meet the requirements of this condition shall be representative of the volume and nature of the monitored discharge.

g. All sampling and analytical methods used to meet the monitoring requirements specified in this permit shall, unless approved otherwise in writing by the Department, conform to the Guidelines Establishing Test Procedures for the Analysis of Pollutants as specified in 40 CFR, Part 136.

G3. All waste solids, including dredgings and sludges, shall be utilized or disposed of in a manner which will prevent their entry, or the entry of contaminated drainage or leachate therefrom, into the waters of the state and such that health hazards and nuisance conditions are not created.

G4. The diversion or bypass of any discharge from facilities utilized by the permittee to maintain compliance with the terms and conditions of this permit is prohibited, except (a) where unavoidable to prevent loss of life or severe property damage or (b) where excessive storm drainage or runoff would damage any facilities necessary for compliance with the terms and conditions of this permit. The permittee shall immediately notify the Department in writing of each such diversion or bypass in accordance with the procedure specified in Condition G12.

G5. The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

G6. Whenever a facility expansion, production increase or process modification is anticipated which will result in a change in the character of pollutants to be discharged or which will result in a new or increased discharge that will exceed the conditions of this permit, a new application must be submitted together with the necessary reports, plans and specifications for the proposed changes. No change shall be made until plans have been approved and a new permit or permit modification has been issued.

G7. After notice and opportunity for a hearing this permit may be modified, suspended or revoked in whole or in part during its term for cause including but not limited to the following:

a. Violation of any terms or conditions of this permit or any applicable rule, standard, or order of the Commission;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;

c. A change in the condition of the receiving waters or any other condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

G8. If a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Federal Act for a toxic pollutant which is present in the discharge authorized herein and such standard or prohibition is more stringent than any limitation upon such pollutant in this permit, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition and the permittee shall be so notified.

G9. The permittee shall, at all reasonable times, allow authorized representatives of the Department of Environmental Quality:

a. To enter upon the permittee's premises where an effluent source or disposal system is located or in which any records are required to be kept under the terms and conditions of this permit;

b. To have access to and copy any records required to be kept under the terms and conditions of this permit;

c. To inspect any monitoring equipment or monitoring method required by this permit; or

d. To sample any discharge of pollutants.

G10. The permittee shall maintain in good working order and operate as efficiently as practicable all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

G11. The Department of Environmental Quality, its officers, agents and employees shall not sustain any liability on account of the issuance of this permit or on account of the construction or maintenance of facilities because of this permit.

G12. In the event the permittee is unable to comply with all of the conditions of this permit because of a breakdown of equipment or facilities, an accident caused by human error or negligence, or any other cause such as an act of nature, the permittee shall:

a. Immediately take action to stop, contain and clean up the unauthorized discharges and correct the problem.

b. Immediately notify the Department of Environmental Quality so that an investigation can be made to evaluate the impact and the corrective actions taken and determine additional action that must be taken.

c. Submit a detailed written report describing the breakdown, the actual quantity and quality of resulting waste discharges, corrective action taken, steps taken to prevent a recurrence and any other pertinent information.

Compliance with these requirements does not relieve the permittee from responsibility to maintain continuous compliance with the conditions of this permit or the resulting liability for failure to comply.

cc CHT
JL
6-13-75

DEPARTMENT OF ENVIRONMENTAL QUALITY

1234 S.W. MORRISON STREET • PORTLAND, OREGON • 97205 • (503) 238-8471

ROBERT W. STRAUB
GOVERNOR

KESSLER R. CANNON
Director

June 9, 1975

Koppers
Organic Materials Division
Koppers Company, Inc
7540 N. W. St. Helens Road
Portland, Oregon 97229

Attention: Mr. Paul W. Guth, Plant Superintendent

Re: Oil Contaminated Water

Gentlemen:

JMA

This will acknowledge receipt of your two letters dated May 27 and PWG May 28, 1975, in regard to oil contaminated waters being discharged from your property.

The program set forth in the May 28, 1975 letter seems to be timely and will serve as an intermediate control until you are able to meet the provisions of your NPDES permit referred to in the May 27, 1975 letter.

As agreed to, in our conversation on May 30, 1975, the completion date for the intermediate controls will be July 1, 1975.

The Department appreciates the Company's action in this incident. Your concern for the environment in Oregon is also appreciated.

Cordially,

KESSLER R. CANNON
Director

Douglas D. Fraley
Division Engineer

DDF/bw

cc: U. S. Coast Guard, Portland, Oregon
cc: Water Quality Control
cc: Portland Region
cc J. Anderson
cc R Shannon

Contains Recycled Materials

DEQ-1

KOPPERS

Interoffice Correspondence

To P. W. Guth

Location Northwest

Subject DEQ REPLY

From Organic Materials Division

Location Manufacturing Services

Date May 27, 1975

Please sign the attached letter and forward to the DEQ by Certified Mail, Return Receipt Requested.

JMA

Jon M. Anderson

JMA:em
Attachment

cc: C. H. Teller, Sr. (With Attachment)
R. L. Shannon " "
J. Little " "
T. Smith " "

K-5 REV. 2

Pittsburgh, Pa. 15219, Telephone 412-391-3300

Certified Mail
Return Receipt Requested

KOPPERS

May 27, 1975

Mr. Douglas D. Fraley
Division Engineer
Department of Environmental Quality
1234 S.W. Morrison Street
Portland, Oregon 97205

Gentlemen:

This letter is in reply to yours of April 29, 1975 regarding discharge of contaminated water. The Water Pollution Control Division of the Department is preparing to issue an NPDES permit to this facility. This permit will contain provisions requiring the treatment of contaminated effluent before discharge. It is expected that this control system will prevent discharge of untreated contaminated effluent.

Very truly yours,

P. W. Guth
Plant Superintendent

Organic Materials Division, Koppers Company, Inc.
7540 N.W. St. Helens Road, Portland, [redacted]97229
Telephone 503-286-3681

cc CHT
5-30-75

KOPPERS
Chemicals
and Coatings

MAY 28, 1975

DEPT. OF ENVIRONMENTAL QUALITY
1234 S.W. MORRISON STREET
PORTLAND, OREGON 97205
ATTN: DOUGLAS D. FRALEY

GENTLEMEN:

THIS IS THE PROGRAM FOR OUR TIMELY ELIMINATION OF MATERIAL WHICH COULD CAUSE THE WATERS TO BE CONTAMINATED.

WE WILL PUT IN A THREE STAGE FILTER SYSTEM AT THE OUTFALL OF THE WATER LEAVING OUR PLANT.

AT TRACK #3 WE WILL PICK UP THE SOILED GROUND AND REPLACE WITH FRESH MATERIAL. BETWEEN THE TRACK WE WILL LET THE BALLAST SHOW. THE WALLED-IN CEMENT AREA BY TRACK #3 WILL ALSO HAVE THE SOILED GROUND REMOVED AND THEN BE REPLACED WITH FRESH MATERIAL.

THE LOADING SPOUTS WILL HAVE CONTAINERS TO CATCH ANY DRIPPINGS. THERE WILL BE PORTABLE CATCH BASINS BENEATH THE TANK CARS TO CATCH ANY DRIPPINGS ALSO.

THE UNLOADING LINE WILL BE REVAMPED TO MINIMIZE ANY CHANCE OF SPILLAGE. THE FLEX HOSES WILL CONTAIN CAPS FOR THE HOSES WHEN THEY ARE NOT IN USE.

TRACK #5 WILL HAVE THE SOILED MATERIAL REMOVED BETWEEN AND ON EITHER SIDE OF THE TRACK. SOME PORTIONS WILL BE FILLED IN BETWEEN THE TRACKS BECAUSE OF VEHICLE TRAFFIC OVER THE TRACKS.

THE AREA AROUND #42 TANK WILL THEN BE CLEANED OF SOILED GROUND AND THIS REPLACED WITH FRESH MATERIAL.

THE TAR PUMPS AREA WILL BE CLEANED AND HAVE DRIP PANS FOR ANY LEAKAGE.

RESPECTFULLY,

Paul W. Guth

PAUL W. GUTH

PLANT MANAGER

cc R Shannon
W Anderson
J Little

NWT 001206

KOPPERS

Interoffice Correspondence

To P. W. Guth

Location Northwest

Subject WATER PERMIT

From Organic Materials Division

Location Manufacturing Services

Date May 20, 1975

Please sign the attached letter and forward to the DEQ by Certified Mail, Return Receipt Requested.

JMA

Jon M. Anderson

JMA:em
Attachment

cc: C. H. Teller, Sr. (With Attachment)
R. L. Shannon " "
J. Little " "
T. Smith " "

K-5 REV. 2

Organic Materials Division, Koppers Company, Inc.
Pittsburgh, Pa. 15219, Telephone 412-391-3300

KOPPERS

May 20, 1975

Mr. Charles K. Ashbaker, Administrator
Water Pollution Control Division
Dept. of Environmental Quality
1234 S.W. Morrison Street
Portland, OR 97205

Re: W.Q. - Koppers
Multnomah County

Dear Sir:

We wish to comment on the proposed NPDES permit for Koppers' Portland, Oregon plant. The proposed permit as presently written in paragraph 5 on page 2 requires that plant effluent be treated to reduce phenol to less than 0.5 mg/l as a monthly average and 0.7 mg/l as a daily maximum. These limits are quite stringent, and would be difficult to achieve consistently. In view of the low discharge volume from this small and intermittently operated plant, these limits should be 1.0 mg/l as a monthly average and 2.0 mg/l as a daily maximum.

The proposed daily maximum limitation for oil and grease as shown in paragraph 5 on page 2 is 15 mg/l. This limitation should be revised to 20 mg/l in recognition of the fact that any well-operated effluent treatment system is still subject to fluctuations.

The proposed permit is written such that plant effluent must be treated and discharged to the Willamette River. Koppers is planning to investigate as part of the compliance program, various methods to reduce effluent volume throughout the plant. If these methods are successful, it may be possible to reduce volume to the extent that this effluent would be acceptable to the City of Portland for discharge to the municipal sewer system. Therefore, it is requested that the permit be revised to allow for this possibility in the event that it can be achieved.

The permit expiration date shown in the upper right-hand corner of each page should be revised.

Thank you for this opportunity to comment.

Very truly yours,

P. W. Guth
Plant Superintendent

cc RLS
CHT
JL
5-5-75

DEPARTMENT OF ENVIRONMENTAL QUALITY

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5696

ROBERT W. STRAUB
GOVERNOR

KESSLER R. CANNON
Director

May 2, 1975

Koppers Company, Inc.
Organic Materials Division
1201 Koppers Building
Pittsburgh, Pennsylvania 15219

Attention: Mr. Jon M. Anderson, Coordinator, Environmental Control

Re: W.Q. - Koppers
Multnomah County

Gentlemen:

Please find enclosed with this letter, a copy of the proposed National Pollutant Discharge Elimination System Waste Discharge Permit for the Koppers Company Plant in Portland, Oregon. The proposed permit has been revised due to the apparent decision by the City of Portland not to accept your wastewater in their sewerage system.

Please review the proposed permit and submit any comments you may have prior to May 23, 1975.

Should you have questions relative to this matter, please feel free to contact Mr. Dick Nichols in this office at 229-5309.

Very truly yours,

KESSLER R. CANNON
Director

Charles K. Ashbaker, Administrator
Water Pollution Control Division
Water Quality Program

RJN:bel

Enclosure

cc: Northwest Region, DEQ
EPA, Oregon Operations
Mr. Paul Guth

Contains Recycled Materials

DEQ-1

NWT 001209

PRELIMINARY DRAFT

FOR A

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

TO BE ISSUED BY

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

Pursuant to ORS 449.083 and P.L. 92-500

ISSUED TO: Koppers Company 1201 Koppers Building Pittsburg, Pennsylvania 15219 PLANT SITE: 7540 N. W. St. Helens Road Portland, Oregon 97229 ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY Kessler R. Cannon, Director — Date	REFERENCE INFORMATION File Number: 47430 Appl. No.: Received OR-000077-9 Major Basin: Willamette Minor Basin: Receiving Stream: Willamette River Mile: 6.2 County: Multnomah

PERMITTED ACTIVITIES

Until such time as this permit expires or is modified or revoked, Koppers Company, Portland Plant is herewith permitted to:

a. Construct, operate and maintain waste water control facilities.
b. Discharge treated tank farm runoff, treated contaminated storm runoff and boiler blowdown to the Willamette River.
c. Discharge uncontaminated cooling water and uncontaminated storm runoff to the Willamette River

All of the above activities must be carried out in conformance with the requirements, limitations and conditions which follow.

All other waste discharges are prohibited.

SPECIAL CONDITIONS

1. Prior to July 1, 1976, the permittee shall submit detailed engineering plans for providing, prior to July 1, 1977, such wastewater control facilities as are necessary to accomplish the following:

   a. Contain and treat all contaminated storm runoff to meet the effluent limitations specified in condition 5 of this permit.

   b. Treat all tank farm runoff and boiler blowdown to meet the effluent limitations specified in condition 5 of this permit.

2. The permittee is expected to meet the compliance schedules and interim dates which have been established in condition 1 of this permit. Either prior to or no later than 14 days following any lapsed compliance date the permittee shall submit to the Department a notice of compliance or non-compliance with the established schedule. The Director may revise a schedule of compliance if he determines good and valid cause resulting from events over which the permittee has little or no control.

3. Prior to constructing or modifying any waste water control facilities, detailed plans and specifications shall be approved in writing by the Department.

4. Beginning on the date of issuance of this permit and ending June 30, 1977, the quantity and quality of boiler blowdown and tank farm effluent discharged directly or indirectly to the Willamette River shall be limited not to exceed the following:

Parameter	Monthly Average	Daily Maximum
Oil and grease	20 mg/l	30 mg/l

Other Parameters	Limitations
pH	Shall not be outside the range 6.0 - 9.0
Temperature	Shall not exceed 110°F

5. Beginning July 1, 1977, the quantity and quality of treated boiler blowdown, tank farm runoff, and contaminated runoff shall be limited not to exceed the following:

Parameter	Monthly Average	Daily Maximum
Oil and Grease	10 mg/l	15 mg/l
Phenols	0.5 mg/l	0.7 mg/l

Other Parameters	Limitations
pH	Shall not be outside the range 6.0 - 9.0
Temperature	Shall not exceed 110°F

6. The quantity and quality of uncontaminated cooling water discharged to the Willamette River shall be limited not to exceed the following:

Parameter	Limitations
Flow	Shall not exceed 10,000 gpd
Temperature	Shall not exceed 80°F

7. The flow rate of waste water discharged through the oil-water separator shall not exceed the hydraulic design capacity of the separator.

8. No emulsifying agents or detergents shall be discharged into or otherwise be allowed to enter the oil-water separator.

9. Notwithstanding the effluent limitations established by this permit, no wastes shall be discharged and no activities shall be conducted after June 30, 1977 which will violate Water Quality Standards as adopted in OAR 340-41-045 except in the following defined mixing zone:

   The allowable mixing zone is defined as that portion of the Willamette River within 200 feet from the point of discharge.

10. Sanitary wastes shall be disposed of to the City of Portland municipal sewerage system.

11. Unless approved otherwise in writing by the Department the permittee shall observe and inspect all waste handling, treatment and disposal facilities and the receiving stream above and below each point of discharge at least daily to insure compliance with the conditions of this permit. A written record of all such observations shall be maintained at the plant and shall be made available to the Department of Environmental Quality staff for inspection and review upon request.

12. The permittee shall monitor the operation and efficiency of all treatment and control facilities and the quantity and quality of the wastes discharged. A record of all such data shall be maintained and submitted to the Department of Environmental Quality at the end of each calendar month. Unless otherwise agreed to in writing by the Department of Environmental Quality, data collected and submitted shall include but not necessarily be limited to the following parameters and minimum frequencies:

Parameter	Source**	Minimum Frequency
Flow	001, 002	Daily estimate
Temperature	001, 002	Daily grab sample
pH	001	Daily grab sample
Oil and grease	001	Weekly composite sample*
Phenols	001	Monthly composite sample*

*The composite sample shall consist of three grab samples taken at regular intervals over an eight hour period.

**001 is the discharge which includes the tank farm runoff, boiler blowdown, and treated storm water effluents. 002 is the discharge which includes the uncontaminated cooling water effluent.

13. Within 30 days of the issuance of this permit the permittee shall submit a detailed description of the sampling procedures used, sample analysis techniques and exact location of sampling stations.

14. Prior to June 1, 1976, the permittee shall provide an alternative power source sufficient to operate all facilities utilized by the permittee to maintain compliance with the terms and conditions of this permit. In lieu of this requirement the permittee may certify in writing to the Department within 30 days of the issuance of the permit that in the event of a reduction, loss, or failure of a power source the permittee shall halt, reduce or otherwise control production and/or all discharges in order to maintain compliance with the terms and conditions of this permit.

15. The permittee shall prepare, submit to the Department and implement a suggested spill prevention and contingency plan for the facility covered by this permit within 90 days of the date of its issuance. Such plan shall include at least the following information and procedures relative to the prevention and handling of spills and unplanned discharges of oil, chemicals and other hazardous substances:

    a. A description of the reporting system which will be used to alert responsible facility management and appropriate legal authorities;

    b. A description of the facilities which prevent, contain or treat spills and unplanned discharges;

    c. A list of all oil and hazardous materials used, processed or stored at the facility which may be spilled and could conceivably be discharged to state waters;

    d. A brief description of recent spills and changes made to prevent their occurrence; and

    e. An implementation schedule for additional facilities which may be required to prevent the spillage of oil, chemicals and other hazardous materials and subsequent discharge to state waters.

16. The permittee shall, during all times of disposal, provide personnel whose responsibilities include assuring the continuous performance of the disposal system within the limitations of this permit.

GENERAL CONDITIONS

G1. All discharges and activities authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant more frequently than or at a level in excess of that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit.

G2. Monitoring procedures:

a. Monitoring shall begin on the first day of the month following issuance of this permit.

b. Monitoring reports shall be submitted by the 15th day of each following month unless otherwise approved in writing by the Department.

c. Monitoring reports shall be submitted on approved NPDES report forms.

d. All records of monitoring activities and results, including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records, shall be retained by the permittee for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the permittee or when requested by the Director.

e. The permittee shall record for each measurement or sample taken pursuant to the requirements of this permit the following information: (1) the date, exact place and time of sampling; (2) the dates the analyses were performed; (3) who performed the analyses; (4) the analytical techniques or methods used and (5) the results of all required analyses.

f. Samples and measurements taken to meet the requirements of this condition shall be representative of the volume and nature of the monitored discharge.

g. All sampling and analytical methods used to meet the monitoring requirements specified in this permit shall, unless approved otherwise in writing by the Department, conform to the Guidelines Establishing Test Procedures for the Analysis of Pollutants as specified in 40 CFR, Part 136.

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G4. The diversion or bypass of any discharge from facilities utilized by the permittee to maintain compliance with the terms and conditions of this permit is prohibited, except (a) where unavoidable to prevent loss of life or severe property damage or (b) where excessive storm drainage or runoff would damage any facilities necessary for compliance with the terms and conditions of this permit. The permittee shall immediately notify the Department in writing of each such diversion or bypass in accordance with the procedure specified in Condition G12.

G5. The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

G6. Whenever a facility expansion, production increase or process modification is anticipated which will result in a change in the character of pollutants to be discharged or which will result in a new or increased discharge that will exceed the conditions of this permit, a new application must be submitted together with the necessary reports, plans and specifications for the proposed changes. No change shall be made until plans have been approved and a new permit or permit modification has been issued.

G7. After notice and opportunity for a hearing this permit may be modified, suspended or revoked in whole or in part during its term for cause including but not limited to the following:

a. Violation of any terms or conditions of this permit or any applicable rule, standard, or order of the Commission;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;

c. A change in the condition of the receiving waters or any other condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

G8. If a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Federal Act for a toxic pollutant which is present in the discharge authorized herein and such standard or prohibition is more stringent than any limitation upon such pollutant in this permit, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition and the permittee shall be so notified.

G9. The permittee shall, at all reasonable times, allow authorized representatives of the Department of Environmental Quality:

a. To enter upon the permittee's premises where an effluent source or disposal system is located or in which any records are required to be kept under the terms and conditions of this permit;

b. To have access to and copy any records required to be kept under the terms and conditions of this permit;

c. To inspect any monitoring equipment or monitoring method required by this permit; or

d. To sample any discharge of pollutants.

G10. The permittee shall maintain in good working order and operate as efficiently as practicable all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

G11. The Department of Environmental Quality, its officers, agents and employees shall not sustain any liability on account of the issuance of this permit or on account of the construction or maintenance of facilities because of this permit.

G12. In the event the permittee is unable to comply with all of the conditions of this permit because of a breakdown of equipment or facilities, an accident caused by human error or negligence, or any other cause such as an act of nature, the permittee shall:

a. Immediately take action to stop, contain and clean up the unauthorized discharges and correct the problem.

b. Immediately notify the Department of Environmental Quality so that an investigation can be made to evaluate the impact and the corrective actions taken and determine additional action that must be taken.

c. Submit a detailed written report describing the breakdown, the actual quantity and quality of resulting waste discharges, corrective action taken, steps taken to prevent a recurrence and any other pertinent information.

Compliance with these requirements does not relieve the permittee from responsibility to maintain continuous compliance with the conditions of this permit or the resulting liability for failure to comply.

ROBERT W. STRAUB
~~TOM McCALL~~
GOVERNOR

KESSLER R. CANNON
Director

DEPARTMENT OF ENVIRONMENTAL QUALITY

1234 S.W. MORRISON STREET • PORTLAND, OREGON • 97205 • (503) ~~229-5~~ 238-8471

April 29, 1975

Koppers
Organic Materials Division
Koppers Company, Inc.
7540 N. W. St. Helens Road
Portland, Oregon 97229

Attention: Mr. Paul W. Guth

Re: Meeting of April 24, 1975

Gentlemen:

This letter is in reference to our meeting of April 24, 1975, concerning the oil contaminated waters which are being discharged from your property.

Te reemphasize our conversation, you are responsible for any problems which occur as a result of the oil on your property, as well as any cleanup costs.

Specifically, oily waste has been deposited on your property such that it is entering or likely to enter public waters, which is in violation of Oregon Revised Statutes 468.785, a copy of which you received at our meeting.

Therefore, it is requested that you submit a program for a timely elimination of this problem to the Department within thirty (30) days of receipt of this letter.

Your immediate attention to this matter is appreciated.

Respectfully,

KESSLER R. CANNON
Director

Douglas D. Fraley

Douglas D. Fraley
Division Engineer

DDF/bw

cc: Water Quality
Portland Region
U. S. Coast Guard
Jon Anderson
R J Shannon
J Little

Contains Recycled Materials

DEQ-1

PRELIMINARY DRAFT

FOR A

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

TO BE ISSUED BY

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

Pursuant to ORS 449.083 and P.L. 92-500

ISSUED TO:

Koppers Company
1201 Koppers Building
Pittsburg, Pennsylvania 15219

PLANT SITE:

7540 N. W. St. Helens Road
Portland, Oregon 97229

ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY

Kessler R. Cannon, Director — Date

REFERENCE INFORMATION

File Number: 47430

Appl. No.: OR-000077-9 Received:

Major Basin: Willamette

Minor Basin:

Receiving Stream: Willamette

River Mile: 6.2

County: Multnomah

PERMITTED ACTIVITIES

Until such time as this permit expires or is modified or revoked, Koppers Company, Portland Plant is herewith permitted to:

a. Construct, operate and maintain waste water control facilities.

b. Discharge treated tank farm runoff and boiler blowdown to the Willamette River.

All of the above activities must be carried out in conformance with the requirements, limitations and conditions which follow.

All other waste discharges are prohibited.

SPECIAL CONDITIONS

1. Prior to May 1, 1975, the permittee shall submit engineering plans and time schedule for providing, prior to November 1, 1975, such waste water control facilities as are necessary to connect all waste waters to the City of Portland sewerage system or otherwise eliminate the discharge of waste waters to public waters.

2. The permittee is expected to meet the compliance schedules and interim dates which have been established in condition 1 of this permit. Either prior to or no later than 14 days following any lapsed compliance date the permittee shall submit to the Department a notice of compliance or non-compliance with the established schedule. The Director may revise a schedule of compliance if he determines good and valid cause resulting from events over which the permittee has little or no control.

3. Prior to constructing or modifying any waste water control facilities, detailed plans and specifications shall be approved in writing by the Department.

4. Beginning on the date of issuance of this permit and ending November 1, 1975, the quantity and quality of boiler blowdown and tank farm effluent discharged directly or indirectly to the Willamette River shall be limited not to exceed the following:

Parameter	Monthly Average	Daily Maximum
Flow	34,000 GPD	68,000 GPD
Oil and grease	20 mg/l	30 mg/l

Other Parameters	Limitations
pH	Shall not be outside the range 6.0 - 9.0
Temperature	Shall not exceed 110°F

5. The flow rate of waste water discharged through the oil-water separator shall not exceed the hydraulic design capacity of the separator.

6. No emulsifying agents or detergents shall be discharged into or otherwise be allowed to enter the oil-water separator.

7. Notwithstanding the effluent limitations established by this permit, no wastes shall be discharged and no activities shall be conducted which will violate Water Quality Standards as adopted in OAR 340-41-045 except in the following defined mixing zone:

   The allowable mixing zone is defined as that portion of the Willamette River within 200 feet from the point of discharge.

8. No petroleum-base products in excess of the limits in Condition 4 or other substances which might cause the Water Quality Standards of the State of Oregon to be violated shall be discharged or otherwise allowed to reach any of the waters of the state.

9. Sanitary wastes shall be disposed of to the City of Portland municipal sewerage system.

10. Unless approved otherwise in writing by the Department the permittee shall observe and inspect all waste handling, treatment and disposal facilities and the receiving stream above and below each point of discharge at least daily to insure compliance with the conditions of this permit. A written record of all such observations shall be maintained at the plant and shall be made available to the Department of Environmental Quality staff for inspection and review upon request.

11. The permittee shall monitor the operation and efficiency of all treatment and control facilities and the quantity and quality of the wastes discharged. A record of all such data shall be maintained and submitted to the Department of Environmental Quality at the end of each calendar month. Unless otherwise agreed to in writing by the Department of Environmental Quality, data collected and submitted shall include but not necessarily be limited to the following parameters and minimum frequencies:

Parameter	Minimum Frequency
Flow	Daily estimate
Temperature	Daily grab sample
pH	Daily grab sample
Oil and grease	Weekly composite sample*

*The composite sample shall consist of three grab samples taken at regular intervals over an eight hour period.

12. Within 30 days of the issuance of this permit the permittee shall submit a detailed description of the sampling procedures used, sample analysis techniques and exact location of sampling stations.

13. Prior to June 1, 1975, the permittee shall provide an alternative power source sufficient to operate all facilities utilized by the permittee to maintain compliance with the terms and conditions of this permit. In lieu of this requirement the permittee may certify in writing to the Department within 30 days of the issuance of the permit that in the event of a reduction, loss, or failure of a power source the permittee shall halt, reduce or otherwise control production and/or all discharges in order to maintain compliance with the terms and conditions of this permit.

14. The permittee shall prepare, submit to the Department and implement a suggested spill prevention and contingency plan for the facility covered by this permit within 90 days of the date of its issuance. Such plan shall include at least the following information and procedures relative to the prevention and handling of spills and unplanned discharges of oil, chemicals and other hazardous substances:

a. A description of the reporting system which will be used to alert responsible facility management and appropriate legal authorities;

b. A description of the facilities which prevent, contain or treat spills and unplanned discharges;

c. A list of all oil and hazardous materials used, processed or stored at the facility which may be spilled and could conceivably be discharged to state waters;

d. A brief description of recent spills and changes made to prevent their occurrence; and

e. An implementation schedule for additional facilities which may be required to prevent the spillage of oil, chemicals and other hazardous materials and subsequent discharge to state waters.

15. An adequate contingency plan for prevention and handling of spills and unplanned discharges shall be in force at all times. A continuing program of employee orientation and education shall be maintained to ensure awareness of the necessity of good inplant control and quick and proper action in the event of a spill or accident.

16. The permittee shall, during all times of disposal, provide personnel whose responsibilities include assuring the continuous performance of the disposal system within the limitations of this permit.

17. All waste waters discharged to the City of Portland sewerage system shall be in accordance with all regulations and requirements of the City of Portland.

GENERAL CONDITIONS

G1. All discharges and activities authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant more frequently than or at a level in excess of that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit.

G2. Monitoring procedures:

a. Monitoring shall begin on the first day of the month following issuance of this permit.

b. Monitoring reports shall be submitted by the 15th day of each following month unless otherwise approved in writing by the Department.

c. Monitoring reports shall be submitted on approved NPDES report forms.

d. All records of monitoring activities and results, including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records, shall be retained by the permittee for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the permittee or when requested by the Director.

e. The permittee shall record for each measurement or sample taken pursuant to the requirements of this permit the following information: (1) the date, exact place and time of sampling; (2) the dates the analyses were performed; (3) who performed the analyses; (4) the analytical techniques or methods used and (5) the results of all required analyses.

f. Samples and measurements taken to meet the requirements of this condition shall be representative of the volume and nature of the monitored discharge.

g. All sampling and analytical methods used to meet the monitoring requirements specified in this permit shall, unless approved otherwise in writing by the Department, conform to the Guidelines Establishing Test Procedures for the Analysis of Pollutants as specified in 40 CFR, Part 136.

G3. All waste solids, including dredgings and sludges, shall be utilized or disposed of in a manner which will prevent their entry, or the entry of contaminated drainage or leachate therefrom, into the waters of the state and such that health hazards and nuisance conditions are not created.

G4. The diversion or bypass of any discharge from facilities utilized by the permittee to maintain compliance with the terms and conditions of this permit is prohibited, except (a) where unavoidable to prevent loss of life or severe property damage or (b) where excessive storm drainage or runoff would damage any facilities necessary for compliance with the terms and conditions of this permit. The permittee shall immediately notify the Department in writing of each such diversion or bypass in accordance with the procedure specified in Condition G12.

G5. The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

G6. Whenever a facility expansion, production increase or process modification is anticipated which will result in a change in the character of pollutants to be discharged or which will result in a new or increased discharge that will exceed the conditions of this permit, a new application must be submitted together with the necessary reports, plans and specifications for the proposed changes. No change shall be made until plans have been approved and a new permit or permit modification has been issued.

G7. After notice and opportunity for a hearing this permit may be modified, suspended or revoked in whole or in part during its term for cause including but not limited to the following:

a. Violation of any terms or conditions of this permit or any applicable rule, standard, or order of the Commission;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;

c. A change in the condition of the receiving waters or any other condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

G8. If a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Federal Act for a toxic pollutant which is present in the discharge authorized herein and such standard or prohibition is more stringent than any limitation upon such pollutant in this permit, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition and the permittee shall be so notified.

G9. The permittee shall, at all reasonable times, allow authorized representatives of the Department of Environmental Quality:

a. To enter upon the permittee's premises where an effluent source or disposal system is located or in which any records are required to be kept under the terms and conditions of this permit;

b. To have access to and copy any records required to be kept under the terms and conditions of this permit;

c. To inspect any monitoring equipment or monitoring method required by this permit; or

d. To sample any discharge of pollutants.

G10. The permittee shall maintain in good working order and operate as efficiently as practicable all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

G11. The Department of Environmental Quality, its officers, agents and employees shall not sustain any liability on account of the issuance of this permit or on account of the construction or maintenance of facilities because of this permit.

G12. In the event the permittee is unable to comply with all of the conditions of this permit because of a breakdown of equipment or facilities, an accident caused by human error or negligence, or any other cause such as an act of nature, the permittee shall:

a. Immediately take action to stop, contain and clean up the unauthorized discharges and correct the problem.

b. Immediately notify the Department of Environmental Quality so that an investigation can be made to evaluate the impact and the corrective actions taken and determine additional action that must be taken.

c. Submit a detailed written report describing the breakdown, the actual quantity and quality of resulting waste discharges, corrective action taken, steps taken to prevent a recurrence and any other pertinent information.

Compliance with these requirements does not relieve the permittee from responsibility to maintain continuous compliance with the conditions of this permit or the resulting liability for failure to comply.

DEPARTMENT OF ENVIRONMENTAL QUALITY

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5696

ROBERT W. STRAUB
GOVERNOR

KESSLER R. CANNON
Director

April 4, 1975

Koppers Company
1201 Koppers Building
Pittsburg, Pennsylvania 15219

Re: File No. 47430

Gentlemen:

This is the draft of the permit that was sent out on notice on April 4, 1975. The public notice period will be up May 4, 1975, after which the permit will be issued.

If you have any further comments, please let us know within this 30-day period.

Very truly yours,

KESSLER R. CANNON
Director

Charles K. Ashbaker
Administrator
Water Pollution Control Division

CKA:rb

Enclosure

NWRO, DEQ

Contains Recycled Materials

DEQ-1

PUBLIC NOTICE AND FACT SHEET

Department of Enviornmental Quality
Northwest Region
1010 N. E. Couch Street
Portland, Oregon 97232

Application No. OR-000077-9

Date: APR 4 1975

County: Multnomah

File No. 47430

This public notice and fact sheet has been prepared to provide public information concerning the following application for a National Pollutant Discharge Elimination System Permit to discharge pollutants to navigable waters pursuant to the provisions of Oregon Revised Statutes (ORS) 449.083 and Federal Water Pollution Control Act Amendments of 1972, P.L. 92-500, October 18, 1972.

APPLICANT: Koppers Company
1201 Koppers Building
Pittsburg, Pennsylvania 15219

DESCRIPTION OF FACILITY AND DISCHARGE:

Koppers Company owns and operates a chemical manufacturing plant in Northwest Portland producing industrial chemicals from coke oven tar. Wastewater discharged to the Willamette River consists of about 34,000 gallons per day, contains about 20 mg/l of oil and grease and has a maximum summertime temperature of about 110°F.

TENTATIVE DETERMINATION, APPLICABLE EFFLUENT LIMITATIONS AND WATER QUALITY STANDARDS

The Department of Environmental Quality has reviewed the application and has tentatively determined to issue a permit to discharge subject to lawful rules and regulations, water quality standards for the Willamette River contained in OAR 340-41-045, applicable effluent guidelines and limitations and certain special conditions. A final determination will not be made until after all comments received, pursuant to the public notice, have been evaluated.

The receiving stream has been classified for the following beneficial uses: domestic, industrial, and agricultural water supply, fish passage and habitat, navigation, recreation, and aesthetic purposes.

The effluent limitations are based upon the capabilities of the existing wastewater control facilities and State of Oregon Water Quality Standards.

PROPOSED EFFLUENT LIMITATIONS

Parameter	Limitations	
	Monthly Average	Daily Maximum
Flow	34,000 gpd	68,000 gpd
Oil and Grease	20 mg/l	30 mg/l
pH	Shall not be outside the range 6.0-9.0	
Temperature		110°F.

PROPOSED SCHEDULE OF COMPLIANCE

The permittee shall submit plans by May 1, 1975, for connecting all wastewaters to the City of Portland sewerage system by November 1, 1975.

PROPOSED SPECIAL CONDITIONS

1. Water Quality Standards shall not be violated outside a specified mixing zone defined as that portion of the Willamette River within 200 feet from the point of discharge.

2. Monitoring and reporting of effluent quality is required.

3. The proposed expiration date is November 30, 1975.

KOPPERS

Interoffice Correspondence

To P. W. Guth

From Organic Materials Division

Location Northwest

Location Manufacturing Services

Subject DEQ REPLY

Date March 26, 1975

Please sign the attached letter and forward to the DEQ by Certified Mail, Return Receipt Requested.

Jon M. Anderson

JMA:em
Attachment

cc: C. H. Teller, Sr. (With Attachment)
R. L. Shannon " "
J. Little " "
T. Smith " "

K-5 REV. 2

Organic Materials Division, Koppers Company, Inc.
Pittsburgh, Pa. 15219, Telephone 412-391-3300

Certified Mail
Return Receipt Requested

KOPPERS

March 27, 1975

Department of Environmental Quality
Northwest Region
1010 N.E. Couch Street
Portland, Oregon 97232

Attn: Mr. Richard J. Nichols
Engineer-Technical Services

Re: Appl. No. OR-000077-9
File No. 47430

Gentlemen:

We are in receipt of the draft NPDES permit for the Koppers Company plant located at 7540 N.W. St. Helens Road, and wish to make several comments on it.

Since the proposed permit specifies that the discharge limitations will be achieved by connecting all wastewaters to the City of Portland sewage system, the City must agree to accept this effluent before the permit can be issued in the final form. The compliance program to be prepared by Koppers must have a firm basis on which to proceed.

The compliance schedule should be revised so that final plans for connection to the sewage system are due 60 days after the City accepts this connection principle. Engineering cannot begin on the connection facilities until the City provides a firm design basis by agreeing to accept the effluent. Discharge to the municipal system would be 9 months after the connection plan is approved by the City. This period of time is required due to the delivery time for pumps and other equipment of approximately 34 weeks.

Thank you for this opportunity to comment.

Very truly yours,

P. W. Guth
Superintendent

Rec'd 3-21-75

cc CHT
RLS
JL
TS

DEPARTMENT OF ENVIRONMENTAL QUALITY

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-6242

MAR 1 9 1975

Robert W. Straub
GOVERNOR

KESS CANNON
Director

Final Date for Submission
of Written Comments APR 1 1975

Koppers Company
1201 Koppers Building
Pittsburg, Pennsylvania 15219

Re: WQ - Koppers Company
Multnomah County

Gentlemen:

Your application for a National Pollutant Discharge Elimination System (NPDES) permit has been reviewed by the Department and a proposed NPDES permit has been drafted. You are invited to review the attached copy and submit any comments you may have in writing prior to the date indicated above.

Other documents which will be distributed to the public are enclosed for your review. Comments on the content of these documents will also be appreciated.

After your comments, if any, have been received a public notice regarding your application will be circulated to interested individuals and organizations. The proposed permit and a fact sheet will also be made available to those persons requesting them.

Once the public review and participation period is over the final NPDES permit will be issued. When issued it will fulfill the Department's requirements for a waste discharge permit as well as fulfill the requirements of the National Pollutant Discharge Elimination System.

If you have any comments or questions, please feel free to contact Mr. Dick Nichols, 1010 N. E. Couch, Portland (Phone 238-8471).

Very truly yours,

KESSLER R. CANNON
Director

E. J. Weathersbee
Director, Technical Services

RJN:lb

cc: Water Quality Division
cc: EPA, Oregon Operations

Contains Recycled Materials

DEQ-1

NWT 001230

ROBERT W. STRAUB
GOVERNOR

KESSLER R. CANNON
Director

E. J. WEATHERSBEE
Regional Administrator

DEPARTMENT OF ENVIRONMENTAL QUALITY

NORTHWEST REGION

1010 N.E. COUCH STREET • PORTLAND, OREGON • 97232 • (503) 238-8471

Appl. No. OR-000077-9

File No. 47430

County: Multnomah

PUBLIC NOTICE

Notice of Application for NPDES Waste Discharge Permit

Koppers Company, 1201 Koppers Building, Pittsburg, Pennsylvania 15219, has applied for issuance of a National Pollutant Discharge Elimination System Waste Discharge Permit in accordance with Oregon Revised Statutes 449.083 and the Federal Water Pollution Control Act Amendments of 1972, P.L. 92-500, October 18, 1972.

DESCRIPTION OF FACILITY AND DISCHARGE

Koppers Company owns and operates a chemical manufacturing plant in Northwest Portland producing industrial chemicals from coke oven tar. Wastewater discharged to the Willamette River consists of about 34,000 gallons per day, contains about 20 mg/l of oil and grease and has a maximum summertime temperature of about 110°F.

TENTATIVE DETERMINATION

On the basis of preliminary staff review, the Department proposes to issue a permit to operate wastewater control facilities and to discharge to public waters subject to certain effluent limitations and special permit conditions. This proposed determination is tentative.

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PRELIMINARY DRAFT

FOR A

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

TO BE ISSUED BY

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

Pursuant to ORS 449.083 and P.L. 92-500

ISSUED TO:

Koppers Company
1201 Koppers Building
Pittsburg, Pennsylvania 15219

PLANT SITE:

7540 N. W. St. Helens Road
Portland, Oregon 97229

ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY

Kessler R. Cannon, Director — Date

REFERENCE INFORMATION

File Number: 47430

Appl. No.: OR-000077-9 Received:

Major Basin: Willamette

Minor Basin:

Receiving Stream: Willamette

River Mile: 6.2

County: Multnomah

PERMITTED ACTIVITIES

Until such time as this permit expires or is modified or revoked, Koppers Company, Portland Plant is herewith permitted to:

a. Construct, operate and maintain waste water control facilities.

b. Discharge treated tank farm runoff and boiler blowdown to the Willamette River.

All of the above activities must be carried out in conformance with the requirements, limitations and conditions which follow.

All other waste discharges are prohibited.

PROPOSED SPECIAL CONDITIONS

1. Water Quality Standards shall not be violated outside a specified mixing zone defined as that portion of the Willamette River within 200 feet from the point of discharge.

2. Monitoring and reporting of effluent quality is required.

3. The proposed expiration date is November 30, 1975.

Department of Enviornmental Quality
Northwest Region
1010 N. E. Couch Street
Portland, Oregon 97232

Application No. OR-000077-9

Date:

County: Multnomah

File No. 47430

This public notice and fact sheet has been prepared to provide public information concerning the following application for a National Pollutant Discharge Elimination System Permit to discharge pollutants to navigable waters pursuant to the provisions of Oregon Revised Statutes (ORS) 449.083 and Federal Water Pollution Control Act Amendments of 1972, P.L. 92-500, October 18, 1972.

APPLICANT: Koppers Company
1201 Koppers Building
Pittsburg, Pennsylvania 15219

DESCRIPTION OF FACILITY AND DISCHARGE:

Koppers Company owns and operates a chemical manufacturing plant in Northwest Portland producing industrial chemicals from coke oven tar. Wastewater discharged to the Willamette River consists of about 34,000 gallons per day, contains about 20 mg/l of oil and grease and has a maximum summertime temperature of about 110°F.

TENTATIVE DETERMINATION, APPLICABLE EFFLUENT LIMITATIONS AND WATER QUALITY STANDARDS

The Department of Environmental Quality has reviewed the application and has tentatively determined to issue a permit to discharge subject to lawful rules and regulations, water quality standards for the Willamette River contained in OAR 340-41-045, applicable effluent guidelines and limitations and certain special conditions. A final determination will not be made until after all comments received, pursuant to the public notice, have been evaluated.

The receiving stream has been classified for the following beneficial uses: domestic, industrial, and agricultural water supply, fish passage and habitat, navigation, recreation, and aesthetic purposes.

The effluent limitations are based upon the capabilities of the existing wastewater control facilities and State of Oregon Water Quality Standards.

PROPOSED EFFLUENT LIMITATIONS

Parameter	Limitations	
	Monthly Average	Daily Maximum
Flow	34,000 gpd	68,000 gpd
Oil and Grease	20 mg/l	30 mg/l
pH	Shall not be outside the range 6.0-9.0	
Temperature		110°F.

PROPOSED SCHEDULE OF COMPLIANCE

The permittee shall submit plans by May 1, 1975, for connecting all wastewaters to the City of Portland sewerage system by November 1, 1975.

I called Dick Nichols 3-21-75 P.M. to review. The city has not yet agreed to accept this water. Nichols says DEQ won't issue the permit until the city agrees.

SPECIAL CONDITIONS

1. Prior to May 1, 1975, the permittee shall submit engineering plans and time schedule for providing, prior to November 1, 1975, such waste water control facilities as are necessary to connect all waste waters to the City of Portland sewerage system or otherwise eliminate the discharge of waste waters to public waters.

2. The permittee is expected to meet the compliance schedules and interim dates which have been established in condition 1 of this permit. Either prior to or no later than 14 days following any lapsed compliance date the permittee shall submit to the Department a notice of compliance or non-compliance with the established schedule. The Director may revise a schedule of compliance if he determines good and valid cause resulting from events over which the permittee has little or no control.

3. Prior to constructing or modifying any waste water control facilities, detailed plans and specifications shall be approved in writing by the Department.

4. Beginning on the date of issuance of this permit and ending November 1, 1975, the quantity and quality of boiler blowdown and tank farm effluent discharged directly or indirectly to the Willamette River shall be limited not to exceed the following:

Parameter	Monthly Average	Daily Maximum
Flow	34,000 GPD	68,000 GPD
Oil and grease	20 mg/l	30 mg/l

Other Parameters	Limitations
pH	Shall not be outside the range 6.0 - 9.0
Temperature	Shall not exceed 110°F

5. The flow rate of waste water discharged through the oil-water separator shall not exceed the hydraulic design capacity of the separator.

6. No emulsifying agents or detergents shall be discharged into or otherwise be allowed to enter the oil-water separator.

7. Notwithstanding the effluent limitations established by this permit, no wastes shall be discharged and no activities shall be conducted which will violate Water Quality Standards as adopted in OAR 340-41-045 except in the following defined mixing zone:

   The allowable mixing zone is defined as that portion of the Willamette River within 200 feet from the point of discharge.

8. No petroleum-base products in excess of the limits in Condition 4 or other substances which might cause the Water Quality Standards of the State of Oregon to be violated shall be discharged or otherwise allowed to reach any of the waters of the state.

9. Sanitary wastes shall be disposed of to the City of Portland municipal sewerage system.

10. Unless approved otherwise in writing by the Department the permittee shall observe and inspect all waste handling, treatment and disposal facilities and the receiving stream above and below each point of discharge at least daily to insure compliance with the conditions of this permit. A written record of all such observations shall be maintained at the plant and shall be made available to the Department of Environmental Quality staff for inspection and review upon request.

11. The permittee shall monitor the operation and efficiency of all treatment and control facilities and the quantity and quality of the wastes discharged. A record of all such data shall be maintained and submitted to the Department of Environmental Quality at the end of each calendar month. Unless otherwise agreed to in writing by the Department of Environmental Quality, data collected and submitted shall include but not necessarily be limited to the following parameters and minimum frequencies:

Parameter	Minimum Frequency
Flow	Daily estimate
Temperature	Daily grab sample
pH	Daily grab sample
Oil and grease	Weekly composite sample*

*The composite sample shall consist of three grab samples taken at regular intervals over an eight hour period.

12. Within 30 days of the issuance of this permit the permittee shall submit a detailed description of the sampling procedures used, sample analysis techniques and exact location of sampling stations.

13. Prior to June 1, 1975, the permittee shall provide an alternative power source sufficient to operate all facilities utilized by the permittee to maintain compliance with the terms and conditions of this permit. In lieu of this requirement the permittee may certify in writing to the Department within 30 days of the issuance of the permit that in the event of a reduction, loss, or failure of a power source the permittee shall halt, reduce or otherwise control production and/or all discharges in order to maintain compliance with the terms and conditions of this permit.

14. The permittee shall prepare, submit to the Department and implement a suggested spill prevention and contingency plan for the facility covered by this permit within 90 days of the date of its issuance. Such plan shall include at least the following information and procedures relative to the prevention and handling of spills and unplanned discharges of oil, chemicals and other hazardous substances:

    a. A description of the reporting system which will be used to alert responsible facility management and appropriate legal authorities;

b. A description of the facilities which prevent, contain or treat spills and unplanned discharges;

c. A list of all oil and hazardous materials used, processed or stored at the facility which may be spilled and could conceivably be discharged to state waters;

d. A brief description of recent spills and changes made to prevent their occurrence; and

e. An implementation schedule for additional facilities which may be required to prevent the spillage of oil, chemicals and other hazardous materials and subsequent discharge to state waters.

15. An adequate contingency plan for prevention and handling of spills and unplanned discharges shall be in force at all times. A continuing program of employee orientation and education shall be maintained to ensure awareness of the necessity of good inplant control and quick and proper action in the event of a spill or accident.

16. The permittee shall, during all times of disposal, provide personnel whose responsibilities include assuring the continuous performance of the disposal system within the limitations of this permit.

17. All waste waters discharged to the City of Portland sewerage system shall be in accordance with all regulations and requirements of the City of Portland.

GENERAL CONDITIONS

G1. All discharges and activities authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant more frequently than or at a level in excess of that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit.

G2. Monitoring procedures:

a. Monitoring shall begin on the first day of the month following issuance of this permit.

b. Monitoring reports shall be submitted by the 15th day of each following month unless otherwise approved in writing by the Department.

c. Monitoring reports shall be submitted on approved NPDES report forms.

d. All records of monitoring activities and results, including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records, shall be retained by the permittee for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the permittee or when requested by the Director.

e. The permittee shall record for each measurement or sample taken pursuant to the requirements of this permit the following information: (1) the date, exact place and time of sampling; (2) the dates the analyses were performed; (3) who performed the analyses; (4) the analytical techniques or methods used and (5) the results of all required analyses.

f. Samples and measurements taken to meet the requirements of this condition shall be representative of the volume and nature of the monitored discharge.

g. All sampling and analytical methods used to meet the monitoring requirements specified in this permit shall, unless approved otherwise in writing by the Department, conform to the Guidelines Establishing Test Procedures for the Analysis of Pollutants as specified in 40 CFR, Part 136.

G3. All waste solids, including dredgings and sludges, shall be utilized or disposed of in a manner which will prevent their entry, or the entry of contaminated drainage or leachate therefrom, into the waters of the state and such that health hazards and nuisance conditions are not created.

G4. The diversion or bypass of any discharge from facilities utilized by the permittee to maintain compliance with the terms and conditions of this permit is prohibited, except (a) where unavoidable to prevent loss of life or severe property damage or (b) where excessive storm drainage or runoff would damage any facilities necessary for compliance with the terms and conditions of this permit. The permittee shall immediately notify the Department in writing of each such diversion or bypass in accordance with the procedure specified in Condition G12.

G5. The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

G6. Whenever a facility expansion, production increase or process modification is anticipated which will result in a change in the character of pollutants to be discharged or which will result in a new or increased discharge that will exceed the conditions of this permit, a new application must be submitted together with the necessary reports, plans and specifications for the proposed changes. No change shall be made until plans have been approved and a new permit or permit modification has been issued.

G7. After notice and opportunity for a hearing this permit may be modified, suspended or revoked in whole or in part during its term for cause including but not limited to the following:

a. Violation of any terms or conditions of this permit or any applicable rule, standard, or order of the Commission;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;

c. A change in the condition of the receiving waters or any other condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

G8. If a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Federal Act for a toxic pollutant which is present in the discharge authorized herein and such standard or prohibition is more stringent than any limitation upon such pollutant in this permit, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition and the permittee shall be so notified.

G9. The permittee shall, at all reasonable times, allow authorized representatives of the Department of Environmental Quality:

a. To enter upon the permittee's premises where an effluent source or disposal system is located or in which any records are required to be kept under the terms and conditions of this permit;

b. To have access to and copy any records required to be kept under the terms and conditions of this permit;

c. To inspect any monitoring equipment or monitoring method required by this permit; or

d. To sample any discharge of pollutants.

G10. The permittee shall maintain in good working order and operate as efficiently as practicable all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

G11. The Department of Environmental Quality, its officers, agents and employees shall not sustain any liability on account of the issuance of this permit or on account of the construction or maintenance of facilities because of this permit.

G12. In the event the permittee is unable to comply with all of the conditions of this permit because of a breakdown of equipment or facilities, an accident caused by human error or negligence, or any other cause such as an act of nature, the permittee shall:

a. Immediately take action to stop, contain and clean up the unauthorized discharges and correct the problem.

b. Immediately notify the Department of Environmental Quality so that an investigation can be made to evaluate the impact and the corrective actions taken and determine additional action that must be taken.

c. Submit a detailed written report describing the breakdown, the actual quantity and quality of resulting waste discharges, corrective action taken, steps taken to prevent a recurrence and any other pertinent information.

Compliance with these requirements does not relieve the permittee from responsibility to maintain continuous compliance with the conditions of this permit or the resulting liability for failure to comply.

KOPPERS

Interoffice Correspondence

To Mr. P. W. Guth — From Mr. R. D. Hepner

Location Northwest Tar Plant, Portland, Ore. — Location Monroeville Research Center

Subject EFFLUENT SAMPLES ANALYSES — Date February 26, 1974

I received a letter from J. M. Anderson on Jan. 3, 1974 requesting that I forward to you sufficient containers to run BOD_5, COD, TOC, phenol and oils on eight sets of effluent samples from the Northwest Tar Plant. The purpose of these analyses at this time would be to satisfy the Oregon Department of Environmental Quality that the Corps of Engineers permit application for the Plant is still accurate.

The sampling program began Jan. 14, 1974 and continued twice weekly for four weeks through and concluding with samples collected Feb. 7, 1974. Table I of this report shows "Sample Collection Data", including nature of the sample, sample dates collected and received, and descriptive properties of the effluents. All samples were acidified as collected with sodium acid sulfate ($NaHSO_4$) as a preservative. Indicated flows of effluent were 96 gpm for all samples collected, except sample PO-NW-9 which was indicated to be 100 gpm.

The samples had colors ranging from tan-brown to brown-red, odors of naphthalene and sulfide, were turbid, and all had a slight floating layer of oil.

Table 2 (attached) shows a "Summary of Analytical Data" for the eight samples. For the parameters tested, all effluents, with the exception of sample PO-NW-10, collected Jan. 21, 1974, would not be in compliance with recently released E.P.A. recommended uniform effluent concentration discharge standards, which are:

Parameter, mg/L	Concentration		PO-NW-10
	Max.	Design Goal	
BOD_5	90	15	60
Phenolics	2.0	0.1	1.7
Oils	10.0	1.0 - 2.0	1.5

Examining the BOD_5 data in Table 2 shows BOD_5 less than TOC in all cases but one (PO-NW-10). Usually the BOD_5 results are 1.5 - 2.0 times greater than the TOC. The lower BOD_5 indicates a probable source of toxicity in these samples. The high oils content may be the cause of some of the toxic factor, but other unknown parameters may be contributing.

NWT 001241

I understand these effluent waters from the Northwest Plant discharge to the Willamette River, a river of rather high quality. It would appear that discharging an effluent of the poor quality indicated in Table 2 may be detrimental to the purity of the Willamette River. Also, the State of Oregon may have higher quality standards than the E.P.A. has in its recommended uniform effluent concentration discharge standards.

If the high flow, highly contaminated waters are the result of storm runoff, as indicated from sample collection data of sample PO-NW-9, 14, and 15, provision should be made to collect and treat these waters prior to discharging to a public waterway.

If further analyses are required, or, if additional help is needed, please notify Mr. C. W. Fisher at Monroeville.

R. D. Hepner

RDH:mw

Attachment

cc: Mr. R. L. Shannon
Mr. J. M. Anderson
Mr. R. S. Detrick
Mr. C. W. Fisher
Dr. T. E. Robbins

NWT 001242

TABLE 1

ORGANIC MATERIALS DIVISION

KOPPERS COMPANY, INC.

NORTHWEST PLANT, PORTLAND, OREGON

SAMPLE COLLECTION DATA

Lab Sample No.	Nature of Sample	DATE		DESCRIPTIVE PROPERTIES			
		Collected	Received	Color	Odor	Turbidity	Oily
PO-NW-8	Tar Plant Effluent (96 gpm)	1/14/74	1/21/74	Tan Brown	Naphthalene	Turbid	Sl. Floating Layer
PO-NW-9	Tar Plant Effluent (100 gpm) (Tank Farm Flooded)	1/17/74	1/21/74	Yellow green	Naphthalene & Sulfide	Turbid	"
PO-NW-10	Tar Plant Effluent (96gpm)	1/21/74	1/28/74	Brown-red	Naphthalene	Turbid	"
PO-NW-11	Tar Plant Effluent (96gpm)	1/24/74	1/28/74	Brown-yellow	"	Turbid	"

Note: Samples preserved with $NaHSO_4$

Effluent Services Group
Environmental Health & Safety Section
Monroeville Research Center
2-26-74

TABLE 1 CONT'D.

ORGANIC MATERIALS DIVISION

KOPPERS COMPANY, INC.

NORTHWEST PLANT, PORTLAND, OREGON

SAMPLE COLLECTION DATA

Lab Sample No.	Nature of Sample	DATE		DESCRIPTIVE PROPERTIES			
		Collected	Received	Color	Odor	Turbidity	Oily
PO-NW-12	Tar Plant Effluent, 96 gpm	1/28/74	2/6/74	Tan Brown	Naphthalene	Turbid	Sl. floating layer
PO-NW-13	Tar Plant Effluent, 96 gpm	1/31/74	2/6/74	"	"	"	"
PO-NW-14	Tar Plant Effluent (Farm Flooded) 96 gpm	2/4/74	2/11/74	"	Naphthalene	"	"
PO-NW-15	Tar Plant Effluent (Farm Flooded) 96 gpm	2/7/74	2/11/74	"	"	"	"

Note: Samples preserved with $NaHSO_4$

Effluent Services Group
Environmental Health & Safety Section
Monroeville Research Center
2-26-74

TABLE 2

ORGANIC MATERIALS DIVISION

KOPPERS COMPANY, INC.

NORTHWEST PLANT, PORTLAND, OREGON

SUMMARY OF ANALYTICAL DATA

PARAMETER	1/14/74 PO-NW-8	1/17/74 PO-NW-9		1/21/74 PO-NW-10	1/24/74 PO-NW-11	
Flow, gpd	138,240	144,000		138,240	138,240	
pH						
Temperature, °F						
Alkalinity (as $CaCO_3$) to pH = 8.3						
T.O.C.	280	1300		40	200	
B.O.D. 5-day	190	430		60	140	
C.O.D.	1,200	3600		120	520	
Solids, Evaporated Total - 103°C						
Fixed - 550°C						
Volatile- 550°C						
Solids, Suspended Total - 103°C						
Fixed - 550°C						
Volatile- 550°C						
Solids, Dissolved Total - 180°C						
Fixed - 550°C						
Volatile- 550°C						
PHENOL	20	30		1.7	3	
OILS	210	830		1.5	180	
Nitrate (as N)						
Phosphorus Total (as P)						

Test results in mg/liter unless otherwise noted.

Effluent Services Group
Environmental Health & Safety Section
Monroeville Research Center
2-26-74

NWT 001245

TABLE 2 CONT'D.

ORGANIC MATERIALS DIVISION

KOPPERS COMPANY, INC.

NORTHWEST PLANT, PORTLAND, OREGON

SUMMARY OF ANALYTICAL DATA

PARAMETER	1/28/74 PO-NW-12	1/31/74 PO-NW-13	2/4/74 PO-NW-14	2/7/74 PO-NW-15	
Flow, gpd	138,240	138,240	138,240	138,240	
pH					
Temperature, °F					
Alkalinity (as $CaCO_3$) to pH = 8.3					
T.O.C.	160	150	300	200	
B.O.D. 5-day	110	120	130	85	
C.O.D.	520	430	1500	480	
Solids, Evaporated Total - 103°C					
Fixed - 550°C					
Volatile- 550°C					
Solids, Suspended Total - 103°C					
Fixed - 550°C					
Volatile- 550°C					
Solids, Dissolved Total - 180°C					
Fixed - 550°C					
Volatile- 550°C					
PHENOLS	9	17	8.7	6.7	
OILS	97	23	430	195	
Nitrate (as N)					
Phosphorus Total (as P)					

Test results in mg/liter unless otherwise noted.

Effluent Services Group
Environmental Health & Safety Section
Monroeville Research Center
2-26-74

KOPPERS

Interoffice Correspondence

To Paul Guth

Location Northwest

Subject SEWER TIE-IN

From Organic Materials Division

Location Manufacturing Services

Date January 31, 1974

Attached is the completed City of Portland Waste Analysis Report. Confirming our discussion today, it need not be submitted until the City asks for it.

JMA

Jon M. Anderson

JMA:em
Attachment

cc: R. L. Shannon - With Attachment

NWT 001247

CITY OF PORTLAND

BUREAU OF SANITARY ENGINEERING

WASTE ANALYSIS REPORT

General Instructions:

1. Please complete and submit this report before ____________________.

2. Please read the accompanying Code of the City of Portland, Oregon which relates to "Industrial Wastes" before attempting to complete report.

3. Where a company operates several different plants, each plant seeking a connection to the sewer in question must fill out a separate report sheet for each location.

4. If the requested information is unknown or for any reason unavailable or not applicable, indicate so and explain why.

5. Please fill out report completely.

6. Any business wasting other than storm runoff, sanitary or uncontaminated cooling water must accompany this report by a chemical analysis of their waste.

7. Completed report and analysis sheets should be mailed to:

   City Engineer
   ~~City Hall, 1220 S.W. 5th Ave.~~ 400 S.W. 6th
   Portland, Oregon 97204 (Rm. 357A)
   Att'n: ~~R.E. Johnson~~, Industrial Wastewater Management Section
   H.G. Edmonds (248-4627)

* *

I. IDENTIFICATION OF APPLICANT

A. OFFICIAL NAME AND ADDRESS OF APPLICANT
   See B.

B. LOCATION OF PLANT DISCHARGING WASTES IF DIFFERENT FROM ABOVE
   Koppers Company, Inc., Organic Materials Division
   7540 N.W. St. Helens Road, Portland, Oregon 97229

C. NAME, TITLE, ADDRESS, AND TELEPHONE NUMBER OF OFFICIAL RESPONSIBLE FOR REPORT

   1. Principal Paul W. Guth, Superintendent 503-286-3681

   2. Alternate (s)

II. SOURCE AND CHARACTER OF RAW WASTE

This information is intended to identify and describe the quantity and quality of raw waste as well as the nature of the process producing the waste. The information will be used to establish discharge requirements and to project waste strength loading.

A. PRODUCTS PRODUCED OR PROCESSED

List all products produced or processed which result in the production of wastes, the associated design daily production capacity and the time of the year each product is produced or processed.

B. NORMAL PLANT OPERATING SCHEDULE

Number of employees: Min. 9 Max. 9 Av. 9

/x/ Year around / / Seasonal From _____ To _____

Hours/day operated M 24 T 24 W 24 T 24 F 24 S ___ S ___

C. WATER SUPPLY

	Source of Supply (Wells, etc.)	Inplant Treatment Provided Before Use	Quantity Used Gallons/Day
Domestic	City	None	500
Cooling	City	None	12,000
Industrial	City	Boiler Chemical	30,000

D. RAW MATERIALS AND CHEMICALS USED

List the significant raw materials and chemicals used, indicate the quantity used per day and average days per month used.

D. (Continued)

Description (Common Name)	Quantity Used/ Day	Average Days per Month Used
Crude coal tar	30,000 gals.	22

E. FLOW DIAGRAM OF WASTE PRODUCING PROCESS (ES)

A schmetac diagram of the basic production process or processes where wastes are produced which shows the points of addition of raw materials, chemicals, and water, and points of waste discharge is attached to and made a part of this report as exhibit _____.

F. WASTE ANALYSIS Sanitary waste only.

Relevent to those wastes outlined in the present Code of the City of Portland, Oregon, and made a part of this report as exhibit _____.

G. QUANTITY AND QUALITY OF WASTES BEFORE FORMAL WASTE TREATMENT

Give as much information as possible which indicates the quantity and quality of the wastes after any inplant reuse but prior to formal waste treatment.

1. General Parameters

	Flow gal/day	pH	Temp	BOD mg/l	SUSP.SOLIDS mg/l
Average (Optg. Day)	_____	__	____	____	_____
Maximum (Optg. Day)	_____	__	____	____	_____
Minimum (Optg. Day)	_____	__	____	____	_____

2. Other Parameters

(include color, turbidity, conductivity, acidity, alkalinity, heavy metals, toxic components, etc., where applicable.)

3. If this data is based on a limited number of samples rather than a continuous waste quality monitoring program, indicate how samples were collected, how often, and when.

III. POLLUTION CONTROL MEASURE EMPLOYED AND PROPOSED

This information is intended to identify and describe all existing control measures and facilities as well as any that are proposed for installation.

A. DESCRIPTION OF TREATMENT AND CONTROL MEASURES EMPLOYED

A brief narrative statement describing all existing inplant and external water pollution control facilities or measures presently employed at the site is attached to and made a part of this report as exhibit _____.

B. PLANT SITE MAP (8½ x 11-inch size is preferred)

A map showing the overall plant site including the location of treatment facilities, outfall lines, and the receiving stream or septic tank is attached to and made a part of this report as exhibit _____.

C. SCHEMATIC DIAGRAM OF TREATMENT FACILITIES

A schematic diagram of the waste treatment facilities employed is attached to and made a part of this report as exhibit _____.

D. PROPOSED POLLUTION CONTROL MEASURES

A statement describing proposed pollution control measures, if any, together with a proposed schedule for completion is attached to and made a part of this report as exhibit _____.

E. DISPOSAL OF COMPONENTS REMOVED BY TREATMENT WORKS

Indicate the location and method of disposal of all components removed by the waste treatment facilities.

F. DISPOSAL OF SANITARY SEWAGE

Indicate location and method of disposal of sanitary sewage.

. . . . . .

I HEREBY CERTIFY THAT THE INFORMATION SUBMITTED ON AND ATTACHED TO THIS REPORT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Applicant's Name _____

By _____

Title _____

Date _____

KOPPERS

Interoffice Correspondence

To Mr. Paul Guth — From Mr. R. D. Hepner

Location Northwest Tar Plant, Portland, Ore. — Location Monroeville Research Center

Subject EFFLUENT SAMPLING — Date January 4, 1974

I have sent to you today, via Air Express, four (4) sampling cases, as requested by Mr. J. M. Anderson, for an effluent sampling program. Each case contains four (4) half-gallon glass jugs and four (4) vials filled with sodium acid sulfate ($NaHSO_4$). Return shipping labels are also enclosed.

As the sampling is to be on a twice per week basis for four weeks, each case will be used for one weeks collection in the following manner:

1. If the first collection can be on a Monday, collect two (2) half-gallons of water at the sampling site. Do not allow the water to overflow the bottle. Add 1 vial of $NaHSO_4$ preservative to each bottle, mix and refrigerate until the second weekly sampling can be collected, say on a Thursday. Indicate on the bottle labels, date and time of collection.

2. Collect the second weekly sampling (on a Thursday if agreeable) as the first set was collected, adding the $NaHSO_4$ preservative to the water, again being certain the waters do not overflow the bottles. Again indicate date and time of sampling.

3. As soon as possible, after the first weeks second collection, return the sampling case with the four (4) samples via Air Express to Mr. C. W. Fisher at the Monroeville Research Center.

4. Repeat steps 1-3 for the second, third and fourth weeks.

As soon as the first samples are received, we shall analyze for BOD_5, COD, TOC, phenol, and oil and grease, as Mr. Anderson requested. Results of analyses will be sent to you at the completion of the test program.

R. D. Hepner

RDH:mw

cc: Mr. C. W. Fisher
Mr. R. L. Shannon
Mr. J. M. Anderson
Dr. T. E. Robbins

K-5 REV. 2

KOPPERS

Interoffice Correspondence

To Paul W. Guth

Location Northwest Plant

Subject WATER PERMIT

From Organic Materials

Location Manufacturing Services

Date January 3, 1974

Please sign the attached letter and forward to the DEQ.

J. M. Anderson

JMA/mak
Attachment
cc: C. H. Teller, Sr. (w/attach.)
T. Smith "
J. Little "
R. L. Shannon "

K43-REV. 5 100M 5-73

January 3, 1974

Department of Environmental Quality
1234 S. W. Morrison Street
Portland, Oregon 97205

ATTN: Mr. Charles K. Ashbaker

Dear Sir:

In response to your letter of December 17, 1973, we have reviewed our pending Refuse Act permit application 071-OYA-2-000189, and are unsure if it is still accurate. Therefore, we are undertaking a program of sampling and analysis of this discharge. We expect to report revisions, if any, in that application to you by April 1, 1974.

Very truly yours,

Paul W. Guth
Superintendent
Koppers Company, Inc.
7540 N. W. St. Helens Road
Portland, Oregon 97229

PWG/mak

KOPPERS

Interoffice Correspondence

To R. D. Hepner

Location Monroeville

Subject NORTHWEST TAR PLANT

From Organic Materials

Location Manufacturing Services

Date January 3, 1974

The Oregon Department of Environmental Quality has asked if the Corps of Engineers permit application is still accurate for the Northwest tar plant. To check those figures, Bob Shannon has set up a sampling program with Paul Guth on a twice per week basis for four weeks.

Please forward to the plant containers and sampling and shipping instructions sufficient to run BOD_5, COD, TOC, phenol, and oil and grease on the eight sets of samples.

J. M. Anderson

JMA/mak

cc: R. L. Shannon
P. W. Guth
C. H. Teller, Sr.

K43-REV. 5 100M 5-73

DEPARTMENT OF ENVIRONMENTAL QUALITY

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5696

DEC 17 1973

TOM McCALL
GOVERNOR

DIARMUID F. O'SCANNLAIN
Director

Paul W. Guth
Koppers Co., Inc.
7540 N.W. St. Helens Road
Portland, Oregon 97229

Dear Mr. Guth:

On September 26, 1973, the Department of Environmental Quality request for operation of the National Pollutant Discharge Elimination System (NPDES) permit program was approved by the U.S. Environmental Protection Agency.

Under the NPDES program the Department will be processing permits for point source waste discharges to essentially all surface waters of the State of Oregon. All the applications must be processed by December 31, 1974, in accordance with Public Law 92-500, since discharging without a permit after that date can be subject to enforcement provisions of the Federal Act.

Because of the severe consequences that can occur to facilities discharging without an NPDES permit, we are making every effort to assure that this important goal is achieved.

To assist the Department in issuing all permits by December 31, 1974, complete and up-to-date information is needed from all dischargers. Your pending Refuse Act permit application (071-OYA-2-000189) has been transferred to DEQ and is considered as your NPDES application for a permit.

We would appreciate it if you would review the application to determine if the information in the application reflects your current wastewater volume and composition and accurately describes your activities. Also, please review and update any sketches of your plant site and discharge locations. In addition, if you have any discharges, such as sanitary wastes which were previously exempt under the Refuse Act, please include these in your application.

RECEIVED DEC 19 1973 KOPPERS CO., INC. TAR & CHEMICAL DIV. PORTLAND, OREGON

EQ-1

If you consider your existing application to be complete please notify us within 30 days. If additional or updated information is needed to complete your application, please submit this data within 30 days or submit a schedule on which the data will be submitted.

Any additional data may be submitted on Refuse Act application forms or summarized in a letter. Refuse Act application forms are available at this office.

If you have any questions or need further information on this matter please contact Jim Sweeney, Environmental Protection Agency, Oregon Operations Office (221-3250) or me.

Sincerely,

Charles K. Ashbaker
Assistant Administrator
Water Quality Division

NWT 001258

FORM APPROVED
OMB NO. 49-R 0408

DEPARTMENT OF THE ARMY, CORPS OF ENGINEERS

APPLICATION FOR PERMIT TO DISCHARGE OR WORK IN NAVIGABLE WATERS AND THEIR TRIBUTARIES

SECTION I. GENERAL INFORMATION

1. State	Application Number (to be assigned by Corps of Engineers)			
O R	Div.	Dist.	Type	Sequence No.

2. Name of applicant and title of signing official
Koppers Company, Inc.
R. E. Spatz - Vice President & Asst. General Manager - Organic Matls. Div.

3. Mailing address of applicant
Koppers Company, Inc.
1201 Koppers Building
Pittsburgh, Pennsylvania 15219

4. Name, address, telephone number and title of applicant's authorized agent for permit application coordination and correspondence.
Paul W. Guth, Plant Superintendent
7540 N.W. St. Helena Road
Portland, Oregon 97229
503-286-3681

NOTE TO APPLICANT: Refer to the pamphlet entitled "Permits for Work and Structures in and for Discharges or Deposits into Navigable Waters" before attempting to complete this form.

Required Information

a. All information contained in this application will, upon request, be made available to the public for inspection and copying. A separate sheet entitled "Confidential Answers" must be used to set out information which is considered by the applicant to constitute trade secrets or commercial or financial information of a confidential nature. The information must clearly indicate the item number to which it applies. Confidential treatment can be considered only for that information for which a specific written request of confidentiality has been made on the attached sheet. However, in no event will identification of the contents and frequency of a discharge be recognized as confidential or privileged information.

b. The applicant shall furnish such supplementary information as is required by the District Engineer in order to evaluate fully an application.

c. If additional space is needed for a complete response to any item on this form, attach a sheet entitled "Additional Information." Indicate on that sheet the item numbers to which answers apply.

d. Drawings required by items 20 and 21 should be attached to this application. Other papers which must be attached to this application include, if applicable, copies of a water quality certification or a written communication which describes water quality impact (see Item 22 and Item 10 of Section II below), the additional information sheet(s) in "c" above, and the confidential information sheet described in "a" above.

Fees

If any discharge or deposit is involved, an application fee of $100 must be submitted with this application. An additional $50 is required for each additional point of discharge or deposit.

Signature

a. If a discharge is involved, an application submitted by a corporation must be signed by the principal executive officer of that corporation or by an official of the rank of corporate vice president or above who reports directly to such principal executive officer and who has been designated by the principal executive officer to make such applications on behalf of the corporation. In the case of a partnership or a sole proprietorship, the application must be signed by a general partner or the proprietor. Other signature requirements are discussed in the pamphlet.

b. If no discharge is involved, an application may be signed by the applicant or his authorized agent.

Application is hereby made for a permit or permits to authorize the activities described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete, and accurate.

R. E. Spatz
Signature of Applicant

18 U.S.C. Section 1001 provides that:

Whoever, in any matter within the jurisdiction of any department or agency of the United States knowingly and wilfully falsifies, conceals or covers up by any trick, scheme, or device a material fact, or makes any false, fictitious or fraudulent statements or representations, or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than $10,000 or imprisoned not more than five years, or both.

FOR CORPS OF ENGINEERS USE ONLY

Acronym name of applicant

Are discharge structures
Major? ☐ Minor? ☐ N/A? ☐

Date received, form not complete — — — — — —
Date received, form complete but without certificate — — — — — —
Date received, form complete Date of Cert./Ltr. — — — — — —
day mo yr

Date sent to EPA, form not complete — — — — — —
Date sent to EPA, NOAA, D/I, AEC, FPC in complete form — — — — — —
day mo yr

NWT 001259

5. Date: 6 (mo) 29 (day) 71 (yr)

(Office use only)

6. Check type of application: a. Original [X] b. Revision [ ]

7. Number of original application

8. Name of facility where discharge or construction will occur.

Koppers Company, Inc.
Northwest Plant

9. Full mailing address of facility named in Item 8 above.

Koppers Company, Inc.
7540 N. W. St. Helena Road
Portland, Oregon 97229

10. Names and mailing addresses of all adjoining property owners whose property also adjoins the waterway.

Northwest Natural Gas Co.
7900 N.W. St. Helena Road
Portland, Oregon 97229

Rivergate Rock Products
7881 N.W. St. Helena Road
Portland, Oregon 97229

11. Check to indicate the nature of the proposed activity:
a. Dredging [ ] b. Construction [ ] c. Construction with Discharge [X] b. Discharge only [ ]

12. If activity is temporary in nature, estimate its duration in months.

If application is for a discharge:

13. List intake sources

Source	Estimated Volume in Million Gallons Per day or Fraction Thereof
Municipal or private water supply system	.034
Surface water body	
Ground water	
Other	

14. Describe water usage within the plant

Type	Estimated Volume in Million Gallons Per day or Fraction Thereof
Cooling water	.014
Boiler Feed water	.040
Process water	
Sanitary system*	.001
Other	

15. List volume of discharges or losses other than into navigable waters.

Type	Estimated Volume in Million Gallons Per day or Fraction Thereof
Municipal waste treatment system	
Surface containment	.002
Underground disposal	
Waste Acceptance firms	
Evaporation	.018
Consumption	

* Indicate number employees served per day: 12

NWT 001260

If structures exist, or dredging, filling or other construction will occur, the precise location of the activity must be described.

(Office use only)

a. Name the corporate boundaries within which the structures exist or the activity will occur.

16. State: Oregon 17. County: Muttnomak 18. City or Town: Portland

b. Name of waterway at the location of the activity

19. Willamette River

20. Maps and sketches which show the location and character of each structure or activity, including any and all outfall devices, dispersive devices, and non-structural points of discharge, must be attached to this application.

21. For construction or work in navigable waters for which a separate permit is sought under 33 U.S.C. 403, the character of each structure must be fully shown on detailed plans to be submitted with this application. Note on the drawings those structures for which separate discharge information (Section II of this form) has been submitted.

22. List all approvals or denials granted by Federal, interstate, State or local agencies for any structures, construction, discharges or deposits described in this application.

Type of document	Id. No.	Date	Issuing Agency
Letter	1 W 3-0	1-11-66	Oregon State Sanitary Authority

23. Check if facility existed or was lawfully under construction prior to April 3, 1970. [X]

24. If dredging or filling will occur:

State the type of materials involved, their volume in cubic yards, and the proposed method of measurement.

Not Applicable

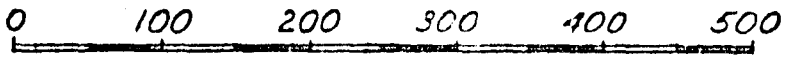
25. Describe the proposed method of instrumentation which will be used to measure the volume of any solids which may be deposited and to determine its effect upon the waterway.

Not Applicable

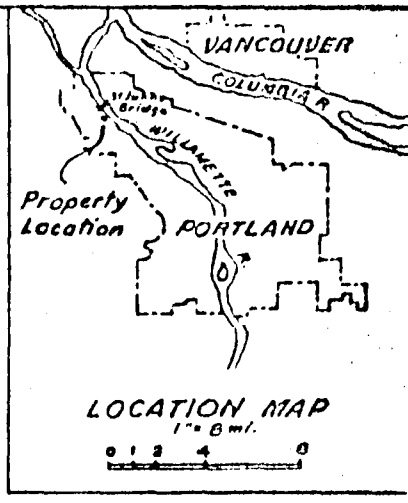
26. State rates and periods of deposition described in Item 25.

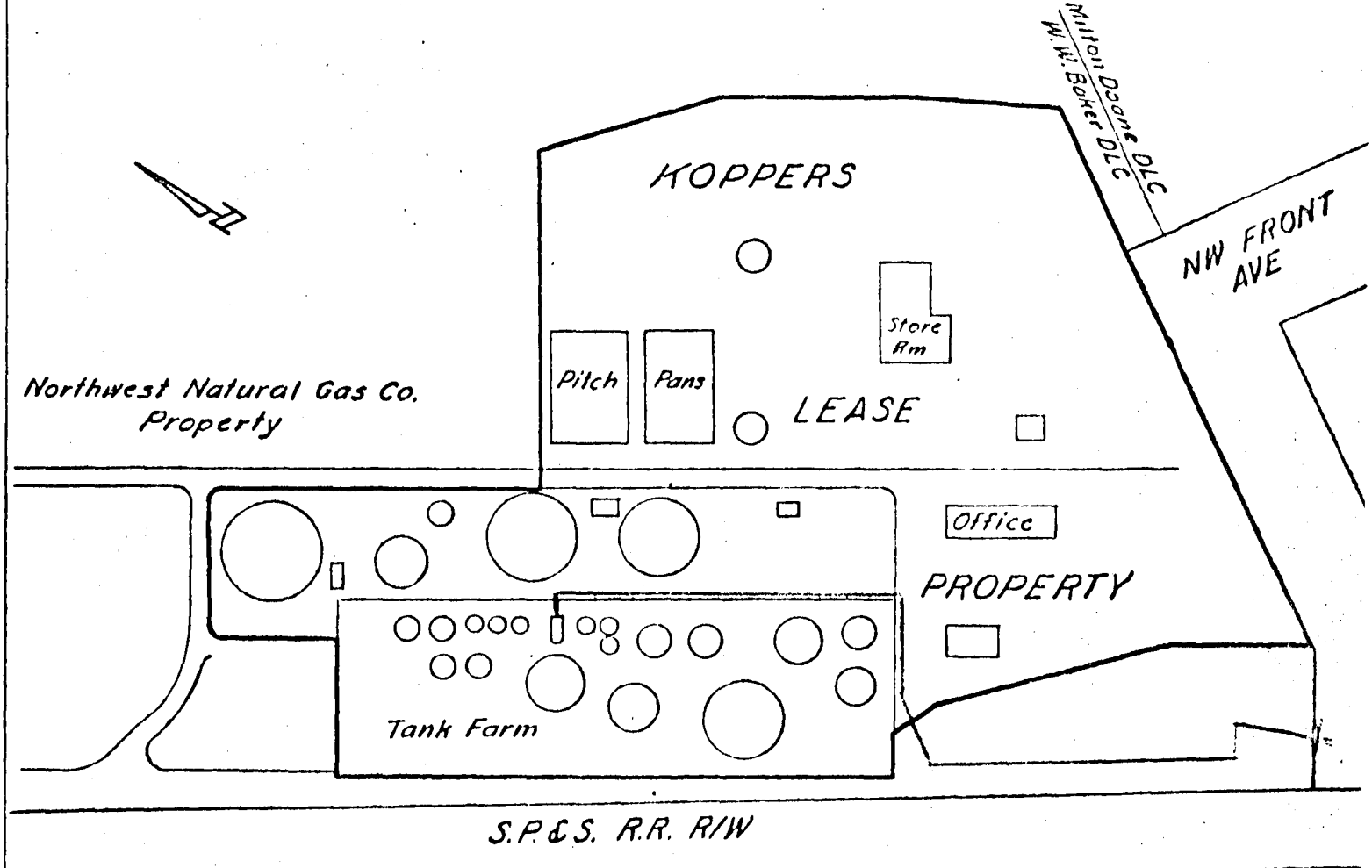
Not Applicable

NWT 001261



Scale in Feet





Location of Koppers Lease Property on Northwest Natural Gas Co. property at 7900 NW St Helens Rd., City of Portland, County of Multnomah, State of Oregon.

June 3, 1971

NWT 001262

SECTION II. PLANT PROCESS AND DISCHARGE DESCRIPTION

1. Discharge described below is a. Present [X] b. Proposed new or changed [ ]	2. Implementation schedule [ ]	(Office use only)

Name of corporate boundaries within which the point of discharge is located.

3. State	4. County	5. City or Town	6. Discharge Serial No.
Oregon	Muttnomack	Portland	001

State the precise location of the point of discharge.	9. Name of waterway at the point of discharge.
7. Latitude N 45 Degrees; 3 5 Min; __ __ Sec. 8. Longitude W 122 Degrees; 4 6 Min; __ __ Sec.	Not applicable

10. Has application for water quality certification or description of impact been made? If so, give date:

Date	Check if certificate is attached to form	Name Issuing Agency
6 (mo) 29 (day) 71 (yr)	[ ]	Oregon Dept. of Environmental Quality

11. Narrative description of activity (include terms of general 4-digit Standard Industrial Classification, and specific manufacturing process).

Primarily engaged in manufacturing industrial organic chemicals by the distillation of coke oven tar.

12. Standard industrial classification number.	13. Principal product.	14. Amount of principal product produced per day.
SIC 2818	See #15	See #16

15. Principal raw material.	16. Amount of principal raw material consumed per day.	17. Number of batch discharges per day.
Coke Oven Tar	280,000 lbs.	Not Applicable

18. Average gallons per batch discharge.	19. Date discharge began.	20. Date discharge will begin.
Not Applicable	6 (mo) 1 (day) 66 (yr)	__ (mo) __ (day) __ (yr)

21. Describe waste abatement practices.

Water discharged at this outfall is contained in a separate drainage system where pumps with special seals and local separators are employed.

ESEPAR, EPUMPS, LOCALS

NWT 001263

PHYSICAL DESCRIPTION OF INTAKE WATER AND DISCHARGE

Intake / Discharge

(Office use only)

Discharge Serial No. 001

Parameter and (Code)	UNTREATED INTAKE WATER (1)	TREATED INTAKE WATER (2)	AVERAGE (DAILY) (3)	MINIMUM (OPERATING YEAR) (4)	MAXIMUM (OPERATING YEAR) (5)	SAMPLE FREQUENCY (6)	CONTINUOUS MONITORING (7)
Flow (Gallons per day) 00056		54,000	34,000	Data Not Avail.	Data Not Avail.	OTHR	ABS
pH 00400		6.9	8.8	Data Not Avail.	Data Not Avail.	OTHR	ABS
Temperature (Winter) (°F) 74028		45	85	Data Not Avail.	Data Not Avail.	OTHR	ABS
Temperature (Summer) (°F) 74027		52	110	Data Not Avail.	Data Not Avail.	OTHR	ABS

23. **DISCHARGE CONTENTS**

PARAMETER	PRESENT	ABSENT	PARAMETER	PRESENT	ABSENT	PARAMETER	PRESENT	ABSENT
Color 00080	X		Aluminum 01105		X	Nickel 01067		X
Turbidity 00070	X		Antimony 01097		X	Selenium 01147		X
Radioactivity 74050		X	Arsenic 01002		X	Silver 01077		X
Hardness 00900	X		Beryllium 01012		X	Potassium 00937	X	
Solids 00500	X		Barium 01007		X	Sodium 00929	X	
Ammonia 00610	X		Boron 01022		X	Titanium 01152		X
Organic Nitrogen 00605	X		Cadmium 01027		X	Tin 01102		X
Nitrate 00620	X		Calcium 00916	X		Zinc 01092		X
Nitrite 00615		X	Cobalt 01037		X	Algicides 74051		X
Phosphorus 00665	X		Chromium 01034		X	Oil and Grease 00550	X	
Sulfate 00945	X		Copper 01042		X	Phenols 32730	X	
Sulfide 00745	X		Iron 01045	X		Surfactants 38260		X
Sulfite 00740		X	Lead 01051		X	Chlorinated Hydrocarbons 74052		X
Bromide 71870		X	Magnesium 00927		X	Pesticides 74053		X
Chloride 00940	X		Manganese 01055		X	Fecal Streptococci Bacteria 74054		X
Cyanide 00720	X		Mercury 71900		X	Coliform Bacteria 74056		X
Fluoride 00951		X	Molybdenum 01062		X			

NWT 001264

24a. Has all known hazardous or potentially hazardous substances in your plant been inventoried?

☐ Yes ☒ No

24b. If yes, have steps been taken to insure that there exists no possibility of any such known hazardous or potentially hazardous substance entering this discharge?

☐ Yes ☐ No

25. Remarks. Principal Raw Material is used as process unit in Part A,Column 4. Item 24a. is checked NO even though we feel that we have such substances under control, because the question is too vague and all encompassing to answer yes comfortably. In Part A all maximum values are arbitrarily taken as 140% of the average in lieu of sufficient data. Part A information is based upon a 24 hour composite sample.

The information above completes the basic reporting requirements which are required of all applicants. Those applicants whose discharge results from an activity included within any of the Standard Industrial Classification Code (SIC Code) categories listed below must complete Part A of this form as well.

CRITICAL INDUSTRIAL GROUPS

SIC	098	FISH HATCHERIES, FARMS, AND PRESERVES
SIC	10–14	DIVISION B – MINING
SIC	201	MEAT PRODUCTS
SIC	202	DAIRY PRODUCTS
SIC	203	CANNED PRESERVED FRUITS, VEGETABLES (EXCEPT SEAFOODS, SIC 2031 AND 2036)
SIC	2031, 2036	CANNED AND CURED FISH AND SEAFOODS; FRESH OR FROZEN PACKAGED FISH AND SEAFOODS
SIC	204	GRAIN MILL PRODUCTS
SIC	206	SUGAR
SIC	207	CONFECTIONARY AND RELATED PRODUCTS
SIC	208	BEVERAGES
SIC	209	MISCELLANEOUS FOOD PREPARATIONS AND KINDRED PRODUCTS
SIC	22	TEXTILE MILL PRODUCTS
SIC	23	APPAREL AND OTHER FINISHED PRODUCTS MADE FROM FABRICS AND SIMILAR MATERIALS
SIC	242	SAWMILLS AND PLANING MILLS
SIC	2432	VENEER AND PLYWOOD
SIC	2491	WOOD PRESERVING
SIC	26	PAPER AND ALLIED PRODUCTS
SIC	281	INDUSTRIAL INORGANIC AND ORGANIC CHEMICALS (EXCEPT SIC 2818)
SIC	2818	INDUSTRIAL ORGANIC CHEMICALS
SIC	282	PLASTICS MATERIALS AND SYNTHETIC RESINS, SYNTHETIC RUBBER, SYNTHETIC AND OTHER MAN-MADE FIBERS, EXCEPT GLASS
SIC	283	DRUGS
SIC	284	SOAP, DETERGENTS, AND CLEANING PREPARATIONS, PERFUMES, COSMETICS, AND OTHER TOILET PREPARATIONS
SIC	285	PAINTS, VARNISHES, LACQUERS, ENAMELS, AND ALLIED PRODUCTS
SIC	2871	FERTILIZERS
SIC	2879	AGRICULTURAL PESTICIDES, AND OTHER AGRICULTURAL CHEMICALS, NOT ELSEWHERE CLASSIFIED
SIC	2891	ADHESIVES AND GELATIN
SIC	2892	EXPLOSIVES
SIC	29	PETROLEUM REFINING AND RELATED INDUSTRIES
SIC	3011, 3069	TIRES AND INNER TUBES; FABRICATED RUBBER PRODUCTS, NOT ELSEWHERE CLASSIFIED
SIC	3079	MISCELLANEOUS PLASTICS PRODUCTS
SIC	311	LEATHER TANNING AND FINISHING
SIC	32	STONE, CLAY, GLASS, AND CONCRETE PRODUCTS
SIC	331	BLAST FURNACES, STEEL WORKS, AND ROLLING AND FINISHING MILLS
SIC	332	IRON AND STEEL FOUNDRIES
SIC	333, 334	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS; SECONDARY SMELTING AND REFINING OF NONFERROUS METALS
SIC	336	NONFERROUS FOUNDRIES
SIC	347	COATING, ENGRAVING, AND ALLIED SERVICES
SIC	35	MACHINERY, EXCEPT ELECTRICAL
SIC	36	ELECTRICAL MACHINERY, EQUIPMENT, AND SUPPLIES
SIC	37	TRANSPORTATION EQUIPMENT (EXCEPT SHIP BUILDING AND REPAIRING, SIC 3731)
SIC	3731	SHIP BUILDING AND REPAIRING
SIC	491	ELECTRIC COMPANIES AND SYSTEMS
SIC	493	COMBINATION COMPANIES AND SYSTEMS

PART A

(Note: Submission of Part A is required of all applicants whose processes are listed on page 3 above.)

(Office use only)

Discharge Serial No. 001

INFORMATION REQUIRED OF SPECIFIED INDUSTRIES

PARAMETER AND CODE	Intake (1) DAILY AVG. CONCENTRATION	Intake (1) DAILY AVG. CONCENTRATION UNTREATED INTAKE WATER	Discharge (2) DAILY AVG. CONCENTRATION TREATED INTAKE WATER	Discharge (2) MAXIMUM CONCENTRATION	(3) MAXIMUM POUNDS PER DAY PER PROCESS UNIT	(4) MAXIMUM POUNDS PER DAY	(5) DAILY AVG. CONCENTRATION	(6) AVERAGE POUNDS PER DAY	(7) SAMPLE TYPE	(8) SAMPLE FREQUENCY	(9) METHOD OF ANALYSIS	(10) CONTINUOUS MONITORING	(11)
ALKALINITY (as $CaCO_3$) 00410			14	101	10×10^{-5}	28	72	20	COMP	OTHR	AWWA	ABS	
B.O.D. 5-DAY 00310			Not Avail	112	11×10^{-5}	32	80	23	COMP	OTHR	AWWA	ABS	
CHEMICAL OXYGEN DEMAND (C.O.D.) 00340			Not Avail	344	37×10^{-5}	105	246	75	COMP	OTHR	AWWA	ABS	
TOTAL SOLIDS 00500			28	246	25×10^{-5}	70	176	50	COMP	OTHR	AWWA	ABS	
TOTAL DISSOLVED SOLIDS 70300			26.8	162	16×10^{-5}	46	116	33	COMP	OTHR	AWWA	ABS	
TOTAL SUSPENDED SOLIDS 00530			1.2	84	86×10^{-6}	24	60	17	COMP	OTHR	AWWA	ABS	
TOTAL VOLATILE SOLIDS 00505			11.5	106	11×10^{-5}	31	76	22	COMP	OTHR	AWWA	ABS	
AMMONIA (as N) 00610			Not Avail	7.98	81×10^{-7}	2.27	5.7	1.62	COMP	OTHR	AWWA	ABS	
KJELDAHL NITROGEN 00625			Not Avail				Not Avail					ABS	
NITRATE (as N) 00620			Not Avail	.71	75×10^{-8}	.21	.51	0.15	COMP	OTHR	AWWA	ABS	
PHOSPHORUS TOTAL (as P) 00665			Not Avail	.42	46×10^{-8}	.13	.30	.09	COMP	OTHR	AWWA	ABS	

NWT 001266

TABLE A
Guide for Completion of Part A

PARAMETER & UNITS	METHOD	REFERENCES			SIGNIFICANCE IN REPORTING DATA
		STANDARD METHODS 13TH ED. 1971	A.S.T.M. STANDARDS Pt. 23 1970	W.Q.O. METHODS 1971	
ALKALINITY AS $CaCO_3$ Mg/liter	ELECTROMETRIC TITRATION TECHNICON METHYL ORANGE METHOD	p. 370	p. 154	p. 6	X.
B.O.D. 5-DAY Mg/liter	MODIFIED WINKLER METHOD OR PROBE METHOD	p. 489	p. 712	p. 15	X.
CHEMICAL OXYGEN DEMAND (C.O.D.) Mg/liter	DICHROMATE REFLUX METHOD	p. 495	–	p. 17	X.
TOTAL SOLIDS Mg/liter	GRAVIMETRIC, 105°C. METHOD	p. 535	–	p. 280	X.
TOTAL DISSOLVED (FILTERABLE) SOLIDS Mg/liter	GLASS FIBER FILTRATION METHOD, 180°C.	p. 539	–	p. 275	X.
TOTAL SUSPENDED (NON-FILTERABLE) SOLIDS Mg/liter	GLASS FIBER FILTRATION METHOD, 103-105°C.	p. 537	–	p. 278	X.
TOTAL VOLATILE SOLIDS Mg/liter	GRAVIMETRIC METHOD 550°C.	p. 536	–	p. 282	X.
AMMONIA (as N) Mg/liter	DISTILLATION-NESSLERIZATION METHOD OR TECHNICON-DIGESTION & PHENOLATE METHOD	p. 453	–	p. 134	.XX
KJELDAHL NITROGEN Mg/liter	DIGESTION-DISTILLATION METHOD OR TECHNICON-DIGESTION & PHENOLATE METHOD	p. 469	–	p. 149	.XX
NITRATE (as N) Mg/liter	BRUCINE SULFATE METHOD OR TECHNICON-HYDRAZINE REDUCTION METHOD	p. 461	–	p. 170	.XX
TOTAL PHOSPHORUS (as P) Mg/liter	PERSULFATE DIGESTION & SINGLE REAGENT METHOD OR TECHNICON-MANUAL DIGESTION & SINGLE REAGENT OR STANNOUS CHLORIDE	p. 526	–	p. 235	.XX

NWT 001267

JUN 30 1971

7-1-71 File with our copy of Corps's Permit when received

June 29, 1971

U. S. Army Engineer District
P. O. Box 2946
Portland, Oregon 97208

Dear Sir:

Attached is our application for a discharge permit for the Northwest Plant (Portland) of Koppers Company, Inc. Also attached is a $100 check for the application fee. Enclosed is a letter sent to the State of Oregon requesting certification to the Corps.

Very truly yours,

P. W. Guth

P. W. Guth, Superintendent
7540 N. W. St. Helens Road
Portland, Oregon 97229

KRC/PWG:mak

Attachments

cc: K. R. Caldwell
D. Eynon
D. L. O'Dell (w/attach.)
B. K. Pospishil
T. Smith

Pittsburgh, Pa. 15219, Telephone 412-391-3300

JUN 30 RECD

KOPPERS

June 29, 1971

Department of Environmental Quality
State Office Building
1400 S. W. Fifth Avenue
Portland, Oregon 97201

Gentlemen:

Attached is a copy of the application for the Corps of Engineers permit. It is necessary to obtain certification from you prior to the Corps approving an application. Will you please forward the required certification to the District Engineer.

Very truly yours,

P. W. Guth

P. W. Guth, Superintendent
7540 N. W. St. Helens Road
Portland, Oregon 97229

KRC/PWG:mak

Attachment

cc: K. R. Caldwell
D. Eynon
D. L. O'Dell
B. K. Pospishil
T. Smith

September 29, 1971

U. S. Army Engineer District
P. O. Box 2946
Portland, Oregon 97208

Dear Sir:

Attached is Part B of Application No. 000189 for outfall 001 for our Portland Plant. We have essentially analyzed only for those parameters required by our SIC classification. I certify that I am familiar with the information contained in this application and to the best of my knowledge and belief such information is true, complete and accurate.

If more detailed information is required, please contact Mr. P. W. Guth, Superintendent at our Portland Plant.

Very truly yours,

s/W. B. Jackson

WBJ/KRC:mak

Attachment

cc: P. W. Guth
bcc: K. R. Caldwell
R. S. Dietrick
D. Eynon
D. L. O'Dell (w/attach.)
Templeton Smith
J. Little

PART B DISCHARGE DESCRIPTION

(Note: Submission of Part B is required of all applicants who are also required to submit Part A. Only those parameters specifically indicated in the instructions are to be reported by a particular industry)

(Office use only)

Discharge Serial No. 001

B-1. PHYSICAL AND BIOLOGICAL PARAMETERS OF INTAKE WATER AND DISCHARGE (See Table B-1)

	Intake		Discharge				
PARAMETER AND CODE	(1) UNTREATED INTAKE WATER	(2) TREATED INTAKE WATER	(3) AVERAGE (DAILY)	(4) MINIMUM (OPERATING YEAR)	(5) MAXIMUM (OPERATING YEAR)	(6) SAMPLE FREQUENCY	(7) CONTINUOUS MONITORING
COLOR 00080	5		180		252	0	A
SPECIFIC CONDUCTANCE 00095	1		230		322	0	A
TURBIDITY 00070	<1		45		63	0	A
FECAL STREPTOCOCCI BACTERIA 74054							
FECAL COLIFORM BACTERIA 74055							
TOTAL COLIFORM BACTERIA 74056							

Sample frequency was once for those marked "0" in Column 6. These samples were analyzed and reported under average. Maximums were calculated as 1.4 times average values. Intake, average and maximum values are all in the required units.

PART B

(Office use only)

Discharge Serial No. 001

B-2. CHEMICAL PARAMETERS OF INTAKE WATER AND DISCHARGE (See Table B-2)

Intake	Discharge										
PARAMETER AND CODE	(1) UNTREATED INTAKE WATER	(2) TREATED INTAKE WATER	(3) MAXIMUM CONCENTRATION	(4) MAXIMUM POUNDS PER DAY PER PROCESS UNIT	(5) MAXIMUM POUNDS PER DAY	(6) DAILY AVG. CONCENTRATION	(7) AVERAGE POUNDS PER DAY	(8) SAMPLE TYPE	(9) SAMPLE FREQUENCY	(10) METHOD OF ANALYSIS	(11) CONTINUOUS MONITORING
ACIDITY (as $CaCO_3$) 00435	0.9		24	2.41 X 10^{-5}	6.74	17	4.81	C	O	S	A
TOTAL ORGANIC CARBON (T.O.C.) 00680											
TOTAL HARDNESS 00900											
NITRITE (as N) 00615											
ORGANIC NITROGEN 00605											
PHOSPHORUS-ORTHO (as P) 70507											
SULFATE 00945	0.45		9.8	9.91 X 10^{-6}	2.76	7	1.983	G	O	S	A
SULFIDE 00745	0.00045		0.0014	1.4 X 10^{-9}	0.000040	<0.001	0.00028	G	O	S	A
SULFITE 00740											
BROMIDE 71870											

NWT 001272

PART B

(Office use only)

Discharge Serial No. 001

B-2. (cont.) CHEMICAL PARAMETERS OF INTAKE WATER AND DISCHARGE (See Table B-2)

	Intake	Discharge									
PARAMETER AND CODE	UNTREATED INTAKE WATER (1)	TREATED INTAKE WATER (2)	MAXIMUM CONCENTRATION (3)	MAXIMUM POUNDS PER DAY PER PROCESS UNIT (4)	MAXIMUM POUNDS PER DAY (5)	DAILY AVG. CONCENTRATION (6)	AVERAGE POUNDS PER DAY (7)	SAMPLE TYPE (8)	SAMPLE FREQUENCY (9)	METHOD OF ANALYSIS (10)	CONTINUOUS MONITORING (11)
CHLORIDE 00940	1.349		4.9	4.96×10^{-6}	1.388	3.5	0.991	C	O	S	A
CYANIDE 00720	<0.0045		<.028	3.0×10^{-7}	.0084	<0.02	.006	G	O	S	A
FLUORIDE 00951	0.018		0.35	3.54×10^{-7}	0.0991	0.25	0.0708	G	O	S	A
ALUMINUM-TOTAL 01105	0.054		310	3.12×10^{-7}	0.0872	220	0.0623	G	O	S	A
ANTIMONY-TOTAL 01097											
ARSENIC-TOTAL 01002											
BARIUM-TOTAL 01007											
BERYLLIUM-TOTAL 01012											
BORON-TOTAL 01022											
CADMIUM-TOTAL 01027	0.00045		2.8	2.8×10^{-9}	0.00079	x	0.00057	G	O	S	A

NWT 001273

PART B

(Office use only)

Discharge Serial No. 001

B-2. (cont.) CHEMICAL PARAMETERS OF INTAKE WATER AND DISCHARGE (See Table B-2)

Intake		Discharge										
PARAMETER AND CODE	UNTREATED INTAKE WATER (1)	TREATED INTAKE WATER (2)	MAXIMUM CONCENTRATION (3)	MAXIMUM POUNDS PER PROCESS UNIT (4)	MAXIMUM POUNDS PER DAY (5)	DAILY AVG. CONCENTRATION (6)	AVERAGE POUNDS PER DAY (7)	SAMPLE TYPE (8)	SAMPLE FREQUENCY (9)	METHOD OF ANALYSIS (10)	CONTINUOUS MONITORING (11)
CALCIUM-TOTAL 00916	0.765		25	2.53×10^{-5}	7.1	17.9	5.07	G	O	S	A
CHROMIUM-TOTAL 01034	0.0067		74	7.51×10^{-8}	0.021	53	0.015	G	O	S	A
COBALT-TOTAL 01037	<0.00045		49	4.96×10^{-8}	0.0139	35	0.0099	G	O	S	A
COPPER-TOTAL 01042	0.009		133	1.34×10^{-7}	0.0377	95	0.0269	G	O	S	A
IRON-TOTAL 01045	0.099		1400	1.42×10^{-6}	0.396	1000	0.283	G	O	S	A
LEAD-TOTAL 01051	0.0067		2.8	2.8×10^{-9}	0.00079	2	0.00057	G	O	S	A
MAGNESIUM-TOTAL 00927	0.225		8	8.07×10^{-6}	2.26	5.7	1.614	G	O	S	A
MANGANESE-TOTAL 01055	0.081		14000	1.42×10^{-5}	3.96	10000	2.83	G	O	S	A
MERCURY-TOTAL 71900	<0.0022		1.4	1.4×10^{-9}	0.0004	<1	0.0003	C	O	S	A
MOLYBDENUM-TOTAL 01082											

NWT 001274

PART B

(Office use only)

Discharge Serial No.
001

B-2. (cont.) CHEMICAL PARAMETERS OF INTAKE WATER AND DISCHARGE (See Table B-2)

	Intake	Discharge									
PARAMETER AND CODE	UNTREATED INTAKE WATER (1)	TREATED INTAKE WATER (2)	MAXIMUM CONCENTRATION (3)	MAXIMUM POUNDS PER DAY PER PROCESS UNIT (4)	MAXIMUM POUNDS PER DAY (5)	DAILY AVG. CONCENTRATION (6)	AVERAGE POUNDS PER DAY (7)	SAMPLE TYPE (8)	SAMPLE FREQUENCY (9)	METHOD OF ANALYSIS (10)	CONTINUOUS MONITORING (11)
NICKEL-TOTAL 01067											
POTASSIUM-TOTAL 00937	0.1349		3.1	3.12×10^{-6}	0.872	2.2	0.623	G	O	S	A
SELENIUM-TOTAL 01147											
SILVER-TOTAL 01077											
SODIUM-TOTAL 00929	0.72		20	1.98×10^{-5}	5.55	14	3.96	G	O	S	A
THALLIUM-TOTAL 01059											
TIN-TOTAL 01102											
TITANIUM-TOTAL 01152											
ZINC-TOTAL 01092	0.1574		770	7.79×10^{-7}	0.218	550	0.1558	G	O	S	A
OIL AND GREASE 00550	0.135		27	2.72×10^{-5}	7.61	19.2	5.44	C	O	S	A

NWT 001275

PART B

(Office use only)

Discharge Serial No. 001

B-2. (cont.) **CHEMICAL PARAMETERS OF INTAKE WATER AND DISCHARGE (See Table B-2)**

	Intake		Discharge								
PARAMETER AND CODE	(1) UNTREATED INTAKE WATER	(2) TREATED INTAKE WATER	(3) MAXIMUM CONCENTRATION	(4) MAXIMUM POUNDS PER DAY PER PROCESS UNIT	(5) MAXIMUM POUNDS PER DAY	(6) DAILY AVG. CONCENTRATION	(7) AVERAGE POUNDS PER DAY	(8) SAMPLE TYPE	(9) SAMPLE FREQUENCY	(10) METHOD OF ANALYSIS	(11) CONTINUOUS MONITORING
PHENOLS 32730	0.00045		4300	4.39×10^{-6}	1.23	3100	0.878	C	O	S	A
SURFACTANTS 38260											
ALGICIDES* 74051											
CHLORINATED HYDRO-CARBONS* (EXCEPT PESTICIDES) 74052	A					A					
PESTICIDES* 74053											

*Name specific compound(s) and fill in the required data for each. Use extra blanks at the end of the form and the "Remarks" space as necessary.

Sample frequency was once for those marked "0" in Column 9. These samples were analyzed and reported as daily average concentration in Column 6. Maximum values were calculated as 1.4 times average values. Intake values are in lb/day. No TOC analyses are available because the independent laboratory doing the tests was not equipped torun them.

PART B

(Office use only)

Discharge Serial No.

B-3. RADIOACTIVE PARAMETERS OF INTAKE WATER AND DISCHARGE (See Table B-3)

	Intake		Discharge					
PARAMETER AND CODE	(1) UNTREATED INTAKE WATER	(2) TREATED INTAKE WATER	(3) AVERAGE (DAILY)	(4) MINIMUM (OPERATING YEAR)	(5) MAXIMUM (OPERATING YEAR)	(6) SAMPLE FREQUENCY	(7) CONTINUOUS MONITORING
ALPHA-TOTAL 01501							
ALPHA COUNTING ERROR 01502							
BETA-TOTAL 03501							
BETA COUNTING ERROR 03502							
GAMMA-TOTAL 05501							
GAMMA COUNTING ERROR 05502							
TRITIUM-TOTAL 07000							
TRITIUM COUNTING ERROR 07001							

B-4. REMARKS

NWT 001277

KOPPERS

Interoffice Correspondence

Corps of Engineers OCT 7 REC'D

To Mr. K. R. Caldwell

Location O. M. - K-1201

Subject Corps of Engineers Application Analyses

From Effluent Services Group Environmental Health & Safety Section

Location Monroeville Research Center

Date October 7, 1971

The analyses for parameters requested to complete the Corps of Engineers Application are as follows:

Portland, Oregon Plant

Date Received:	October 4, 1971
Phenols, mg/l	4.8
Cyanides, mg/l	<0.02

Utica, N. Y. Plant

Date Received:	October 1, 1971
pH	6.5
Total Organic Carbon (TOC), mg/l	25
Oils, mg/l	19.6

C. W. Fisher

CWF:jd

cc: Mr. D. L. O'Dell
cc: Mr. R. L. Shannon
cc: Mr. P. W. Guth (Portland, Oregon)
cc: Mr. C. S. Groff (Utica, N. Y.)

KOPPERS

Interoffice Correspondence

To Paul Guth

Location Northwest Plant

Subject Corps of Engineers Permit

From K. R. Caldwell

Location Manufacturing Planning

Date November 11, 1971

Attached is the completed portion of your application for a discharge permit to the Corps of Engineers together with a map of the discharge point and the cover letter to the Corps. Please forward these to the District Engineer and keep two cppies of the application and a copy of the cover letter for your files.

Kay R Caldwell

KRC/mak

Attachments

K43-REV. 5 100M 3-71

ENVIRONMENTAL PROTECTION AGENCY

REGION X

1200 SIXTH AVENUE

SEATTLE, WASHINGTON 98101

September 28, 1971

Application Number
071-OYA-2-000189

Paul W. Guth, Plant Superintendent
7540 N. W. St. Helena Roak
Portland, Oregon 97229

Re: Koppers Company Inc.
Northwest Plant

Dear Mr. Guth:

The Environmental Protection Agency has received from the District Engineer, Corps of Engineers, a copy of your application for a permit to discharge into a navigable water or tributary. To complete your application so that it can be processed, please submit the information requested (see attachment) to the Corps of Engineers, who will forward it to EPA.

A copy of the incomplete portions of your application, with the above marked in red, and a new application form are enclosed. For each page of your application which is incomplete, please submit a new page with all items on the page completed. The completed page will replace your first submission in the application file.

Thank you for your cooperation. If you have questions regarding your application you may contact the reviewer identified on the attachment.

Sincerely yours,

Lloyd A. Reed

Lloyd A. Reed
Acting Chief
Permits Branch

Attachments: ENG Form 4345, 4345-1, May 71

cc: C/E Portland

Application Number:
071-0YA-2-000189

Information Required to Complete Waste Discharge Permit Application

Section I:
Item 25&26: An answer is required for this as you report solids under Section II, Item 23.

Section II: Discharge Serial No. 001.
Item 9: Please explain why its question does not apply.
Item 22: Please supply the required data as it becomes available.
Part A: Please supply the required parameters as they become available.
Part B: Due October 1, 1971.
Maps: Please provide a corss section of your point of discharge and where your discharge line goes.

Reviewer: Nora McGee, telephone 442-1275.

November 11, 1971

U. S. Army Engineer District
P. O. Box 2946
Portland, Oregon 97208

Dear Sir:

Attached is a copy of a letter from the Environmental Protection Agency requesting information on the incomplete portions of our application. This information has been completed and is enclosed together with a map of the discharge point.

Yours truly,

P. W. Guth, Superintendent
7540 N. W. St. Helens Road
Portland, Oregon 97229

KRC/PWG/mak

Attachments

cc: K. R. Caldwell
D. Eynon
D. L. O'Dell (w/attach.)
B. K. Pospishil
T. Smith

NWT 001282

If structures exist, or dredging, filling or other construction will occur, the precise location of the activity must be described.

(Office use only)

a. Name the corporate boundaries within which the structures exist or the activity will occur.

16. State: Oregon 17. County: Muttnomah 18. City or Town: Portland

b. Name of waterway at the location of the activity

19. Willamette River

20. Maps and sketches which show the location and character of each structure or activity, including any and all outfall devices, dispersive devices, and non-structural points of discharge, must be attached to this application.

21. For construction or work in navigable waters for which a separate permit is sought under 33 U.S.C. 403, the character of each structure must be fully shown on detailed plans to be submitted with this application. Note on the drawings those structures for which separate discharge information (Section II of this form) has been submitted.

22. List all approvals or denials granted by Federal, interstate, State or local agencies for any structures, construction, discharges or deposits described in this application.

Type of document	Id. No.	Date	Issuing Agency
Letter	1 W 3-0	1-11-66	Oregon State Sanitary Authority

23. Check if facility existed or was lawfully under construction prior to April 3, 1970. [X]

24. If dredging or filling will occur:

State the type of materials involved, their volume in cubic yards, and the proposed method of measurement.

Not Applicable.

25. Describe the proposed method of instrumentation which will be used to measure the volume of any solids which may be deposited and to determine its effect upon the waterway.

None

26. State rates and periods of deposition described in Item 25.

We estimate no deposition in the Willamette River.
(See page 4 of 5, Section II)

NWT 001283

SECTION II. PLANT PROCESS AND DISCHARGE DESCRIPTION

1. Discharge described below is a. Present [X] b. Proposed new or changed [ ]	2. Implementation schedule [ ]	(Office use only)

Name of corporate boundaries within which the point of discharge is located.

3. State	4. County	5. City or Town	6. Discharge Serial No.
Oregon	Muttnomach	Portland	001

State the precise location of the point of discharge.	9. Name of waterway at the point of discharge.
7. Latitude N 45 Degrees; 3 5 Min; ___ Sec. 8. Longitude W 122 Degrees; 4 6 Min; ___ Sec.	Unnamed Drainage Ditch.

10. Has application for water quality certification or description of impact been made? If so, give date:

Date (mo / day / yr)	Check if certificate is attached to form	Name Issuing Agency
6 / 29 / 71	[ ]	Oregon Dept. of Environmental Quality

11. Narrative description of activity (include terms of general 4-digit Standard Industrial Classification, and specific manufacturing process).

Primarily engaged in manufacturing industrial organic chemicals by the distillation of coke oven tar.

12. Standard industrial classification number.	13. Principal product.	14. Amount of principal product produced per day.
SIC 2818	See #15	See #16

15. Principal raw material.	16. Amount of principal raw material consumed per day.	17. Number of batch discharges per day.
Coke Oven Tar	280,000 lbs.	Not Applicable.

18. Average gallons per batch discharge.	19. Date discharge began. (mo / day / yr)	20. Date discharge will begin. (mo / day / yr)
Not Applicable.	6 / 1 / 66	___ / ___ / ___

21. Describe waste abatement practices.

Water discharged at this outfall is contained in a separate drainage system where pumps with special seals and local separators are employed.

ESEPAR, EPUMPS, LOCALS.

NWT 001284

PHYSICAL DESCRIPTION OF INTAKE WATER AND DISCHARGE

Intake / Discharge

(Office use only)

Discharge Serial No. 001

Parameter and (Code)	UNTREATED INTAKE WATER (1)	TREATED INTAKE WATER (2)	AVERAGE (DAILY) (3)	ESTIMATED MINIMUM (OPERATING YEAR) (4)	ESTIMATED MAXIMUM (OPERATING YEAR) (5)	SAMPLE FREQUENCY (6)	CONTINUOUS MONITORING (7)
Flow (Gallons per day) 00056		54,000	34,000	27,200	47,600	OTHR	ABS
pH 00400		6.9	8.8	6.9	9.0	OTHR	ABS
Temperature (Winter) (°F) 74028		45	85	70	100	OTHR	ABS
Temperature (Summer) (°F) 74027		52	110	100	120	OTHR	ABS

23. **DISCHARGE CONTENTS**

PARAMETER	PRESENT	ABSENT	PARAMETER	PRESENT	ABSENT	PARAMETER	PRESENT	ABSENT
Color 00080	X		Aluminum 01105		X	Nickel 01067		X
Turbidity 00070	X		Antimony 01097		X	Selenium 01147		X
Radioactivity 74050		X	Arsenic 01002		X	Silver 01077		X
Hardness 00900	X		Beryllium 01012		X	Potassium 00937	X	
Solids 00500	X		Barium 01007		X	Sodium 00929	X	
Ammonia 00610	X		Boron 01022		X	Titanium 01152		X
Organic Nitrogen 00605	X		Cadmium 01027		X	Tin 01102		X
Nitrate 00620	X		Calcium 00916	X		Zinc 01092		X
Nitrite 00615		X	Cobalt 01037		X	Algicides 74051		X
Phosphorus 00665	X		Chromium 01034		X	Oil and Grease 00550	X	
Sulfate 00945	X		Copper 01042		X	Phenols 32730	X	
Sulfide 00745	X		Iron 01045	X		Surfactants 38260		X
Sulfite 00740		X	Lead 01051		X	Chlorinated Hydrocarbons 74052		X
Bromide 71870		X	Magnesium 00927		X	Pesticides 74053		X
Chloride 00940	X		Manganese 01055		X	Fecal Streptococci Bacteria 74054		X
Cyanide 00720	X		Mercury 71900		X	Coliform Bacteria 74056		X
Fluoride 00951		X	Molybdenum 01062		X			

PART A

(Note: Submission of Part A is required of all applicants whose processes are listed on page 3 above.)

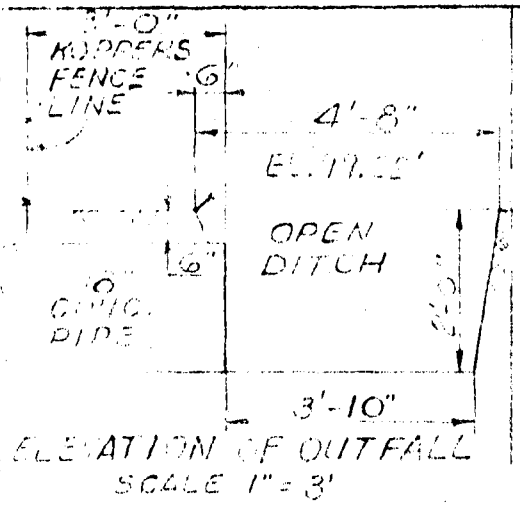
(Office use only)

Discharge Serial No. 001

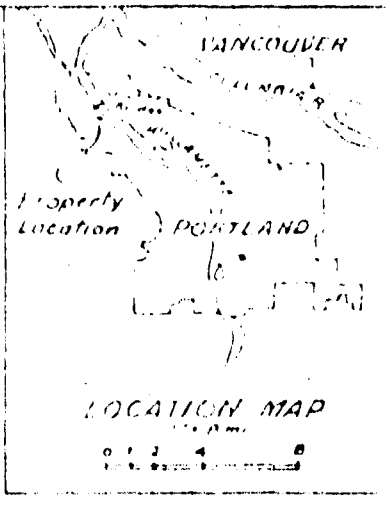
INFORMATION REQUIRED OF SPECIFIED INDUSTRIES

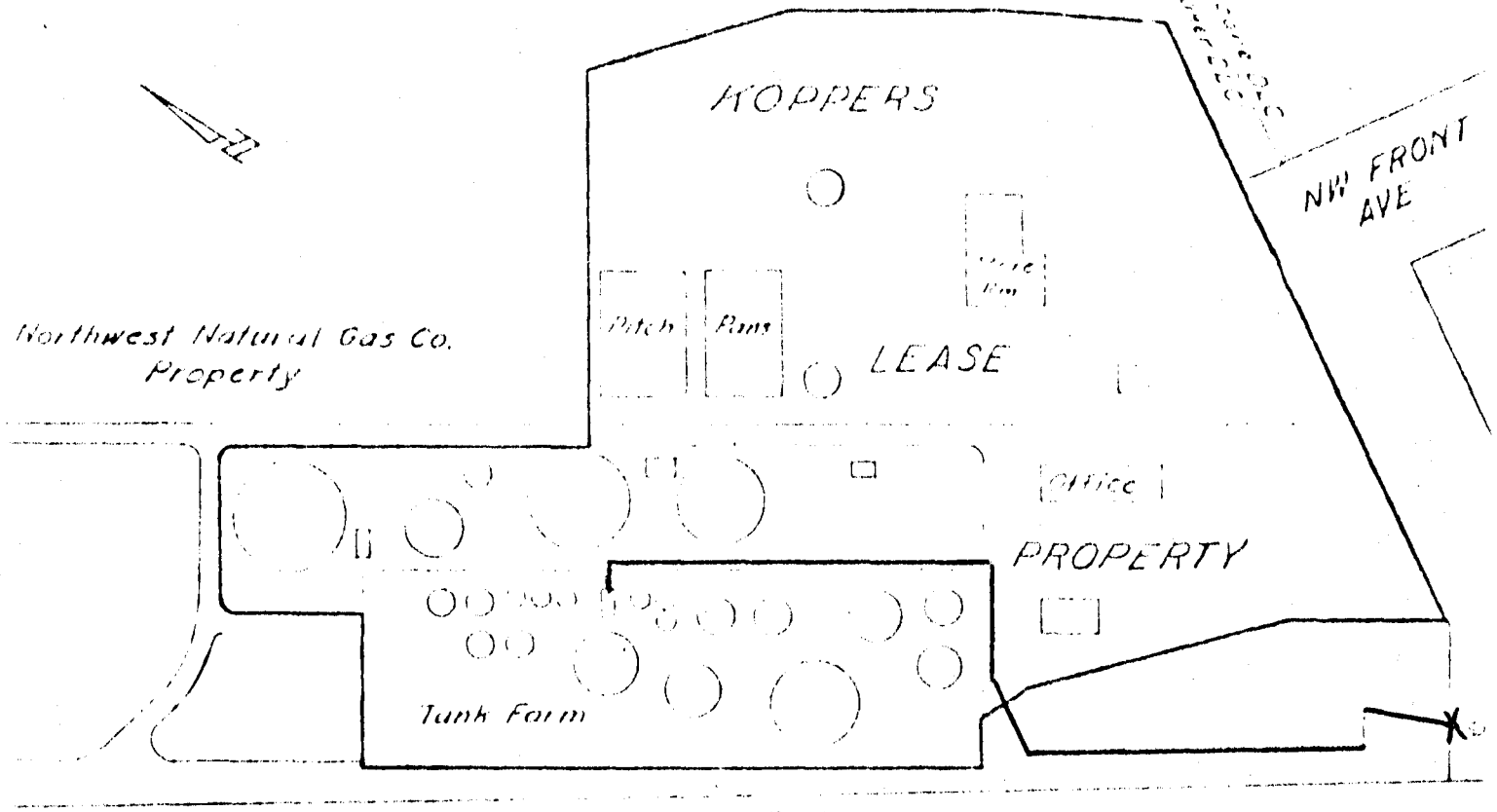
PARAMETER AND CODE	Intake: (DAILY AVG. CONCENTRATION) (1)	Intake: (DAILY AVG. CONCENTRATION) UNTREATED INTAKE WATER	Intake: TREATED INTAKE WATER (2)	Discharge: MAXIMUM CONCENTRATION PER PROCESS UNIT (3)	Discharge: MAXIMUM POUNDS PER DAY (4)	Discharge: DAILY AVG. CONCENTRATION (5)	Discharge: AVERAGE POUNDS PER DAY (6)	Discharge: SAMPLE TYPE (7)	Discharge: SAMPLE FREQUENCY (8)	Discharge: METHOD OF ANALYSIS (9)	Discharge: CONTINUOUS MONITORING (10)	(11)
ALKALINITY (as $CaCO_3$) 00410			14	101	10×10^{-5}	28	72	20	COMP	OTHR	AWWA	ABS
B.O.D. 5-DAY 00310			1	112	11×10^{-5}	32	80	23	COMP	OTHR	AWWA	ABS
CHEMICAL OXYGEN DEMAND (C.O.D.) 00340			3	344	37×10^{-5}	105	246	75	COMP	OTHR	AWWA	ABS
TOTAL SOLIDS 00500			28	246	25×10^{-5}	70	176	50	COMP	OTHR	AWWA	ABS
TOTAL DISSOLVED SOLIDS 70300			26.8	162	16×10^{-5}	46	116	33	COMP	OTHR	AWWA	ABS
TOTAL SUSPENDED SOLIDS 00530			1.2	84	86×10^{-6}	24	60	17	COMP	OTHR	AWWA	ABS
TOTAL VOLATILE SOLIDS 00505			11.5	106	11×10^{-5}	31	76	22	COMP	OTHR	AWWA	ABS
AMMONIA (as N) 00610			0.2	7.98	81×10^{-7}	2.27	5.7	1.62	COMP	OTHR	AWWA	ABS
KJELDAHL NITROGEN 00625			4.4	36.5	3.69×10^{-5}	10.3	26.1	7.39	GRAB	OTHR	AWWA	ABS
NITRATE (as N) 00620			0.08	.71	75×10^{-8}	.21	.51	0.15	COMP	OTHR	AWWA	ABS
PHOSPHORUS TOTAL (as P) 00665			0.01	.42	46×10^{-8}	.13	.30	.09	COMP	OTHR	AWWA	ABS

NWT 001286



ELEVATION OF OUTFALL
SCALE 1" = 3'





S.P.&S. R.R. R/W

NW ST HELENS RD.

Location of Koppers Lease Property on Northwest Natural Gas Co. property at 7900 NW St Helens Rd., City of Portland, County of Multnomah, State of Oregon.

June 3, 1971
REVISED Nov. 5, 1971

NWT 001287

Pittsburgh, Pa. 15219, Telephone 412-391-3300

Portland or AEW?

KOPPERS

June 29, 1971

Department of Environmental Quality
State Office Building
1400 S. W. Fifth Avenue
Portland, Oregon 97201

Gentlemen:

Attached is a copy of the application for the Corps of Engineers permit. It is necessary to obtain certification from you prior to the Corps approving an application. Will you please forward the required certification to the District Engineer.

Very truly yours,

P. W. Guth

P. W. Guth, Superintendent
7540 N. W. St. Helens Road
Portland, Oregon 97229

KRC/PWG:mak

Attachment

cc: K. R. Caldwell
D. Eynon
D. L. O'Dell
B. K. Pospishil
T. Smith

June 29, 1971

U. S. Army Engineer District
P. O. Box 2946
Portland, Oregon 97208

Dear Sir:

Attached is our application for a discharge permit for the Northwest Plant (Portland) of Koppers Company, Inc. Also attached is a $100 check for the application fee. Enclosed is a letter sent to the State of Oregon requesting certification to the Corps.

Very truly yours,

P. W. Cuth, Superintendent
7540 N. W. St. Helens Road
Portland, Oregon 97229

KRC/PWC:mak

Attachments

cc: K. R. Caldwell
D. Eynon
D. L. O'Dell (w/attach.)
B. K. Pospishil
T. Smith

NWT 001289

Portland

November 11, 1971

U. S. Army Engineer District
P. O. Box 2946
Portland, Oregon 97208

Dear Sir:

Attached is a copy of a letter from the Environmental Protection Agency requesting information on the incomplete portions of our application. This information has been completed and is enclosed together with a map of the discharge point.

Yours truly,

P. W. Cath, Superintendent
7540 N. W. St. Helens Road
Portland, Oregon 97229

PWC/PWC/mak

Attachments

cc: M. B. Caldwell
~~D. Dynon~~
D. L. O'Dell (w/attach.)
B. K. Pospishil
T. Smith

NWT 001290

Northwest Plant

KOPPERS

Interoffice Correspondence

To W. B. Jackson

Location

Subject Northwest Plant

From K. R. Caldwell

Location

Date May 3, 1971

The Northwest plant will have to file for a Corps of Engineers Permit. We have been operating and discharging in effect under the Northwest Natural Gas Company's permit. I talked to Northwest and was told that we would have to file for our own permit as they were not going to cover us. Arrangements have been made to get samples to Research to characterize the effluent.

Installation of the Portland sanitary sewer system will be completed in the fall of 1971 and it is hoped we can discharge into it. I have asked Paul Cuth to obtain from them what water they will accept. I don't believe that they will take decanter water (currently being irrigated) without treatment. Since Northwest is currently getting topped tar for raw material, the contaminated water load is lower than for a normal tar plant. At Portland we have to do the following:

(1) Analyze contaminated water to irrigation and determine volume

(2) Confirm location of sewer outlet from tank farm drains and amount of water and volume

(3) Apply for Oregon permit

(4) Apply for Corps of Engineers permit - may be simultaneous

The Northwest plant is a clean plant and it is obvious that plant personnel are proud of the plant.

Although this plant has not had major problems on air pollution, we need some engineering work and a plan formulated. If we have this, I think we could make modest improvements over a period of time, and be all right when questioned by air enforcement people.

KRC/mak

cc: P. Bost/J. Little
E. Eynon
P. Guth
D. L. O'Dell
B. Pospishil
T. Smith

Dave Eynon
For info
Recvd 4/14/71
KRC

North west Plant

F

January 6, 1971

Department of Environmental Quality
1400 S.W. 5th Avenue
Portland, Oregon

Attention: Mr. Kenneth H. Spies, Director

Gentlemen:

Re: Waste Discharge Permit
File No. 62231

We contacted Mr. Bob Gilbert of your office about the provisions of your Waste Discharge Permit.

We had several questions which he has answered as follows:

1. The present drain line which carries clean cooling water from our Liquid Natural Gas plant to the river will require a yearly renewable permit for its operation. It does not need to be diverted from the river in the forseeable future.

2. We are preparing plans for the disposal of an existing tar pond. It is one of the areas referred to in Item 3 of the permit. The second area referred to will be eliminated as a result of piping the cooling water from the Liquid Natural Gas plant to the river. The plan for the tar pond disposal has been submitted to our management for approval. Upon their acceptance and prior to March 31, 1971 we will submit it to the Department of Environmental Quality. The present rain water runoff will be trapped to keep it free of oil or contaminants. We have contacted Koppers Company about the water from the process boiler blowdown. We will give them copies of Waste Discharge Permit No. 62231 so they can comply with Item 1 and other items that may be of concern.

3. We have three sanitary sewers and Koppers has one. These are to be connected to the City of Portland sanitary sewer within 30 days of the notification of the completion of the sewer past the plant.

4. The present storm drains carry rain water to the river. These will continue to be acceptable without a permit in the forseeable future.

5. The present rain water that enters our property from the Rivergate Rock Plant across St. Helens Road and then turns off our property onto the Allen Tract is not a problem to us as long as we or Koppers do not discharge any untreated process water to it.

We will contact you as soon as possible with preliminary drafts of our proposal for the tar pond disposal. Please contact us about any changes in our permit and feel free to inspect the area whenever necessary. We would appreciate it if your representative would contact the plant engineer of the Liquid Natural Gas plant, H.A. Grobey at the plant or by phone (226-4211) when they do visit the site.

Very truly yours,

D.F. DeVino
Engineering Department

D:f

cc: R.T. Miller
E.D. Rowan
C.A. Roberts
H.A. Grobey

Rec'd 12/21/70 D.

DEPARTMENT OF ENVIRONMENTAL QUALITY

STATE OFFICE BUILDING • 1400 S.W. 5th AVENUE • PORTLAND, OREGON • 97201

TOM McCALL
GOVERNOR

KENNETH H. SPIES
Director

ENVIRONMENTAL QUALITY COMMISSION
B. A. McPHILLIPS
Chairman, McMinnville
EDWARD C. HARMS, JR.
Springfield
STORRS S. WATERMAN
Portland
GEORGE A. McMATH
Portland
ARNOLD M. COGAN
Portland

December 18, 1970

Northwest Natural Gas Company
123 N. W. Flanders Street
Portland, Oregon 97209

Attention: Mr. W. A. Cook, Senior Vice President

Gentlemen:

Re: Waste Discharge Permit
File No. 62231

Your application for a Waste Discharge Permit has been reviewed by the Department of Environmental Quality, and proposed waste discharge permit provisions have been drafted. You are invited to review the attached copy and submit any comments you may have in writing prior to January 6, 1971.

After that date, all comments received will be evaluated by the Department of Environmental Quality and final action on your application will be taken in accordance with the procedures set forth in Paragraph 45.040 of the attached copy of Regulations Pertaining to Waste Discharge Permits (Oregon Administrative Rules, Chapter 340). You will be advised of the action taken as soon as possible after January 6, 1971.

Very truly yours,

Kenneth H. Spies

Kenneth H. Spies, Director
Department of Environmental Quality

HLS:mjb
Attachments

cc: Commission Members
cc: Portland District Office

Mailing Address: P.O. Box 231, Portland, Oregon 97207 — Telephone: (503) 229-5696

NWT 001295

State of Oregon

DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMO

To: Environmental Quality Commission Members

Date: DEC 18 1970

From: Bob Gilbert, Portland District Office

Subject: Northwest Natural Gas Company, Portland
Proposed Waste Discharge Permit Provisions

Northwest Natural Gas Company operates a liquified natural gas plant near the St. Johns Bridge in Northwest Portland. Natural gas is liquified during the summer months, when consumer demand is lowest, and stored for use in the winter months when consumption is at its peak.

To supply natural gas during the high-demand winter months, liquid gas is pumped from storage, revaporized and released to provide increased gas supplies. In order to operate the plant, the company purchases approximately 70 gallons per minute of water from the city of Portland. This water is used in the closed shell and tube heat exchange for cooling natural gas. No chemicals are utilized for rust corrosion control.

Presently, this cooling water is discharged into a pond where a petroleum-based substance was disposed of in recent years. As the cooling water flows through the pond, an oily film is retained. Separating the uncontaminated cooling water from this pond is the necessary first step in solving the company's present discharge problem. At this time, the staff feels that the waste flow (70 gpm at 100° F.) will have a minimal effect on the Willamette River.

Northwest Natural Gas also leases a portion of its property to Koppers Company, Incorporated, Organic Materials Division. Koppers presently discharges approximately 20 gpm into another part ot the property. This part was also used as a disposal site for a petroleum-based substance. As the waste flows through the pond, an oily film is retained. The waste must be separated from the pond and some type of pre-treatment installed before the waste can be acceptable for discharge into a city of Portland sewer.

The staff feels that separate treatment facilities for these particular industries should not be considered, but that all acceptable wastes should be discharged into an area-wide system when completed by the city of Portland.

mjb
Attachment

PROPOSED WASTE DISCHARGE PERMIT PROVISIONS

Prepared by the Staff of the
DEPARTMENT OF ENVIRONMENTAL QUALITY

PRELIMINARY PROPOSAL

Recommended Expiration Date: 12-31-71
Page 1 of 3

APPLICANT:

Northwest Natural Gas Company
123 N. W. Flanders Street
Portland, Oregon 97209

REFERENCE INFORMATION

File Number: 62231
Appl. No.: 1124 Received: 9-9-70
Major Bn: Willamette Minor Bn:
Receiving Stream: Willamette River
River Mile:
County: Multnomah

Until such time as this permit expires or is modified or revoked, Northwest Natural Gas Company is herewith permitted to:

a. Extend an existing cooling water line so that it will be submerged below low water level of the Willamette River.
b. Discharge uncontaminated cooling waters to the Willamette River for the company's natural gas plant.

All of the above activities must be carried out in conformance with the requirements, limitations, and conditions which follow.

All other waste discharges are prohibited.

1. Prior to March 31, 1971, the permittee shall complete all necessary negotiations with the City of Portland and shall submit to the Department of Environmental Quality evidence of agreement together with a schedule for completing construction of necessary facilities so that all wastes acceptable, or that can be made acceptable by pretreatment, be discharged to the city's sanitary sewer. These facilities shall be completed by September 1, 1971 such that the wastes can be discharged to the city's sanitary sewer system within 30 days after notification of the completion of such sewer in the area. Plans for collection, pretreatment and disposal facilities shall be submitted to the Department of Environmental Quality (and the city) for review and approval prior to construction.

2. For all wastes which are not acceptable for discharge to the city system, the permittee shall construct and place into operation before September 1, 1971 such facilities as are necessary to provide the highest and best treatment in accordance with the following requirements:

   a. Prior to March 31, 1971, detailed engineering plans and specifications shall be submitted to the Department of Environmental Quality for review and approval in writing prior to construction as required by ORS 449.395.

   b. All facilities shall be constructed in accordance with the approved plans.

   c. The Department of Environmental Quality shall be notified in writing when the facilities are complete and ready to be placed in operation.

3. Prior to March 31, 1971, the permittee shall submit to the Department of Environmental Quality a program and time schedule for the continuation of a land fill which will eliminate the two existing waste disposal ponds.

4. All plant processes and all existing waste collection, treatment, and disposal facilities shall be operated and maintained at all times at maximum efficiency and in a manner which will minimize waste discharges.

5. Sanitary wastes shall be disposed of to a septic tank and drainfield system which has been installed in accordance with the recommendations of the Oregon State Board of Health and the local county health department or by other approved means.

6. All solids which are removed from the waste shall be utilized or disposed of in a manner which will prevent their entry into the waters of the state and such that health hazards and nuisance conditions are not created.

7. No petroleum base products or other substances which might cause the Water Quality Standards of the State of Oregon to be violated shall be discharged or otherwise allowed to reach any of the waters of the state.

8. In the event the permittee is temporarily unable to comply with any of the conditions of this permit, due to breakdown of equipment or other cause, the permittee shall immediately notify the Department of Environmental Quality of the breakdown or cause, and the steps taken to correct the problem and prevent its recurrence.

9. Authorized representatives of the Department of Environmental Quality shall be permitted access to the premises of all facilities owned and operated by the permittee at all reasonable times for the purpose of making inspections, surveys, collecting samples, obtaining data, and carrying out other necessary functions related to this permit.

10. Whenever a significant change in the character of the waste is anticipated or whenever a change in the waste to be discharged in excess of the conditions of this permit is anticipated, a new application shall be submitted together with the necessary reports, plans, and specifications for the proposed changes. No change shall be made until plans are approved and a new permit issued.

11. In the event that a change in the conditions of the receiving waters results in a dangerous degree of pollution, the Department of Environmental Quality may specify additional conditions to this permit.

12. This permit is subject to termination if the Department of Environmental Quality finds:

    a. That it was procured by misrepresentation of any material fact or by lack of full disclosure in the application.

b. That there has been a violation of any of the conditions contained herein.

c. That there has been a material change in quantity or character of waste or method of waste disposal.

Subdivision 5

REGULATIONS PERTAINING TO WASTE DISCHARGE PERMITS

[ED. NOTE: Unless otherwise specified, sections 45-005 thru 45-060 of this chapter of the Oregon Administrative Rules Compilation were adopted by the Department of Environmental Quality December 19, 1969 and filed with the Secretary of State January 9, 1970 as Administrative Order DEQ-1. Effective January 9, 1970.]

45-005 PURPOSE. The purpose of these regulations is to prescribe limitations on disposal and discharge of wastes and the requirements and procedures for obtaining Waste Discharge Permits pursuant to ORS 449.083.

45-010 DEFINITIONS. As used in these regulations unless otherwise required by context:

(1) "Department" means Department of Environmental Quality. Department actions shall be taken by the Director as defined herein.

(2) "Commission" means Environmental Quality Commission.

(3) "Director" means Director of the Department of Environmental Quality or his authorized deputies or officers.

(4) "Person" means the state, any individual, public or private corporation, political subdivision, governmental agency, municipality, industry, copartnership, association, firm, trust, estate or any other legal entity whatsoever.

(5) "Waste Discharge Permit" or "Permit" means a written permit issued by the Department, bearing the signature of the Director, which by its conditions may authorize the permittee to construct, install, modify or operate specified facilities, conduct specified activities, or discharge or dispose of wastes in accordance with specified limitations.

(6) "Wastes" means sewage, industrial wastes, and all other liquid, gaseous, solid, radioactive, or other substance which will or may cause pollution or tend to cause pollution of any waters of the state.

(7) "Discharge" or "disposal" means the placement of wastes into public waters, on land, or otherwise into the environment in a manner that does or may tend to affect the quality of public waters.

(8) "Public waters" or "waters of the state" include lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters which do not combine or effect a junction with natural surface or underground waters) which are wholly or partially within or bordering the state or within its jurisdiction.

(9) "Treatment" or "waste treatment" means the alteration of the quality of waste waters by physical, chemical or biological means, or a combination thereof such that the tendency of said wastes to cause any degradation in water quality or other environmental conditions is reduced.

(10) "Sewage" means the water-carried human or animal waste from residences, buildings, industrial establishments or other places, together with such ground water infiltration and surface water as may be present. The mixture of sewage as above defined with wastes or industrial wastes, as defined in subsections 6 and 11 of this section, shall also be considered "sewage" within the meaning of these regulations.

(11) "Industrial waste" means any liquid, gaseous, radioactive or solid waste substance or a combination thereof resulting from any process of industry, manufacturing, trade or business, or from the development or recovery of any natural resources.

(12) "Toxic waste" means any waste which will cause or can reasonably be expected to cause a hazard to fish or other aquatic life or to human or animal life.

45-015 PERMIT REQUIRED. (1) Without first obtaining a permit from the Department, no person shall:

NWT 001300

(a) Construct, install, expand, or significantly modify any factory, mill, plant or other industrial or commercial facility which will result in a new or enlarged waste discharge to public waters.

(b) Construct, install, or significantly modify any facilities designed or used for the treatment or disposal of wastes.

(c) Operate any facilities which function to treat or dispose of wastes.

(d) Discharge any wastes into any public waters.

(e) Conduct any industrial, commercial, or agricultural operation which will or may cause or tend to cause pollution of any public waters.

(f) Construct or use any new outlet for wastes into public waters.

(2) Although not exempted from complying with all applicable laws, rules and regulations regarding water pollution, the following are specifically exempted from the above requirements to obtain a permit:

(a) Privately owned sewage treatment and disposal systems which serve less than 25 families or 100 people.

(b) Person utilizing conventional cesspools, seepage pits, or septic tank and subsurface drainage field disposal systems for sewage and non-toxic commercial or industrial wastes, providing such system is approved by and is installed, operated and maintained in accordance with the rules, regulations, and other requirements of the local county health department or the Oregon State Board of Health.

(c) Persons discharging wastes into a publicly owned or privately owned sewerage system providing the owner of such sewerage system has a valid permit from the Department. In such cases, the owner of such sewerage system assumes ultimate responsibility for controlling and treating the wastes which he allows to be discharged into said system.

(d) Gravel removal operations which are conducted in accordance with a valid removal permit issued by the Division of State Lands. Waste Discharge Permits are required for gravel washing and other processing operations where water quality is a factor.

(e) Agricultural irrigation return waters.

(f) Logging, land clearing, or road building.

(g) Construction or installation of essential bridges, culverts or other stream crossings.

(3) Where established water quality standards may be violated by such legitimate activites as are listed in Sections 2d, 2e, 2f, and 2g above, specific written authorization shall be obtained from the Department prior to commencing such activities.

45-020 NON PERMITTED DISCHARGE. (1) Discharge of the following wastes into any public waters shall not be permitted:

(a) Untreated or inadequately treated sewage.

(b) Untreated or inadequately treated or inadequately controlled commercial or industrial wastes which can be effectively treated or disposed of by other practicable means.

(c) Toxic wastes.

(2) In cases of preexisting untreated or inadequately treated discharges, enforcement may not be undertaken by the Department so long as the discharger is operating under a specifically approved program to provide the necessary treatment or control and so long as the continued discharge does not cause a serious hazard to the health, safety, and welfare of the public or cause irreparable damage to a resource.

45-025 TYPE, DURATION AND TERMINATION OF PERMITS. (1) Permits issued by the Department will specify those activities and discharges which are permitted as well as the requirements, limitations and conditions which must be met.

(2) The duration of permits will be variable, but shall not exceed 5 years. The expiration date will be recorded on each permit issued. A new application must be filed with the Department to obtain renewal or modification of a permit.

(3) Permits are issued to the official applicant of record for the activities or discharges of record, and shall be automatically terminated upon:

(a) Sale or exchange of the activity or facility which requires a permit.

NWT 001301

compliance with the terms of the permit or due to unapproved change in operation or false information submitted in the application or any other cause, the Department shall request authorization to proceed with suspension or revocation from the Commission at its next regular meeting. Upon approval by the Commission, the Department shall notify the permittee by registered mail of its intent to suspend or revoke the permit. Such notification shall include the reasons for the suspension or revocation. The suspension or revocation shall become effective 20 days from the date of mailing of such notice unless within that time the permittee requests a hearing before the Commission or its authorized representative. Such a request for hearing shall be made in writing to the Director. Any hearing held shall be conducted pursuant to the regulations of the Department.

45-060 SPECIAL PERMITS. The Department may waive the procedures prescribed in Section 45-040 and issue special permits of duration not to exceed 30 days from the date of issuance for unexpected emergency activities or discharges which are essential to the protection of property and preservation of public health and welfare. Application for such permits shall be in writing in the form of a letter which fully describes the emergency and the proposed activities or discharges.

NWT 001302

To: P. W. Guth
J. Little
P. L. Bost
D. L. O'Dell
C. H. Teller, Sr.
J. R. LaValla
J. M. Anderson

From: Organic Materials Div.
Engineering Department

Date: February 11, 1976

Subject: Air & Water Pollution Abatement
Northwest Tank Farm

Attached are a preliminary set of specifications (prepared by Jack Towne) for equipment to abate air and water pollution in the Northwest tank farm area. I would like your comments on the general process by February 20, 1976.

We are required by N.P.D.E.S. Permit #2180-J to submit detailed engineering plans for providing pollution control in the tank farm area by July 1, 1976 and to have operating facilities by July 1, 1977. The level of pollution does not warrant installation of our own waste treatment facilities. The reasonable course of action is to enter into an agreement with the City of Portland to accept our contaminated run-off for treatment at the city sewage plant along with any process water. When the N.P.D.E.S. Permit was issued, the D.E.Q. tried to force us to discharge to the city sewers, but the city refused to accept our waste, citing an E.P.A. order prohibiting them from taking any more storm sewers into their collection system. However, I believe the city might take a portion of the most contaminated run-off if we can convince them we will do a good job of segregating and controlling the discharge. We must act now to get city approval in order to meet the deadline in the N.P.D.E.S. Permit. If we fail to get city approval, we will have to devise alternate treatment methods prior to June 1, 1976.

We are also under the gun on our air permit at Northwest. We have an interim permit which expires on July 1, 1977. The Department of Environment Quality has given us some strong hints that they will not extend or renew this permit unless we install a fume system in the tank farm. Some economies can result from combining a much needed spill collection system with the fume system. Furthermore, management should be aware of the total costs of pollution control at Northwest when considering the storm water proposal. Therefore, we wish to submit the combined package for approval at one time. We will forward a cost estimate for the facilities as soon as it is completed.

R. L. Shannon

RLS:jfc

Attachments

NORTHWEST TANK FARM

PROJECT NO. 2026

RAINWATER COLLECTION AND TREATMENT

TANK OVERFLOW COLLECTION SYSTEM

TANK VAPOR COLLECTION SYSTEM

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Vapor and Tank Overflow Collection Systems

Process Description

The vapor and tank overflow collection systems are to be combined into one system. Vapors are to be pulled off all tanks through Varec Figure 2020 Series Breather Valves (or equal). This valve provides for both pressure and vacuum relief. Piping off each breather valve will be connected to a central header starting at T-39, turning centrally through the tank farm and going into the side of T-23.

Tank T-23 will be used as an oil tank for the system. An eductor and liquid-air separator will be installed on top of the tank. A pump will be installed to pump oil from the tank through the nozzle of the eductor. Fumes will be pulled from the side of T-23 through the eductor. Liquid will run back into the tank and clean air will be exhausted from the side of the liquid-air separator through a short stack.

A high level alarm will be installed on T-23. In addition an overflow will be installed that will drain into the API Separator.

Spill collection piping will be provided on all tanks of 100,000 gallons or less. A nozzle will be located about two feet below the top of the tank. The nozzle will come out of the tank with a 90° flanged ell facing up. A Varec Figure 365 (or equal) pressure relief valve will be installed on this flange and piped into the fume piping (see sketch). Thus, any tank accidentally overfilled will overflow into the vapor system and into T-23. The pressure relief valve will prevent a backflash into the tank in case of fire and seal the spill line to insure proper operation of vapor system through the breather valve.

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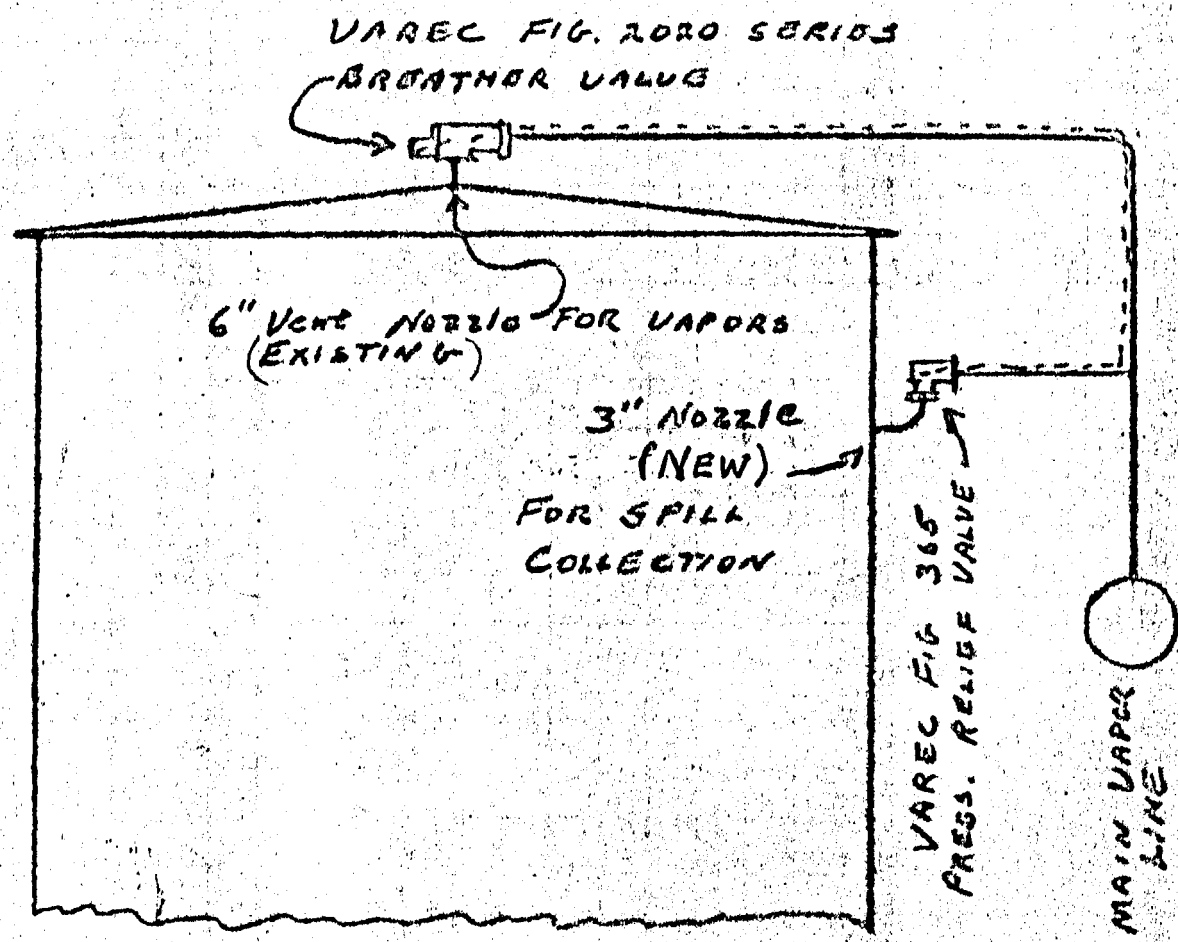
BY JPT DATE SUBJECT North West Tank Farm SHEET NO. 1 OF 2
CHKD. BY DATE TYP. VAPOR & SPILL COLLECTION JOB NO. 3026



dashed line represents Steam Tracing

Typ. For Tanks T-3, T-4, T-17, T-18, T-19, T-33, T-34, T-39, T-67 and T-23.

Tanks T-20, T-66, T-68, T-99, + T-101 would have 3" spill nozzle and press. relief valve omitted.

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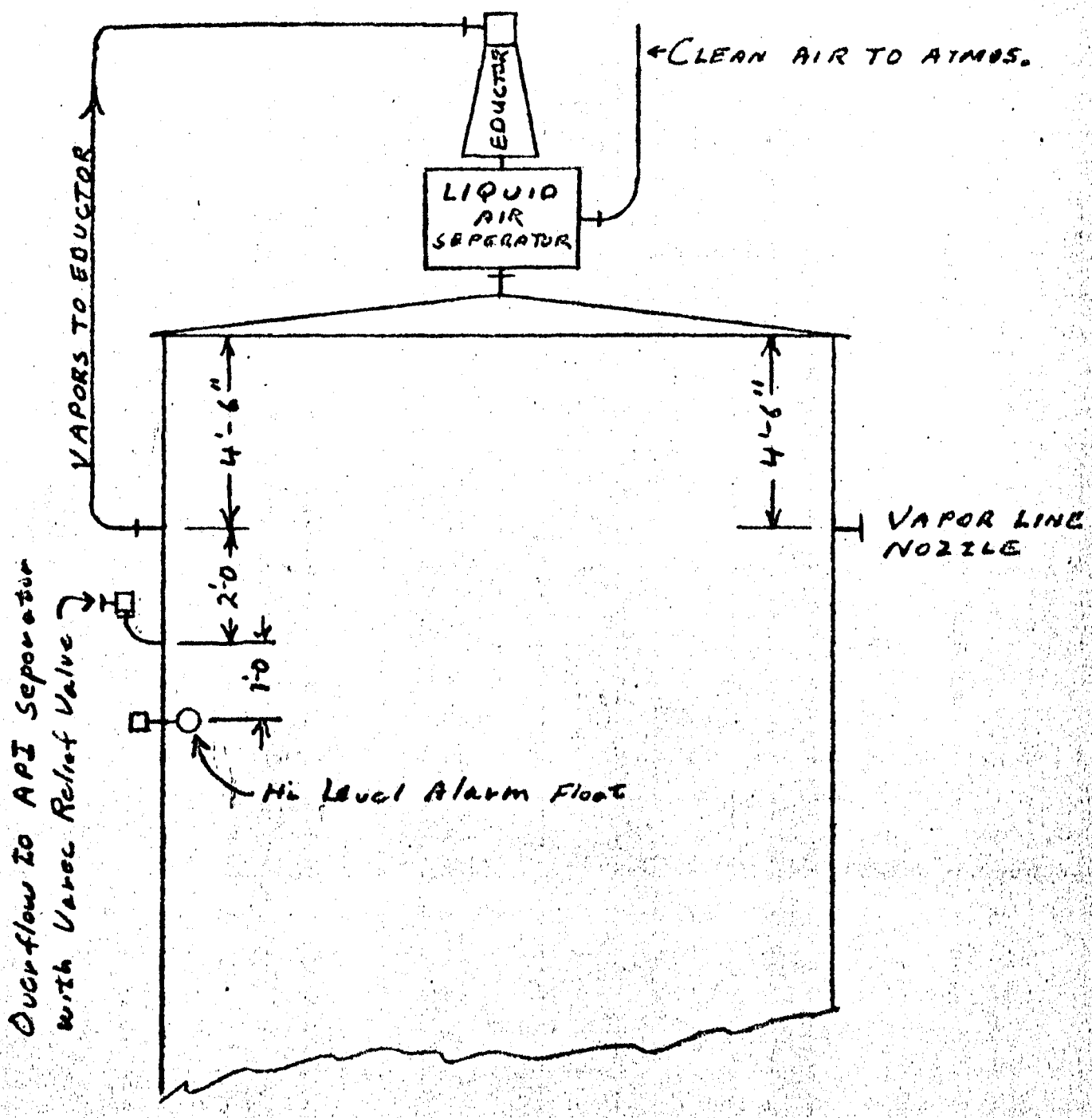
BY JPT DATE
CHKD. BY DATE
SUBJECT North West Tank Farm
Tank T-23
Fuma System Oil Tank
SHEET NO. 2 OF 2
JOB NO. 2026



NWT 001307

Vapor System
Breather Valves

Purpose:	Provide vacuum relief protection and backflash protection in case of fire.
Quantity:	14 each
Type:	Varec Figure 2020 Series or Equal.
Size:	6" x 8"

Spill Collection
Pressure Relief Valves

Purpose:	Provide backflash protection in case of fire, keep tank sealed for proper operation of fume system and still allow spillage to be collected and drained to fume tank in case of accidental overfilling of tank.
Quantity:	10 each
Type:	Varec Figure 365 Series or Equal.
Size:	3" x 4"

Vapor System
Eductor

Purpose:	Pull vapors of tanks resulting from pumping into, steaming into or general heating of tanks.
Quantity:	One
Type:	Korertrol Type 7014 Scrubber-Separator System or equal.
Size:	12", fabricated with standard nozzle. Pressure on nozzle to be 60 psi to produce a flow of 970 cfm at 2" wc draft.

Vapor System
Eductor Pump

Purpose:	Pump oil through nozzle in eductor to produce vacuum for pulling fumes through fume system.
Quantity:	One
Type:	Horizontal
Size:	60 gpm, discharge pressure = ~80 psi

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Materials for Fume and Spill Control Piping
(Preliminary)

12" Suction Piping - Main Header Including Piping on T-23

12" pipe - 315 ft.
90° ell - 3 ea.
45° ell - 5 ea.
flanges - 12 ea. (estimate)

Materials Required from Tanks to Main Header

vapor line - 8 inches, spill line - 4 inches

Tank	8" pipe	8"-90	8" Fig.	4" Pipe	4" Fig.	6x8 B.V.	3x4 R.V
T-39	26 ft.	1	3	17 ft.	3	1	1
T-67	30 ft.	1	3	8	3	1	1
T-66	37 ft.	1	3	0	0	1	0
T-99	30 ft.	1	3	0	0	1	0
T-33	39 ft.	2	2	3	3	1	1
T-34	21 ft.	1	3	3	3	1	1
T-101	57 ft.	1	3	0	0	1	0
T-4	33 ft.	1	3	10	3	1	1
T-3	33 ft.	1	3	10	3	1	1
T-68	40 ft.	1	3	0	0	1	0
T-17	20 ft.	2	3	3	3	1	1
T-18	7 ft.	0	1	3	3	1	1
T-19	28 ft.	1	2	3	3	1	1
T-20	46 ft.	1	3	0	0	1	0
Total		15	38		27	14	9

Note
1) BU-Varec Figure 2020 Series Breather Valve 6" x 8".
2) RU-Varec Figure 365 Relief Valve 3" x 4".
3) Materials for steam tracing and insulation not included.

Rain Water Collection

Process Description

The entire floor area of the lower tank farm (approximately 30,000 ft.^{2}) is to be covered with four inches of wire reinforced concrete. Potentially contaminated and uncontaminated runoff will be separated by general sloping of the grade and trenching under pipelines. All runoff from tank T-20 will be considered contaminated due to seeping rivets. Runoff will be about 24% contaminated, 76% uncontaminated. The unused portion of the tank farm will be diked off.

Two sumps are to be provided for collecting runoff, one each for contaminated and uncontaminated water. Two float actuated pumps will be installed in each sump. One pump will be turned on at a medium level and the second pump will come on when the sump reaches a high level.

Water from the contaminated sump will be pumped to Tanks T-29 and T-36. From these tanks a controlled flow will go to the API Separator and then to the sewer. The uncontaminated water will be pumped directly to the river.

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Rainwater Collection and Treatment

Ten Year Rainfall History

Duration Hours	Depth In.	Volume $Ft.^2$	Rate $Ft.^3/Hr.$	Rate GPM	Rate Gal./Hr.	Cum. Gallons
0.5	0.8	2,650	5,300	661	39,649	19,822
1	1.0	3,313	3,313	413	24,781	24,781
2	1.5	4,970	2,485	310	18,523	37,176
3	2.0	6,626	2,209	275	16,523	49,562
6	3.0	9,939	1,657	207	12,394	74,344
12	4.0	13,252	1,104	138	8,258	99,125
24	6.0	19,878	828	103	6,193	148,687

Total Tank Farm Area - approximately 40,000 $ft.^2$

Runoff in contaminated area - approximately 9,600 $ft.^3$ or 24%

Runoff in uncontaminated area - approximately 30,400 or 76%

Maximum 1/2 hour collection rate - contaminated - 160 gpm

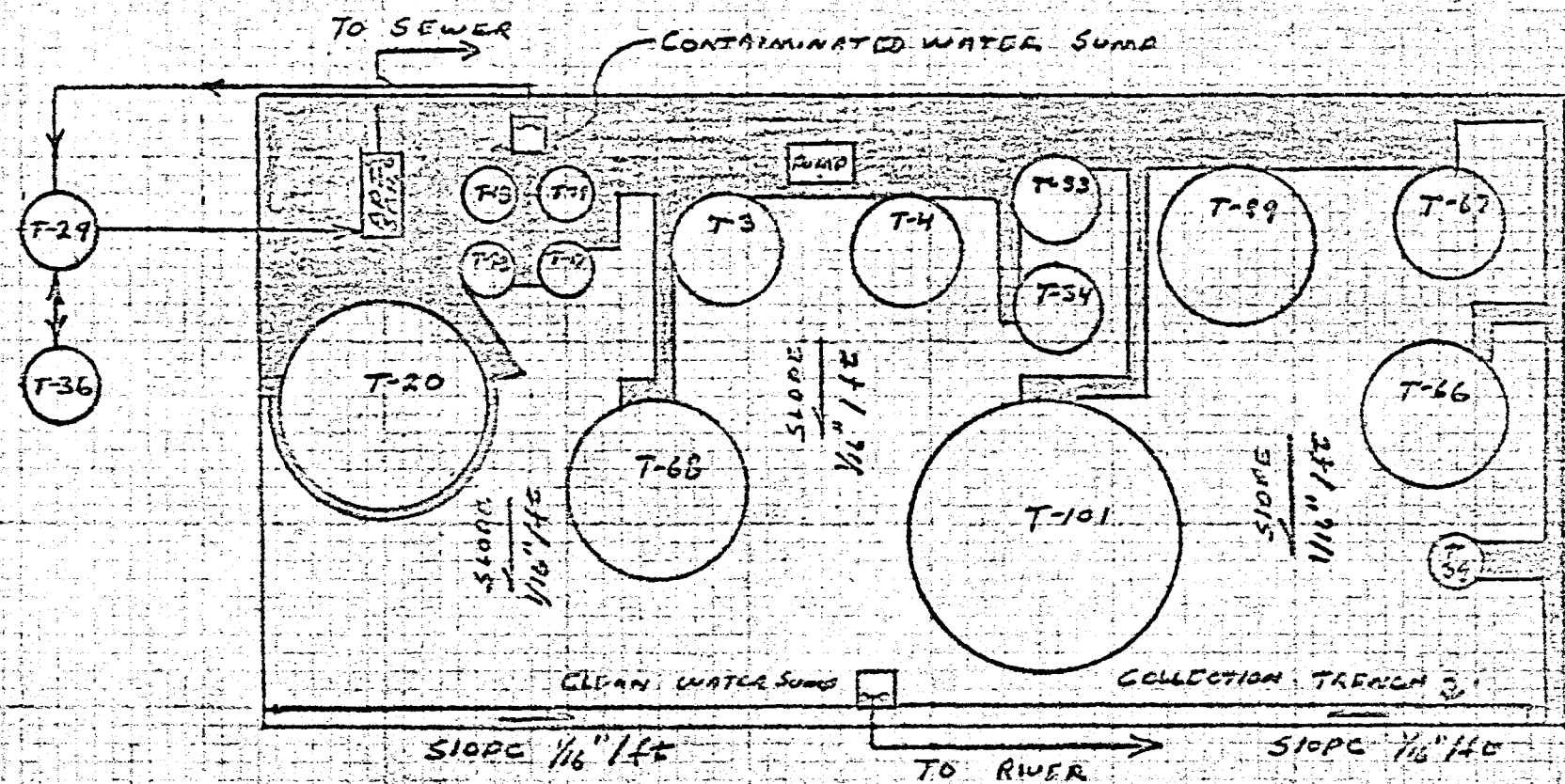
Maximum 24 hour collection rate - contaminated - 25 gpm

Maximum 1/2 hour average collection rate - uncontaminated - 502 gpm

Maximum 24 hour average collection rate - uncontaminated - 78 gpm

BY SLPT DATE
CHKD. BY DATE
SUBJECT NORTHWEST 76 FARM
RAINWATER COLLECTION
SHEET NO. OF
JOB NO. 2026

11000

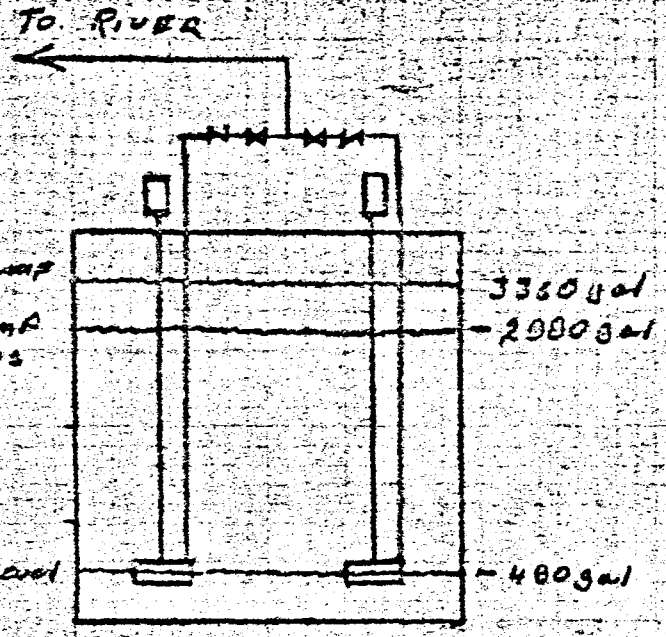


SHADED AREA IS POTENTIALLY CONTAMINATED. COLLECTION DITCHES TO BE APPROX. 3 ft WIDE, 6" DEEP, and have a 1/16"/ft SLOPE.

CLEAN AREA TO SLOPE TOWARD SIDE 1/16"/ft AS SHOWN INTO A COLLECTION TRENCH WHICH SLOPES TO THE CLEAN SUMP.

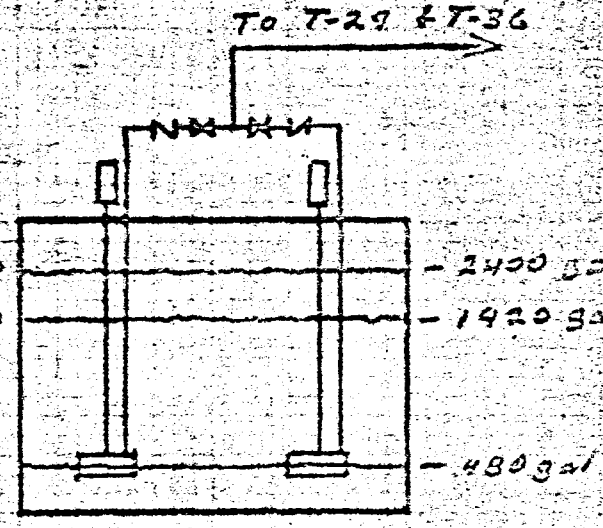
TOTAL AREA - 40,000 ft², APPROX 24% CONTAMINATED.

NORTHWEST TANK FARM
RAINWATER COLLECTION SUMPS
PROJ 2026 JPT



CLEAN WATER SUMP
8ft SQ. x 6' DEEP

Pump Capacity
1 Pump - 175 GPM
2 Pumps - 320 GPM



CONTAMINATED WATER SUMP
8ft SQ. x 6' DEEP.

Pump Capacity
1 Pump - 60 GPM
2 Pumps - 110 GPM

NWT 001316

CENTRIFUGAL PUMP SPECIFICATION SHEET

JOB NO.	2026
ITEM NO.	P-1, P-2
SPEC. NO.	
REV. NO.	DATE
QUOTE NO.	
REFERENCE	

GENERAL

FOR	Clean Rain Water	
PLANT	Northwest Plant	NO. REQUIRED 2
LOCATION	Portland, Oregon	MOTOR DRIVE X
SERVICE	Cool Water	TURBINE DRIVE
NO. OPERATING	Two (see below)	

OPERATING CONDITIONS

LIQUID PUMPED	Water	@ 60 °F. P.T.	DISCH. PRESSURE P.S.I.G.
CAPACITY, G.P.M.: NORMAL	see bottom note	DESIGN	SUCT. PRESSURE P.S.I.G.
@ P.T.: SP. GR.	VISC.	CPS; VAP. PR. P.S.I.A.	DIFF. PRESSURE P.S.I.
@ 60° F: SP. GR.	VISC.	CPS; VAP. PR. P.S.I.A.	DIFF. HEAD see below FT.
*AVAILABLE NPSH	FT. (LIQUID)	SOLIDS: WT.%	LARGEST SIZE
REQUIRED NPSH	FT. (LIQUID)	CORR. MATERIAL?	EROSIVE MATERIAL?
METHOD OF PRIMING	Flooded Suction	LOCATION	ALTITUDE S.L.

PUMP SPECS.

MANUFACTURER		NO. OF STAGES	
SIZE & TYPE	175 gpm vert. sump pump	PERFORMANCE CURVE	
R.P.M.	EFFICIENCY	IMPELLER DIAM.: BID	MIN MAX.
BHP.: @ DESIGN	MAX. BHP. REQ'D	RECOMMENDED DRIVER HP.	
CIRCULAR NO.	DIMENSION PRINT	SECTION DWG.	

MATERIALS OF CONSTRUCTION

CASING & NOZZLE	C.I.
IMPELLER	C.I.
CASING RING	Stellite
IMPELLER RINGS	Stellite
SHAFT	
SHAFT SLEEVE	
PACKING GLAND	
PACKING	
SEAL CAGE	
BASE PLATE	

CONSTRUCTION FEATURES

CASE: SPLIT: HORIZ.	VERT. X
SUPPORT: C/L	FOOT BRACKET
IMPELLER: OPEN	CLOSED SEMI-ENC.
STUFF. BOX: JACKET: WATER	STEAM
MECH. SEAL? X	; INTERNAL EXTERNAL
SINGLE X	; DOUBLE ; BALANCED ; UNBAL.
BEARINGS: WATER JACKETED: YES	NO
LUBRICATION: OIL	GREASE
FLEXIBLE COUPLING: MAKE	TYPE
COUPLING GUARD: YES	NO
SHAFT SEAL LUBRICATION	
ROTATION VIEWED FROM FREE END	
STEAMING OUT	
CONNECTIONS: SUCTION	DISCHARGED

DRIVER DATA

MOTOR

MAKE	; HP
TYPE	TEFC ; R.P.M.
PHASE	3 CYCLE 60 VOLTS 460
FRAME	

TURBINE

MAKE	; HP
TYPE	; R.P.M.
WATER RATE @ DESIGN LOAD	LB./HR./BHP.
STEAM INLET	P.S.I.G.@ °F
STEAM EXHAUST	P.S.I.G.@ °F

WT.

NET WEIGHT	PUMP, BASE, CPLG.	LB.	SHIPPING WEIGHT	PUMP, BASE, CPLG.	LB.
	MOTOR	LB.			

SPECIAL INSTRUCTIONS OR FEATURES:

Pumps are to operate separately or in parallel single pump capacity to be approximately 175 gpm with total head of 1 approximately 40'. Parallel capacity to be approximately 320 gpm with total head to be about 88 ft.
Impeller is to be located seven feet below the top of the sump.

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CENTRIFUGAL PUMP SPECIFICATION SHEET

JOB NO.	2026
ITEM NO.	P-2 & P-3
SPEC. NO.	
REV. NO.	DATE
QUOTE NO.	
REFERENCE	

GENERAL

FOR	Contaminated Rain Water		
PLANT	Northwest Plant	NO. REQUIRED	2
LOCATION	Portland, Oregon	MOTOR DRIVE	X
SERVICE	Cool Water	TURBINE DRIVE	
NO. OPERATING	Two (see below)		

OPERATING CONDITIONS

LIQUID PUMPED	Water	@ 60 °F.P.T.	DISCH. PRESSURE P.S.I.G.
CAPACITY, G.P.M.: NORMAL	(see below)	DESIGN	SUCT. PRESSURE P.S.I.G.
@ P.T.: SP.GR.	VISC.	CPS; VAP. PR. P.S.I.A.	DIFF. PRESSURE P.S.I.
@ 60° F: SP. GR.	VISC.	CPS; VAP. PR. P.S.I.A.	DIFF. HEAD (see below) FT.
*AVAILABLE NPSH	FT. (LIQUID)	SOLIDS: WT.%	LARGEST SIZE
REQUIRED NPSH	FT. (LIQUID)	CORR. MATERIAL?	EROSIVE MATERIAL?
METHOD OF PRIMING	Flooded Suction	LOCATION	ALTITUDE

PUMP SPECS.

MANUFACTURER		NO. OF STAGES	
SIZE & TYPE	60 gpm vert. sump pump	PERFORMANCE CURVE	
R.P.M.	EFFICIENCY	IMPELLER DIAM.: BID	MIN MAX.
BHP.: @ DESIGN	MAX. BHP. REQ'D	RECOMMENDED DRIVER HP.	
CIRCULAR NO.	DIMENSION PRINT	SECTION DWG.	

MATERIALS OF CONSTRUCTION

CASING & NOZZLE	C.I.
IMPELLER	C.I.
CASING RING	Stellite
IMPELLER RINGS	Stellite
SHAFT	
SHAFT SLEEVE	
PACKING GLAND	
PACKING	
SEAL CAGE	
BASE PLATE	

CONSTRUCTION FEATURES

CASE: SPLIT: HORIZ.		VERT.	X
SUPPORT: C/L	FOOT	BRACKET	
IMPELLER: OPEN	CLOSED	SEMI-ENC.	
STUFF. BOX: JACKET: WATER		STEAM	
MECH. SEAL?	X	; INTERNAL	EXTERNAL
SINGLE X	; DOUBLE	; BALANCED	; UNBAL.
BEARINGS: WATER JACKETED: YES		NO	
LUBRICATION: OIL		GREASE	
FLEXIBLE COUPLING: MAKE		TYPE	
COUPLING GUARD: YES		NO	
SHAFT SEAL LUBRICATION			
ROTATION VIEWED FROM FREE END			
STEAMING OUT			
CONNECTIONS: SUCTION		DISCHARGED	

DRIVER DATA

MOTOR

MAKE		; HP	
TYPE	TEFC	; R.P.M.	
PHASE	3	CYCLE 60	VOLTS 460
FRAME			

TURBINE

MAKE		; HP	
TYPE		; R.P.M.	
WATER RATE @ DESIGN LOAD			LB./HR./BHP.
STEAM INLET	P.S.I.G.@		°F
STEAM EXHAUST	P.S.I.G.@		°F

WT.

NET WEIGHT	PUMP, BASE, CPLG.	LB.	SHIPPING WEIGHT	PUMP, BASE, CPLG.	LB.
	MOTOR	LB.			

SPECIAL INSTRUCTIONS OR FEATURES:

Pumps are to operate separately or in parallel. Single pump capacity to be approximately 60 gpm at total head of 40 ft. Parallel capacity of both pumps to be about 110 gpm at 60 ft. total head. Impeller to be located 5 ft. below top of sump.

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E-255

Rainwater Collection
Contaminated Water Sump

Purpose:	Collect potentially contaminated water from tank farm.
Quantity:	One
Size:	8 ft. wide x 8 ft. long x 6 ft. deep.
Capacity:	Low level (one ft.) - 480 gallons First pumping level (four ft.) - 1920 gallons High level (five ft.) - 2400 gallons

11000

Rainwater Collection
Surge Tanks

Purpose:	Collect surges in rainfall runoff and smooth out flow to API Separator and sewer.
Quantity:	Two - Tanks T-29 & T-36.
Type:	Existing 18 ft. diameter x 24 ft. high vertical storage tanks.
Capacity:	40,000 gallons each

Water to drain from these tanks at a maximum rate of 30 gpm, into the API Separator.

11000

Rainwater Collection
API Separator

Purpose: Separate oil from rainwater.

Quantity: One existing.

Size: 24' L x 9' W x 9' D.

(Ref. Portland Gas & Coke Co. Dwg. File I Sheet 1551)

Head Calculations

Eq. Length Fittings:

	2"	2½"	3"	4"
Gate Valve	1¼	1½	1-3/4	2¼
Check Valve	37	45	60	75
Tee	12	14	16	20
90° Ell	3¼	3½	5	7

Contaminated Piping (2½" pipe picked)

Δ 2 = 30 ft.

Pipe = 150 ft.

Fittings - 7-90° Ell
1-gate valve
1-check valve
1-T

	60 gpm	110 gpm
Total Head:	2"-58'	117'
	2½"-40'	61'
	3"-34'	44'
Velocity:	2"-6.1 f/s	11.23 ft./s
	2½"-3.9 f/s	7.18 f/s
	3"-2.7 f/s	5 f/s

Piping Materials for Rainwater Handling System

2½" pipe	150 ft.
2½" gate valve	2 each
2½" check valve	2 each
2½" tee	1 each
2½" 90° ell	7 each
4" pipe	650 ft.
4" gate valve	2 each
4" check valve	2 each
4" tee	1 each
4" 90° ell	4 each

KOPPERS

Interoffice Correspondence

To R.L. SHANNON

From PAUL W. GUTH

Location ENGINEERING DEPT.

Location NORTHWEST TAR

Subject EFFLUENT TREATMENT

Date FEBRUARY 4, 1976

WHEN WE START DISTILLING TAR THIS MONTH, I DON'T THINK WE SHOULD GO THROUGH THE API SEPARATOR WITH THE WATER AND OIL.

WE HAVE TOO MUCH RAIN WATER FROM THE TANK FARM TO GO TO THE RIVER. WE CANNOT TAKE THE CHANCE OF CONTAMINATING THE RUN OFF WATER.

WE SHOULD RECOVER ABOUT 5000 GALLONS OF WATER AND UNCORRECTED CREOSOTE ON THAT ONE RUN.

I AM PLANNING ON GOING TO TANK #23, AND THEN DRAW OFF ANY OIL ACCUMULATED THERE, THEN TRANSFER THE WATER OVER TO THE SURGE TANK (#28). AGAIN LETTING THE WATER AND OIL SEPARATE IN TANK #28 BEFORE PUTTING THE CLEAN WATER INTO OUR IRRIGATION FIELD AT THE SPECIFIED RATE.

Paul W. Guth

PAUL W. GUTH

PWG:ip

CC: J.M ANDERSON
J. LITTLE

K 43- REV. 5 100M 2-75

cc: J. H. [illegible]
J. [illegible]

KOPPERS

Interoffice Correspondence

To P. W. Guth

From Organic Materials Div.

Location Northwest Plant

Location Engineering Department

Subject Effluent Treatment

Date January 15, 1976

You will soon be distilling tar again and will need to treat process water on the oxidation field once more. Now is a good time to review operating procedures. The original intent was to collect process water in #23 tank, partially decant oil from it in #23 tank, run the decanted water through the API separator, pump the oil-free water from the API separator to the surge tank (#28), settle further in #28 tank and pump oil back to creosote storage, and finally irrigate the field from #28 tank.

The maximum permissible rate of irrigation is 3,500 gal./day/acre. Your field is about 1/3 acre so you should limit your irrigations 11-1200 gallons each day. This water is applied by alternately opening one of the three gate valves and running the water out as fast as possible to spread over a wide area of the field. Alternating valves spread the water over a different area each time and allows the adjacent areas to dry out.

The way the fields operate follows:

> As the water percolates through the field, micro-organisms in the soil consume the phenol and other organics as food and convert them to carbon dioxide and water. These "bugs" require oxygen just as higher animals do. This is the reason for limiting the rate of irrigation. The water can then percolate through and the soil partially dry, allowing oxygen to re-enter. This is also why you must be very careful not to put oil on the field. It will filter out on the surface sealing the pores so that neither water nor oxygen can get into the soil.

I hope the above explanation will help you do a better job of effluent treatment. I know your operations are complicated by the fact that you have to run surface water through the API Separator at times during the wet season. If this is necessary, the process water must be segregated from the surface water. There is no way we can handle surface water through the oxidation field. Please call me when you have thoroughly digested this memo and we will discuss any operating problems you anticipate.

R. L. Shannon

K 43-REV. 5 [illegible]

NWT 001325

KOPPERS

Interoffice Correspondence

To Paul W. Guth

Location Northwest

Subject AIR AND WATER PERMITS

From Organic Materials Division

Location Manufacturing Services

Date October 30, 1974

Please sign the attached letters and forward to the DEQ by Certified Mail, Return Receipt Requested.

Jon M. Anderson

JMA:em
Attachments

cc: C. H. Teller, Sr. (With Attachments)
J. Little " "
R. L. Shannon " "
T. Smith " "

11000

-5 REV. 2

Organic Materials Division, Koppers Company, Inc.
Pittsburgh, Pa. 15219, Telephone 412-391-3300

Certified Mail
Return Receipt Requested

KOPPERS

October 30, 1974

Mr. Richard J. Nichols
Engineer - Technical Services
Department of Environmental Quality
1010 N.E. Couch Street
Portland, Oregon 97232

Re: Appl. No. 071-0YA-2-000189

Dear Sir:

On March 7, 1974, a letter was sent to Mr. Charles K. Ashbaker of your office advising that production at this location had been temporarily suspended, and that effluent sampling at that time would not be representative. On September 24, 1974, you visited the plant to review plant operations and the effluent permit application. As of this date, production has not resumed, and plans are still indefinite as to when it will resume.

The major portion of the effluent from this location is ground water which collects in the tank farm area. The floor of the tank farm, which is below grade, will be paved to reduce the volume of ground water which infiltrates this area. This water will be pretreated in the API separator and then discharged, together with boiler house effluent, to the sanitary sewer which has recently been extended through the plant property.

These plans will be reviewed with the sewer authority to obtain their approval.

Very truly yours,

Paul W. Guth
Plant Superintendent

11000

KOPPERS

Interoffice Correspondence

To Mr. Paul Guth

Location Northwest Tar Plant, Portland, Ore.

Subject OIL SAMPLE, SUMP AT TRACK 3

From Mr. R. D. Hepner

Location Monroeville Research Center

Date April 11, 1974

Your sample of oil (IO-NW-16) collected March 20, 1974 was examined by an infrared-solvent separation procedure. The absorption characteristics and spectrum obtained were identical to creosote.

R. D. Hepner

cc: Mr. Henry E. Rossi
Mr. J. M. Anderson
Mr. R. S. Detrick
Mr. C. W. Fisher
Dr. T. E. Robbins

11000

K-5 REV. 2

Organic Materials Division, Koppers Company, Inc.
Pittsburgh, Pa. 15219, Telephone 412-391-3300

KOPPERS

March 7, 1974

Department of Environmental Quality
1234 S.W. Morrison Street
Portland, Oregon 97205

Attn: Mr. Charles K. Ashbaker

Dear Sir:

On January 3, 1974, we advised you that we were undertaking a sampling program of our effluent to determine if the pending Refuse Act permit application was still accurate. Changing market conditions since then have forced us to cease production at this location. Therefore, sampling at this time will not truly indicate plant operations.

Some terminalling and shipping of products will continue. It is estimated that production will be resumed at this location during the third quarter of 1974. At that time, we will sample the effluent and forward the analyses to you.

Very truly yours,

Paul W. Guth
Superintendent
Koppers Company, Inc.
7540 N.W. St. Helen's Road
Portland, Oregon 97229

NWT 001329

KOPPERS

Interoffice Correspondence

To Paul W. Guth

Location Northwest Plant

Subject WATER PERMIT

From Organic Materials

Location Manufacturing Services

Date March 6, 1974

Please sign the attached letter and forward to the DEQ.

Jon M. Anderson

JMA:em
Attachment

cc: C. H. Teller, Sr. (With Attachment)
T. Smith " "
J. Little " "
R. L. Shannon " "
R. S. Detrick " "

1000

NWT 001330

KOPPERS

Interoffice Correspondence

To Paul W. Guth

Location Northwest

Subject COAST GUARD FINE

From Organic Materials Division

Location Manufacturing Services

Date February 18, 1974

Please sign the enclosed letter and forward, with a check for $100 and the copy of the Coast Guard letter, by Certified Mail, Return Receipt Requested to the Coast Guard at Seattle. The remaining copy is for your file.

Jon M. Anderson

JMA:em
Attachment

cc: C. H. Teller, Sr. (With Attachment)
J. Little " "
T. Smith " "
R. L. Shannon " "

110001

K-5 REV. 2

Organic Materials Division, Koppers Company, Inc.
Pittsburgh, Pa. 15219, Telephone 412-391-3300

Certified Mail
Return Receipt
Requested

KOPPERS

February 18, 1974

Commander (m)
United States Coast Guard
Thirteenth Coast Guard District
618 Second Avenue
Seattle, Washington 98104

Gentlemen:

Enclosed is a check for $100.00 as proposed by the Coast Guard letter of January 24, 1974, a copy of which is also enclosed. Regarding that report, we wish to point out several facts which were omitted from it.

Storm water runoff from Koppers property is only a very small portion of the total flow from this outfall during a heavy rain. Because of the heavy runoff from another operation on the other side of St. Helen's Road, Koppers' discharge pipe to the ditch leading to the outfall is usually completely submerged, causing backflow into Koppers' sewer system. Therefore, flow from Koppers' discharge pipe immediately after a rainstorm could contain oil from another source which flowed into Koppers' pipe at the height of the storm flow and was gradually washed out by Koppers' lower flow subsequent to the fall of water level in the ditch.

Prior to this incident, another party, not connected with Koppers Company, was bulldozing silt from the ditch outside Koppers' property to alleviate the backflow into Koppers' sewers mentioned above. In doing so, the fill on Koppers' property was disturbed. This fill is known to have tarry residues deposited there by an entity other than Koppers Company at a time prior to Koppers presence at that site. It is almost certain that heavy rains would leach oil from this fill sufficiently to produce a rainbow on the water in the ditch.

At the time of the Coast Guard inspection, the bulldozer operator was cleaning or had recently cleaned his tractor by hosing it off into the ditch. This is another possible source of oil films.

The Coast Guard inspection report notes that puddles in Koppers' tank farm had rainbows but it does not note the fact that all runoff from the tank farm passes through an API oil separator before discharge. The report does not mention any examination of the effluent from the separator.

The undersigned, as Plant Superintendent, called all of the above to the attention of the Coast Guard, yet no mention of my name and the facts I pointed out have been included in the report or considered in proposing a penalty against Koppers.

Very truly yours,

1 1000

Paul W. Guth
Plant Superintendent

File 1000-300

RECEIVED
DEC 26 1973

KOPPERS

Interoffice Correspondence

To C.H. TELLER SR. From PAUL W. GUTH

Location PITTSBURGH, PA. Location NORTHWEST TAR

Subject OIL SPILL Date DECEMBER 19, 1973

THE COAST GUARD CALLED ON US MONDAY, DECEMBER 17, 1973, SAYING THAT WE WERE POLLUTING THE WILLAMETTE RIVER. THE POLLUTING THAT THEY WERE TALKING ABOUT WAS A VERY THIN FILM THAT COULD BE SEEN ON THE TOP OF THE WATER. AT THE TIME THAT THIS WAS TAKING PLACE RIVERGATE ROCK STONE QUARRY WAS USING A LARGE BULL DOZER CLEANING OUT THE DRAINAGE DITCH OF ROCK AND SILT THAT FILLED THE DITCH FROM THEIR PROPERTY DUE TO HIGH AND SWIFT WATER FROM VERY HEAVY RAINS WE HAD. THIS LAND WHERE THEY WERE PUSHING THE ROCK AND SILT UPON HAD BEEN A DUMPING GROUND OF THE NORTHWEST NATURAL GAS COMPANY AND HAD CONTAINED OIL OR SLUDGE. I TOLD THE COAST GUARD THAT THIS OIL COULD BE FROM THE TRACTOR WHICH WAS BEING WASHED CLEAN BY THE WATER AND ALSO FROM THE SOIL HE WAS DISTURBING WITH THE TRACTOR. THERE WAS AN OIL FILM ON OUR WATER ENTERING THIS STREAM AT THIS TIME. WHEN THEY Cleared THE SILT AND ROCK OUT FROM AROUND OUR OUTLET THIS LEFT THE WATER THAT HAD BACKED UP GUSH OUT IN FORCE , CLEANING OUT THE STEEL DRAINAGE PIPE. WE SHUT OUR WATER FROM THE TANK FARM OFF AT THIS TIME TO SEE IF WE COULD CLEAR UP THE FILM. THE COAST GUARD DID NOT KNOW THAT WE DID THIS. THE COAST GUARD DID NOT SAMPLE THE WATER, BUT HE SEEMED CONFUSED AS TO WHERE THE OIL WAS REALLY COMING FROM AFTER I DREW HIS ATTENTION TO THE OTHER POSSIBILITY. HE STATED THAT HE WOULD BE BACK IN SEVERAL HOURS TO HAVE ANOTHER LOOK. BY THE TIME HE CAME BACK AROUND THERE AT THREE O'CLOCK IN THE AFTERNOON, THEY WERE DONE DREDGING AND THE WATER HAD CLEARED UP TO WHERE THERE WAS A VERY SMALL AMOUNT OF FILM VISIBLE. HE SEEMED SATISFIED WITH THE RESULTS AND LEFT.

WE TOOK SAMPLES OF THE WATER FOR OUR OWN RECORDS AFTER THE COAST GUARD LEFT THE FIRST TIME.

Paul W. Guth

PAUL W. GUTH

PWG:ip

CC: J. LITTLE
R.L. SHANNON

1100

K43-REV. 5 100M 4-72

Copies to: Mr. P. W. Guth
Mr. J. M. Anderson
Mr. D. L. O'Dell
Mr. R. L. Shannon
Mr. R. S. Dietrick
Mr. T. E. Robbins

September 26, 1973

EFFLUENT SERVICES GROUP
ENVIRONMENTAL HEALTH & SAFETY SECTION
MONROEVILLE RESEARCH CENTER

TRIP REPORT

TO: Northwest Plant
Organic Materials Division
Portland, Oregon

DATE: September 14, 1973

PERSONNEL: Paul W. Guth - Northwest Plant
C. W. Fisher - Research Department

PURPOSE: To review effluent handling at the plant.

The functioning of the Federal and State control agencies was reviewed as regards permits for effluent handling and discharges. In Oregon the Federal people have manpower in each state regional office and the two control agencies are working very close together. Thus only one permit system will be in effect and at present there does not appear to be any conflict of interests. To date none of the control agencies have requested permits or sampled outfalls from Koppers plant.

The city has the interceptor sewer line installed through the plant and a tie-in point was provided in road between office building and the tank area. The contractor was realining the grade of this 4' sewer in the plant area. Thus, it is expected that tie-in of effluent waters to this sewer system could come shortly.

It is understood that the plant will be required to tie in all process and sanitary waters to the city's sewer system. The necessary pipe tie-ins may best be indicated by the engineers of the Division in Pittsburgh. It is recommended that sampling points and manholes together with easy addition of recording flow meters be provided when the plant ties its discharges into the sewer. The city has indicated they will accept water meter readings with subtraction allowed by meter reading for the indirect cooling water discharged to the storm drain.

NWT 001334

Once the plant is connected to the city sewers, oils in the process effluent water may require additional treatment and more careful monitoring so as to meet the expected oil limitation of 100 mg/L. The boiler blow-down, process waters, etc., should go to the city sewer system.

Once through cooling water is being monitored for phenols and these always are less than 1 mg/L. As discussed at the plant, a quick easy test for phenols is CHEMTRICS,INC., NITRO, W. VA. 25143, Phenols Test Kit, Model KP. Kits come with 60 test units, P-10 are furnished unless otherwise requested; the P-10 is good for 1 to 10 mg/L of phenol. Type P-1 tubes are good for 0 to 1 mg/L. The complete kit costs $34.50 with 60 tubes, color standards, pH paper, etc. Refill tubes of 60 units cost $24.50. These are quite accurate and give a phenol value in less than two minutes.

Some of the new permits being issued by EPA require that contaminated storm water be collected and treated before discharge. It is thus recommended that plans be made at this time to collect certain limited yard run-off which may pick up oils or phenols and treat these waste waters. Thus, if treatment of these waters is required it can be collected and transferred to the municipal sewer system.

The plant had cleared off the irrigation area of oil deposits on the surface and the fields are in good shape to continue receiving process effluent waters. It was also interesting to note that the ground between the plant and the river has been filled in and elevation brought to about same yard level as at Koppers plant.

C. W. Fisher

CWF:mw

11009

#1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REPORT EB05Q R01 — ORGANICS AND PLASTICS EPA DATA BASE SUMMARY OF EPA 308 QUESTIONNAIRES — DATE 17 NOV 1979 PAGE 1

* = CONFIDENTIAL INFORMATION

CORPORATION 2100

KOPPERS COMPANY,INC S=B
KOPPERS BUILDING
PITTSBURGH PA 15219 S=0

CONTACT

JON M ANDERSON COOR.ENVIR CNTL (412)227-2329 CORP S=B

PLANT 035 AS OF 06/15/79 REV 0004

NORTHWEST S=0
7940 NW ST.HELENS ROAD
PORTLAND OR 97229 S=0

NPDES - PERMIT 2180-J EXP 11/30/79 S=0 SC

WAS BPT QUESTIONNAIRE RECEIVED YES

COMMENT NONCONTACT COOLING WATER AND SURFACE WATER RUNOFF ONLY.

EPA REGION 0 PLANT CONFIDENTIAL NO

PROCESSES
CRG 01 PGS 00 P.P. 00 OTH ORG 00 OTH NEC 00

PRODUCTS PRODUCED AT THIS PLANT

PROD-PROC. CODE	PRODUCT NAME	DESIGN CAPACITY AMOUNT	DESIGN CAPACITY UNITS	AVG. DAILY PRODUCTN AMOUNT	AVG. DAILY PRODUCTN UNITS	INSTALLATION STATUS	INSTALLATION DATE
	D2 ORGANICS - LIST 2	PRIORITY					
1009 01	COAL TAR PRODUCTS (MISC.)			50,000*	LBS/DAY S=0	00	S=0

0001

NWT 001336

#2

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REPORT E6050 R01 — ORGANICS AND PLASTICS EPA DATA BASE SUMMARY OF EPA 308 QUESTIONNAIRES — DATE 17 NOV 1979 PAGE 2

* = CONFIDENTIAL INFORMATION

KOPPERS COMPANY,INC
NORTHWEST 2100 035
PORTLAND OR 97229

PRODUCTS PRODUCED AT THIS PLANT

PRODUCT PROCESS	PROCESS FLOW DIAGRAM ATTACHED	RAW MATER INDICATED FOR EACH OPERATION	POLLUTION CONTROL DEVICES IDENTIF'D	NAR-RATIVE ATTACHED	PROCESS OPERATNAL MODE	LENGTH & FREQ OF CYCLE SPECIF'D	QUES 8 SOD	PROCESS MODIFS SPECIF'D	DETAILS OF MODIF EFFECT GIVEN	YEAR CURR PROC ESTAB'D	VALUABLE TECH DATA GIVEN	INPLANT PLNT CIRC WATR POLLS GVN	IN TABLE 8	QUES 9 SOD
1009 01	YES	YES			UNKNOWN		S=0							S=0

1 1000

NWT 001337

#3

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REPORT EECSO R01

ORGANICS AND PLASTICS
EPA DATA BASE
SUMMARY OF EPA 308 QUESTIONNAIRES

DATE 17 NOV 1979 PAGE
* = CONFIDENTIAL INFORMATION

KOPPERS COMPANY,INC
NORTHWEST 2100 035
PORTLAND OR 97229

WATER USE, RE-USE, AND DISCHARGE - TOTAL PLANT

	AVERAGE VALUE (MGD)	CALCULATION TIME FROM	TO	
SOURCE -				
MUNICIPAL	0.01	01/01/75	09/30/76	S=0
USES -				
NON-CONTACT COOLING	0.005	01/01/75	09/30/76	S=0 SC
COMMENT	NON-CONTACT COOLING WATER AND BOILER HOUSE			
SANITARY AND POTABLE	0.005	01/01/75	09/30/76	S=0
SOURCES OF WASTEWATER FLOWS -				
NON-CONTACT COOLING	0.005	01/01/75	09/30/76	S=0 SC
COMMENT	NON-CONTACT COOLING WATER AND BOILER HOUSE			
SANITARY AND POTABLE	0.005	01/01/75	09/30/76	S=0
STORM WATER	0.005	01/01/75	09/30/76	S=0
POINTS OF WASTEWATER DISCHARGE -				
MUNICIPAL SEWAGE TREATM PLANT	0.005	01/01/75	09/30/76	S=0
SURF WATR/STRM SEWER TREATED	0.005	01/01/75	09/30/76	S=0

0001 TL

NWT 001338

#4 part 1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REPORT BE050 R01

ORGANICS AND PLASTICS
EPA DATA BASE
SUMMARY OF EPA 308 QUESTIONNAIRES

* = CONFIDENTIAL INFORMATION

KOPPERS COMPANY, INC
NORTHWEST 2100 039
PORTLAND OR 97229

WATER USE, RE-USE, AND DISCHARGE - TOTAL PLANT

WATER ANALYSIS DATA SUMMARY SHEET(S) ATTACHED	- NO	S=0
NON-REPRESENTATIVE SUPPLEMENTAL DATA ATTACHED	- NO	S=0
PARAMETERS IN TABLES A THROUGH E MEASURED BY NON-EPA-APPROVED METHODS	- NONE	S=0
SEED USED IN BOD5 TESTS ACCLIMATED TO WASTEWATERS TESTED	- NO	S=S

THE FOLLOWING QUESTIONS ARE FROM THE DECEMBER, 1977 308 QUESTIONAIRE, PART II --

4. DO YOU SUSPECT THAT ANY OF 129 PRIORITY POLLUTANTS ARE PRESENT IN YOUR WASTEWATER OR TREATMENT PLANT EFFLUENT	- YES	S=0
5. HAVE TREATMENT FACILITIES (END-OF-PIPE OR IN-PLANT CONTROL) BEEN INSTALLED SPECIFICALLY FOR REMOVAL OF ANY OF THE PRIORITY POLLUTANTS	- NO	S=0
6. DO YOU HAVE ANY DATA ON THE REMOVAL OF SPECIFIC PRIORITY POLLUTANTS BY EXISTING END-OF-PIPE TREATMENT FACILITIES OR IN-PROCESS POLLUTANT CONTROL PROCESSES WHICH WERE ORIGINALLY DESIGNED FOR REMOVAL OF CONVENTIONAL POLLUTANT PARAMETERS		
A. END-OF-PIPE TREATMENT FACILITIES	- NO	S=0
B. IN-PROCESS POLLUTANT CONTROL PROCESSES	- NO	S=0

1001

#4 part 2

7. HAVE YOU CONDUCTED RESEARCH AND/OR BENCH-SCALE OR PILOT-SCALE PROGRAMS FOR STUDYING THE TREATABILITY OR REMOVAL OF ONE OR MORE OF THE 129 PRIORITY POLLUTANTS - NO S=B

8. DO YOU HAVE ANY DATA ON THE ADSORPTION CAPACITY OF ACTIVATED CARBON FOR SPECIFIC PROCESS WASTEWATERS RESULTING FROM THE PRODUCTION OF THE COMPOUNDS PRESENTED IN LISTS 1, 2, 3, OR 4 - NO S=B

00011

#5

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REPORT (E050 R01

ORGANICS AND PLASTICS
EPA DATA BASE
SUMMARY OF EPA 308 QUESTIONNAIRES

DATE 17 NOV 1979 PAGE
* = CONFIDENTIAL INFORMATION

KOPPERS COMPANY,INC
NORTHWEST 2200 035
PORTLAND OR 97229

NOTE ON UNITS LINE -
SC IF PRESENT = SUPPLEMENTARY COMMENTS
NUMBER FOLLOWING = SOURCE OF DATA

QUALITY OF WATER DISCHARGED

TABLE B - UNTREATED PROCESS WATER LOAD DISCHARGED

TABLE B01
PRODUCT-PROCESS 1005-01
FLOW

S=0 TIME PD 1/ 1/75 TO 9/30/76 S=0

AVERAGE
MINIMUM
MAXIMUM
UNITS S=0
SMPL/TRN UNK
PERCENT FROM NCC
ANALYSIS MADE PRIOR TO 1/1/73
TEST
FACILITY

S=

REMARK FLOW NO DATA

NWT 001341

#6

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

ORGANICS AND PLASTICS
EPA DATA BASE
SUMMARY OF EPA 308 QUESTIONNAIRES

REPORT EE050 R01 — DATE 17 NOV 1979 PAGE 6

* = CONFIDENTIAL INFORMATION

8 KOPPERS COMPANY,INC
NORTHWEST 2100 035
PORTLAND OR 97229

NOTE ON UNITS LINE -
SC IF PRESENT = SUPPLEMENTARY COMMENTS
NUMBER FOLLOWING = SOURCE OF DATA

QUALITY OF WATER DISCHARGED

TABLE E - PLANT INTAKE WATER

TABLE E01 MUNICIPLE
PRODUCT-PROCESS 1005-01 S=0 TIME PD 1/ 1/75 TO 9/30/76 S=0

	FLOW	S=0
6 AVERAGE	0.01	
MINIMUM		
MAXIMUM		
UNITS	S=0 MGD	
SMPL/TRM	UNK L	
PERCENT PROD ACC		

ANALYSIS MADE PRIOR TO 1/1/73

TEST
FACILITY

S=

6

11000

#7

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

ORGANICS AND PLASTICS
EPA DATA BASE
SUMMARY OF EPA 308 QUESTIONNAIRES

* = CONFIDENTIAL INFORMATION

KOPPERS COMPANY,INC
NORTHWEST 2100 035
PORTLAND OR 97229

NOTE ON UNITS LINE -
SC IF PRESENT = SUPPLEMENTARY COMMENTS
NUMBER FOLLOWING = SOURCE OF DATA

QUALITY OF WATER DISCHARGED

TREATMENT FACILITY A
UNIT PROCESSES OIL SEPRTN S=0

TABLE A - WASTE LOAD TO TREATMENT FACILITY

A01 PROD-PROC 9700-03 S=0 TIME PD 1/ 1/75 TO 9/30/76 S=0

	FLOW	PH	TEMP/H2O	PHENOL
AVERAGE	0.001			
MINIMUM	0.			
MAXIMUM	0.01			
UNITS	S=0 MGD			
SMPL/TRM	GRAB L			
PERCENT FROM NCC				
ANALYSIS MADE PRIOR TO 1/1/73				

TEST
FACILITY

S=

TABLE C - TREATED PROCESS WASTE LOADS DISCHARGED

C01 PROD-PROC S=0 TIME PD 1/ 1/75 TO 9/30/76 S=0

	FLOW	PH	TEMP/H2O	PHENOLS
AVERAGE	0.001	7.	60.	0.3
MINIMUM	0.	6.5	40.	0.
MAXIMUM	0.01	8.	83.	0.6
UNITS	S=0 MGD	S=0 PH	S=0 DEG F	S=0 MG/L
SMPL/TRM	GRAB L	GRAB L	GRAB L	GRAB L
PERCENT FROM NCC				
ANALYSIS MADE PRIOR TO 1/1/73				

TEST
FACILITY

S=

11000

S=

#8

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REPORT BE050 R01

ORGANICS AND PLASTICS
EPA DATA BASE
SUMMARY OF EPA 308 QUESTIONNAIRES

DATE 17 NOV 1979 PAGE 8

* = CONFIDENTIAL INFORMATION

KOPPERS COMPANY, INC
NORTHWEST 2100 035
PORTLAND OR 97229

TREATMENT TECHNOLOGY

TREATMENT FACILITY IN PLANT YES S=0

FACILITY A

BIOLOGICAL TREATMENT TYPE - NON-BIOLOGICAL TREATMENT S=0

IS NUTRIENT ADDITION PRACTICED - NO S=0

EMPLOYEES - OPERATORS 0. MYR/YR SUPPORT 0. MYR/YR S=0 IS OPERATOR ALWAYS PRESENT S=0

SOLID WASTES - QUAN DISPOSED 0. KG DES S=0 MOISTURE CONTENT PERCENT S=0

DISPOSITION - PRESENT S=0 PLANNED FUTURE S=0

ESTIMATED ANNUAL COST OF HANDLING AND DISPOSAL (76 $) /TON DRY BASIS S=0

TOTAL ANNUAL ENERGY REQUIREMENTS - ELECTRICAL KWH OTHER BTU

DISCHARGE OF WASTES TO MUNICIPAL TREATMENT PLANTS - DO LOCAL PRETREATMENT REGULATIONS APPLY - S=0

CW011

#9

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

ORGANICS AND PLASTICS
EPA DATA BASE
SUMMARY OF EPA 308 QUESTIONNAIRES

REPORT EE050 R01 — DATE 17 NOV 1979 PAGE

* = CONFIDENTIAL INFORMATION

KOPPERS COMPANY,INC
NORTHWEST 2100 035
PORTLAND OR 97229

ACTIVATED SLUDGE TREATMENT IN PLANT NO

S=B

0001 1

#10

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

ORGANICS AND PLASTICS
EPA DATA BASE
SUMMARY OF EPA 308 QUESTIONNAIRES

REPORT EE050 R01 — DATE 17 NOV 1979 PAGE 10
* = CONFIDENTIAL INFORMATION

9 KOPPERS COMPANY,INC
NORTHWEST 2100 055
PORTLAND OR 97229

		IF YES - COMMENTS ATTACHED	DRAWINGS ATTACHED	
CARBON SORPTION TECHNOLOGY				
CARBON SORPTION ISOTHERMS ON WASTEWATER - BY COMPANY PERSONNEL	NO			S=0
- BY NON COMPANY PERSONNEL	NO			S=0
CARBON COLUMNS ON WASTEWATERS FROM PLANT EVALUATED -	NO			S=0
CARBON SORPTION DATA FROM PLANT ON - RAW WASTES	NO			S=0
- BIOLOGICALLY TREATED WASTES	NO			S=0
- INDIVIDUAL PROCESS LINES	NO			S=0
- COMBINED PROCESS LINES	NO			S=0
- PILOT PLANT STUDIES	NO			S=0
- CONTRACTOR EVALUATIONS	NO			S=0
- COST EVALUATIONS	NO			S=0
- PLANT SCALE EVALUATIONS	NO			S=0
- OPERATIONAL UNITS	NO			S=0
ADDITIONAL FILTRATION STUDIES ON WASTEWATERS (SAND, MULTI-MEDIA, ETC)	NO			S=0
ADDITIONAL BIOLOGICAL TREATABILITY STUDIES ON WASTEWATERS	NO			S=0
ADDITIONAL OTHER TREATABILITY STUDIES ON WASTEWATERS STREAMS	NO			S=0

001100

#11

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

ORGANICS AND PLASTICS
EPA DATA BASE
SUMMARY OF EPA 308 QUESTIONNAIRES

REPORT EE050 R01

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* = CONFIDENTIAL INFORMATION

KOPPERS COMPANY, INC
NORTHWEST 2100 035
PORTLAND OR 97229

NON-308 DATA

RETA STATE FILE EXISTS	YES	S=1
NPDES PERMIT OR APPLICATION INCLUDED	YES	S=1
ARE NPDES MONTHLY REPORTS INCLUDED	YES	S=1
STATE PERMIT OR APPLICATION INCLUDED	YES	S=1
TREATMENT FACILITY DESCRIPTION INCLUDED	YES	S=1
WASTEWATER TREATABILITY OR ENGINEERING REPORTS INCLUDED	YES	S=1
SURFACE WATER DISCHARGED TO 'WATER QUALITY LIMITED' STREAM	UNKNOWN	S=1
STREAM OR SURFACE WATER DISCHARGED INTO	WILLIAMETTE RIVER	S=1

00011

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REPORT EE050 R01

ORGANICS AND PLASTICS
EPA DATA BASE
SUMMARY OF EPA 308 QUESTIONNAIRES

* = CONFIDENTIAL INFORMATION

KOPPERS COMPANY, INC
NORTHWEST 2100 035
PORTLAND OR 97229

FULL PRODUCT/PROCESS DESCRIPTIONS

CODE	PRODUCT DESCRIPTION	CAS	CODE	PROCESS DESCRIPTION
1005	COAL TAR PRODUCTS (MISC.)		C1	COAL TAR DISTILLATION

ORGANIC CHEMICALS OR PLASTICS AND SYNTHETICS (Identify Category)

PART I GENERAL INFORMATION

To be returned within 60 days of receipt to:

Robert B. Schaffer, Director
Effluent Guidelines Division
U.S. EPA (WH-552)
Washington, D. C. 20460

1. Name of Corporation
Koppers Company, Inc.

2. Address of Corporation Headquarters

Street: Koppers Building

City: Pittsburgh,

State: Pa. Zip Code 15219

3. Name of Plant
Northwest

4. Address of Plant

Street: 7540 N.W. St. Helens Road

City: Portland

State: Oregon Zip Code 97229

5. Name(s) of corporation personnel to be contacted for information pertaining to this data collection portfolio.

Name	Title	(Area Code) Telephone
Jon M. Anderson	Coordinator-	412 391-3300 - Ext. 2487
	Environmental	
	Control	

6. Plant NPDES Permit Number(s) 2180-J (Non-contact cooling water and surface water runoff only - No process water)

Date of expiration November 30, 1979

If no permit, application number

Date of application

11000 PART I - Page 1

NWT 001349

Corporation Koppers Company, Inc.
Plant Northwest
City Portland, State Oregon

7. Products produced at this plant site.

a. Indicate which of the products in list 1 (Plastics and Synthetics-page 3) or list 2 (Organic Chemicals-page 4) that you produce at this site and the production rate during the period January 1, 1975 to September 30, 1976. If there is more than one process type for a given product, identify and list each separately. The average daily production while operating should match with the waste water data tables in Part II.

Product	Process	Design Capacity lbs/day	Avg. Daily Production While Operating lbs/day	Year Process Installed
Coal Tar Products	Distillation		50,000	1966

Attach additional pages, if necessary.

11000

NWT 001350

LIST 1

PLASTICS & SYNTHETICS

ABS/SAN
Acrylic Resins
Alkyds and Unsaturated Polyester Resins
Cellulose Acetate Fiber/Resin
Cellulose Derivatives
Cellulose Nitrate
Cellophane
Epoxy Resins
Ethylene-Vinyl Acetate Copolymers
Fluorocarbon Polymers
Melamine Resins
Nylon Resins/Fiber
Phenolic Resins
Polyamides
Polyester Resin/Fiber
Polyethylene
Polypropylene Resin/Fiber
Polystyrene
Polyurethane Resins
Polyvinyl Acetate
Polyvinyl Chloride
Rayon
Silicones
Urea Resins

LIST 2

ORGANIC CHEMICALS

Acetaldehyde
Acetic Acid
Acetone
Acetylene
Acrylates (includes acrylic acid, methacrylic acid, and esters)
Acrylonitrile
Adiponitrile
Aniline
Benzene
Benzoic Acid
Bisphenol A
Caprolactam
Chloromethanes (Methyl Chloride, Dichloromethyl, Chloroform, and Carbon tetrachloride)
Citronellol
Coal Tar
Cumene
Cyclohexane
Dimethyl Terephthalate
Diphynylamine
Ethyl Acetate
Ethyl Benzene
Ethylene
Ethylene Dichloride
Ethylene Glycol
Ethylene Oxide
Formaldehyde
Hexamethylenediamine
Isobutylene
Isopropanol
Maleic Anhdride
Methanol
Meta-Xylene
Methyl Amines (including mono, di, and tri methyl amine)
Methyl Ethyl Ketone
Methyl Salicylate
Ortho-Nitroaniline
Ortho-Xylene
OxoChemicals
Para-Aminophenol
Para-Cresol
Para-Nitroaniline
Para-Xylene
Phenol
Phthalic Anhydride
Plasticizers (esters of phthalic acid)
Propylene
Sec-butyl-alcohol
Styrene
Tannic Acid
Terephthalic Acid
Tetraethyl Lead
Toluene
Vinyl Acetate
Vinyl Chloride

Corporation Koppers Company, Inc.
Plant Northwest
City Portland, State Oregon

b. Indicate which of the products in list 3 (Organic Chemicals - page 6) that you produce at this site and the production rate during the period January 1, 1975 to September 30, 1976. If there is more than one process type for a given product, identify and list separately. The average daily production while operating should match with the waste water data tables in Part II.

Product	Process	Design Capacity lbs/day	Avg. Daily Production While Operating lbs/day	Year Process Installed
None				

Attach additional pages, if necessary.

11000

NWT 001353

LIST 3

ORGANIC CHEMICALS

Proplyene Oxide
Acetic Anhydride
Ethyl Alcohol, Synthetic
Adipic Acid
Cyclohexanone
Nitrobenzene
Tetrachloroethylene (Perchloroethylene)
Propylene Glycol (1,2-Propanediol)
Diethylene Glycol
Trichloroethylene
N-Butyl Alcohols (N-Propylcarbinol)
Dichlorodifluoromethane
Ethanolamines, Total
Trichlorofluoromethane
4,4-Isopropylidenediphenol (Bisphenol A)
2-Methoxyethanol (Ethylene Glycol Monomethyl Ether)
2-Aminoethanol (Monoethanolamine)
Cresols, Total
Epoxidized Esters, Total
2,2-Iminodiethanol (Diethanolamine)
Triethylene Glycol
Pentaerythritol
Hexamethylenetetramine, Tech.
Ortho-Dichlorobenzene
a-Chlorotoluene (Benzylchloride)
Fumaric Acid
Dipropylene Glycol
Glutamic Acid, Monosodium Salt
Choline Chloride (All Grades)
Para-Nitrophenol and Sodium Salt
Pentachlorophenol (PCP)
Propionic Acid
Xylenesulfonic Acid, Sodium Salt
Aspirin
Acetic Acid Salts, Total
Methyl Bromide
Dodecyl Mercaptans
Salicylic Acid
Benzoic Acid Salts: Sodium Benzoate, tech. and U.S.P.
5-Nitro-Ortho-Toluenesulfonic Acid (SO3H-1)
Benzyl Alcohol
Benzoyl Peroxide
Castor Oil, Ethoxylated
2-Ethylhexanoic Acid (a-Ethylcaproic Acid)
2-Dimethylaminoethanol

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NWT 001354

Corporation Koppers Company, Inc.
Plant Northwest
City Portland, State Oregon

c. List below all other products (not appearing on lists 1, 2 or 3) manufactured at this same site that account for at least one percent of the plant's total production. Minor products may be grouped in this listing if the products are similar in nature and made by a similar process. The products should be listed individually with a total production indicated for the group in all instances where grouping is used to report.

Product	Process	Design Capacity lbs/day	Avg. Daily Production While Operating lbs/day
None			

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NWT 001355

d. List below products not in items 7a, b and c if they account for an inordinate pollution load either in terms of pounds discharged per 1,000 pounds of production (RWL) or difficult treatment problems.

None

8. For each product indicated in response to Questions 7a and 7b of Part I, attach a process flow diagram which identifies the unit operations involved in each product manufacturing process and all sources and quantities of waste waters from the process operations. Show recycle loops for both process water and non-contact cooling water and specify the blowdown control systems. Indicate raw materials used and contact and non-contact water entering each operation. Identify pollution control devices associated with the process that have wastewater streams. Use consistent units throughout; for example, gallons per hour or pounds per hour. Supplement the diagram with a narrative description for clarity or completeness where necessary.

See attachment.

The respondent may use process flow diagrams from EPA Development Documents if representative of the process. The process diagrams should be modified to include all requested information.

On each process flow diagram, clearly state whether the process operational mode is batch, continuous or other. If the answer is "other" the operational mode should be specified. If the process is batch or semi-continuous, describe the length of cycle and frequency.

9. Describe major process modifications made (to each process described in response to Question 8) since January 1, 1972 that significantly affect either the volume of flow, or the amount of waste water pollutants per unit of production originating from that process. Explain the purpose behind each of these modifications. Give your best estimate as to the technological age of each process installation as it now exists.

None

Corporation Koppers Company, Inc.
Plant Northwest
City Portland, State Oregon

Give an analysis of the effect of making the modification, i.e., describe the load and flow prior to the modification and after the modification. Do you have future modifications for in-plant control of waste water pollutants scheduled, if so, on which processes? Specifically highlight any process changes that would not be made except for pollution control. Include all such changes in the process flow diagram of Item 8 using a separate block wherever feasible.

None

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NWT 001357

Corporation Koppers Company, Inc.
Plant Northwest
City Portland, State Oregon

ORGANIC CHEMICALS OR PLASTICS AND SYNTHETICS (Identify Category)

PART II WATER USE, RE-USE, AND DISCHARGE

To be returned within 60 days of receipt to:

Robert Schaffer, Director
Effluent Guidelines Division
U.S. EPA (WH-552)
Washington, D. C. 20460

1. Water Use, Total Plant Needs During the Period January 1, 1975 to September 30, 1976

List below for your plant the sources and quantities of water used and describe the disposition of waste waters. If a time period of less than January 1, 1975 to September 30, 1976 is used, state the reason that the values used are representative of that period.

A. Water Source:

			Time Period of Calculation
Municipal	.01	mgd (average value)	1-1-75 to 9-30-76 throughout
Surface	0	mgd	
Ground	0	mgd	
Other (specify)	0	mgd	

B. Uses:

Non-contact cooling and Boiler House	.005 mgd	
Direct process contact (as diluent, solvent, carrier, reactant, by-product, cooling, etc.)	mgd	
Indirect process contact (pumps, seals, etc.)	mgd	
Non-contact ancillary uses (boilers, utilities, etc.)	mgd	
Maintenance, equipment cleaning and work area washdown	mgd	
Air pollution control	mgd	
Sanitary and potable	.005 mgd	
Other (specify)	mgd	

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NWT 001358

Corporation Koppers Company, Inc.
Plant Northwest
City Portland, State Oregon

C. Source of waste water flows:

Non-contact cooling and Boiler House	.005 mgd	
Direct process contact	mgd	
Indirect process contact	mgd	
Non-contact ancillary uses	mgd	
Maintenance, equipment cleaning and work area washdown	mgd	
Air pollution control	mgd	
Sanitary/Potable water	.005 mgd	
Storm water (collected in treatment system)	.005 mgd	
Other (specify)	mgd	

D. Process or Process Contaminated Waste Water Discharged To: (Do not include cooling water, boiler blowdown, etc.)

Surface water or storm sewer		
Treated	.005 mgd	
Untreated	mgd	
Municipal Sewage Treatment Plant	.005 mgd	
Deep well	mgd	
Other (Specify and describe briefly)	mgd	

2. Quality of Water Discharged:

For the period January 1, 1975 to September 30, 1976, summarize your influent, effluent and raw waste loads in Tables A, B, C, D and E. If data for individual waste streams are not available, information for combined waste streams should be furnished which represents the greatest degree of detail available. The tables are located at the end of this section.

Instructions for Completing Tables A, B, C, D and E:

For Tables A, B, C, D and E, use the following definitions and notes. The period covered should correspond with that used for Part I question 7 to calculate average daily production.

Flow - Do not include rainfall runoff, unless it is collected in the treatment system. If collected, estimate the percent of total flow which is attributed to this source.

Average day - Should represent the average of the data period covered.

Significant parameters - Those potential pollutants not specifically listed, but which are introduced into the waste streams as a result of materials used, product produced, process used and for which you have test data.

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NWT 001359

Identify all data which results from abnormal operating or other conditions.

If use of a different time period (a portion of the time period January 1, 1975 to September 15, 1976) results in more adequate representation of the pollution loads, you may do so if the time period is not less than six months. You should specify the time period and explain why that period is more representative.

Table A - Complete Table A for the combined influent to each treatment facility.

Table B - Complete Table B for each untreated waste discharge point (to surface waters, deep wells, land application, etc.)

Table C - Complete Table C for the treated effluent from each treatment facility. Not applicable to plants that have not yet installed waste treatment facilities. This section is not restricted by type of treatment.

Table D - Complete Table D for the process wastewaters from each of the product/process lines identified in Part I, items 7a and 7b. Do not include non-contact cooling waters but do include all contact cooling waters. If measured values are not known or not available, supply the best estimate available and specify the basis for the estimate. The production basis should be the same as the average daily production while operating that was given in Part I.

Table E - Complete Table E for the plant intake water.

3. Attach the water analysis data summary sheets showing the daily water analyses that were used to compute Tables A through E, e.g. monthly summary tables. Also include any data for the period January 1, 1975 to September 30, 1976 that was omitted in Tables A through E as not being representative.

4. The method of sample collection for the data supplied in response to Question 2, Tables A, B, C, D and E, should be specified (e.g., daily grab sample, 8 hour flow composited, 24 hour continuous, etc.). Daily grab sample.

5. Indicate all parameters listed in Part II, tables A through E, which were not measured by EPA approved methods.

None

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NWT 001360

TABLE A

WASTE LOADS TO TREATMENT FACILITIES

Corporation Koppers Company, Inc.

Plant Northwest

City Portland, State Oregon

Treatment Facility Name

Treatment Facility Description

API Separator

Wastewater Source(s) Stormwater Runoff

Time Period Represented

Parameter	Daily Minimum	Daily Long Term Average	Daily Maximum	Calendar Monthly Averages Minimum	Calendar Monthly Averages Maximum	Remarks
Flow (MGD)	0	.001	.010			
pH (pH units)						
Temperature (°C) - Wastewater						
Temperature (°C) - Ambient Air						
BOD_5 (lbs/day)						
COD (lbs/day)						
TOC (lbs/day)						
TSS (lbs/day)						
TDS (lbs/day)						
NH_3 as N (lbs/day)						
TKN as N (lbs/day)						
Phenol (lbs/day)						
Significant Metals (Identify)						
(lbs/day)						
(lbs/day)						
(lbs/day)						
(lbs/day)						
(lbs/day)						
Others (Identify)						
(lbs/day)						
(lbs/day)						
(lbs/day)						
(lbs/day)						

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TABLE B

UNTREATED PROCESS WATER LOAD DISCHARGED

Corporation Koppers Company, Inc.

Plant Northwest

City Portland, State Oregon

Discharge Point

NPDES Discharge No.

Wastewater Source(s)

Time Period Represented

Not Applicable

Parameter	Daily Minimum	Daily Long Term Average	Daily Maximum	Calendar Monthly Averages Minimum	Calendar Monthly Averages Maximum	Remarks
Flow (MGD)						
pH (pH units)						
Temperature (°C) - Wastewater						
Temperature (°C) - Ambient Air						
BOD_5 (lbs/day)						
COD (lbs/day)						
TOC (lbs/day)						
TSS (lbs/day)						
TDS (lbs/day)						
NH_3 as N (lbs/day)						
TKN as N (lbs/day)						
Phenol (lbs/day)						
Significant Metals (Identify)						
_____ (lbs/day)						
_____ (lbs/day)						
_____ (lbs/day)						
_____ (lbs/day)						
_____ (lbs/day)						
Others (Identify)						
_____ (lbs/day)						
_____ (lbs/day)						
_____ (lbs/day)						
_____ (lbs/day)						

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TABLE C

TREATED PROCESS WASTE LOADS DISCHARGED

Corporation Koppers Company, Inc.

Plant Northwest

City Portland, State Oregon

Treatment Facility

Treatment Facility Description

API Separator

Discharge Point Willamette River

NPDES Discharge No. 2180-J

Do you post-chlorinate this effluent? __ Yes x No If yes, do you chlorinate __ (A) Full-Time __ (B) Part-Ttime

Time Period Represented

Parameter	Daily Minimum	Daily Long Term Average	Daily Maximum	Calendar Monthly Averages Minimum	Calendar Monthly Averages Maximum	Remarks
Flow (MGD)	0	.001	.010			
pH (pH units)	6.5	7.0	8.0			
Temperature (°C) - Wastewater °F.	40	60	80			
Temperature (°C) - Ambient Air						
BOD_5 (lbs/day)						
COD (lbs/day)						
TOC (lbs/day)						
TSS (lbs/day)						
TDS (lbs/day)						
NH_3 as N (lbs/day)						
TKN as N (lbs/day)						
Phenol ~~(lbs/day)~~ mg/l	0	0.2	0.6			
Significant Metals (Identify)						
(lbs/day)						
(lbs/day)						
(lbs/day)						
(lbs/day)						
(lbs/day)						
Others (Identify)						
(lbs/day)						
(lbs/day)						
(lbs/day)						
(lbs/day)						

11000

NWT 001363

TABLE D

PRODUCT/PROCESS LINES RAW WASTE LOADS

Corporation Koppers Company, Inc.

Plant Northwest

City Portland, State Oregon

Product Unknown

Process

Time Period Represented

Parameter	Daily Minimum	Daily Long Term Average	Daily Maximum	Calendar Monthly Averages Minimum	Calendar Monthly Averages Maximum	Remarks
Flow (gal/1,000 lbs)*						
pH (pH units)						
Temperature (°C) - Wastewater						
Temperature (°C) - Ambient Air						
BOD_5 (lbs/1,000 lbs)**						
COD (lbs/1,000 lbs)						
TOC (lbs/1,000 lbs)						
TSS (lbs/1,000 lbs)						
TDS (lbs/1,000 lbs)						
NH_3 as N (lbs/1,000 lbs)						
TKN as N (lbs/1,000 lbs)						
Phenol (lbs/1,000 lbs)						
Significant Metals (Identify)						
_____(lbs/1,000 lbs)						
_____(lbs/1,000 lbs)						
_____(lbs/1,000 lbs)						
_____(lbs/1,000 lbs)						
_____(lbs/1,000 lbs)						
Others (Identify)						
_____(lbs/1,000 lbs)						
_____(lbs/1,000 lbs)						
_____(lbs/1,000 lbs)						
_____(lbs/1,000 lbs)						

*Indicates gallons discharged (per 1000 pounds of production)

**Indicates pounds discharged (per 1000 pounds of production)

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NWT 001364

TABLE I

PLANT INTAKE WATER

Corporation Koppers Company, Inc.

Plant Northwest

City Portland, State Oregon Unknown

Product

Process

Time Period Represented

Parameter	Daily Long Term Average	Daily Maximum	Calendar Monthly Averages Minimum	Calendar Monthly Averages Maximum	Remarks
Flow (MGD)					
pH (pH units)					
Temperature (°C) - Wastewater					
Temperature (°C) - Ambient Air					
BOD_5 (lbs/day)					
COD (lbs/day)					
TOC (lbs/day)					
TSS (lbs/day)					
TDS (lbs/day)					
NH_3 as N (lbs/day)					
TKN as N (lbs/day)					
Phenol (lbs/day)					
Significant Metals (Identify)					
(lbs/day)					
(lbs/day)					
(lbs/day)					
(lbs/day)					
(lbs/day)					
Others (Identify)					
(lbs/day)					
(lbs/day)					
(lbs/day)					
(lbs/day)					

11000

Corporation Koppers Company, Inc.
Plant Northwest
City Portland, State Oregon

6. Has the seed used in the BOD5 test been acclimated to the waste waters that have been tested?

____ Yes ____ No Not Applicable

If yes, what is the source of the seed?

A ____ sewage treatment plant

B ____ plant treatment facility

C ____ laboratory acclimation

D ____ other explain _____

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NWT 001366

Corporation Koppers Company, Inc.
Plant Northwest
City Portland, State Oregon

ORGANIC CHEMICALS OR PLASTICS AND SYNTHETICS (Identify Category)

PART III TREATMENT TECHNOLOGY

To be returned within 60 days of receipt to:

Robert B. Schaffer, Director
Effluent Guidelines Division
U.S. EPA (WH-552)
Washington, D. C. 20460

A. Do you have a treatment system(s) at this plant?

Yes x No____

If yes, complete the following and attach a separate flow sheet for each distinct treatment facility indicating waste streams treated, unit sizes of treatment equipment, detention times, recycle rates, effluent concentration or design criteria and other pertinent engineering information for operation of the treatment facility. Include treatment of storm runoff, where applicable.

Indicate the process lines for which any portion of the waste water flow is diverted to separate treatment, pretreatment or disposal (e.g. deep well, solvent recovery, incineration, etc.). Which portions are so diverted and which portions are combined for joint treatment?

For each treatment facility complete the following:

Name of Facility API Separator

Source(s) of Waste Water Stormwater runoff

		Year	Cost (1976 dollars)
1	a. Original installation Unknown (Battery limits of treatment plant only)	_____	_____
	b. Other costs (include collection system, piping, pumping, etc.)	_____	_____
2	Estimated replacement cost	_____	_____
3	Estimated total capital expenditure for this facility to date	_____	_____
4	Annual cost of operation and maintenance (exclude depreciation and debt service cost)	_____	_____

5 List major modifications or additions since original installation and

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NWT 001367

Corporation Koppers Company, Inc.
Plant Northwest
City Portland, State Oregon

state the purpose of the modification or addition.

Modification-Addition	Treatment Facility	Year	Cost (1976 Dollars)	Purpose
None				

6 List scheduled modifications or additions and estimated date of completion and state the purpose of the modification or addition.

Modification-Addition	Treatment Facility	Year	Cost (1976 Dollars)	Purpose
None				

7 Is nutrient addition practiced:

____ Yes __X__ No

8 How many employees (equivalent man-years/year) are primarily engaged as operators of the waste water treatment facility? (exclude maintenance)

0

How many employees (equivalent man-years/year) are engaged as support personnel for the waste water treatment facility?

0

9 Is an operator always present?

____ Yes __x__ No

10 Quantity of wastewater treatment facility solid wastes disposed of at present (dry basis)

0 lbs/day

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Corporation Koppers Company, Inc.
Plant Northwest
City Portland, State Oregon

11 Moisture content of waste solids disposed of at present
_____% moisture

12 Present disposition of solids

_____

_____

_____

13 Estimated annual cost of solids handling and disposal (1976 dollars)
_____$/ton dry basis

14 Planned future disposition of solids:

_____

_____

_____

15 What are the total annual energy requirements for the treatment facility?

Electrical _____Kwhr
Other (e.g. Heat) _____Btu

16 For discharges of industrial wastes to municipal treatment plants are there local pretreatment regulations applying to you?
Yes ____ No ____.

If yes, reference those regulations and attach a copy.

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Corporation Koppers Company, Inc.
Plant Northwest
City Portland, State Oregon

B. Carbon Sorption Technology.

	Yes	No
Have you determined carbon sorption isotherms on your waste waters?	___	x
Have carbon sorption isotherms been determined for waste waters from your plant(s) by a person(s) other than company personnel?	___	x
Have you or anyone else evaluated carbon columns on waste waters from this plant?	___	x
Do you have carbon sorption data from your plant(s) on:		
raw wastes	___	x
biologically treated wastes	___	x
individual process lines	___	x
combined process lines	___	x
pilot plant studies	___	x
contractor evaluations	___	x
cost evaluations	___	x
plant scale evaluations	___	x
operational units	___	x

For each question above which was answered affirmatively, give a brief description of the data (source and types of wastes, period of time covered, plant involved, extent of data base and contact personnel suggested) in the space below.

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NWT 001370

Corporation Koppers Company, Inc.
Plant Northwest
City Portland, State Oregon

C. Filtration

Have you done filtration studies on your waste waters (sand, multi-media, etc.) beyond what was described in Section A, Part III? ____ Yes __x__ No

If yes, give a brief description of the data (source and types of wastes, period of time covered, process stream involved, extent of data base and contact personnel suggested) in the space below.

D. Biological Treatment

Have biological treatability studies been conducted on your wastewaters beyond what was described in Section A, Part III? ____ Yes __x__ No

If yes, give a brief description of the data and results (source and types of wastes treated, duration of the study, extent of data base, conclusions of study, and contact personnel suggested) in the space below:

E. Have other treatability studies, beyond what was described in Section A, Part III, employing treatment processes such as sedimentation, neutralization, hydrolysis, precipitation, oxidation/reduction, ion exchange, phenol recovery, etc., been run on any of the process wastewater streams from the plant? ____ Yes __x__ No

If yes, list on a separate sheet those product/process streams from which such treatability studies were conducted. Identify the sheet as response to III-E.

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NWT 001371

Organic Materials Division, Koppers Company, Inc.
Pittsburgh, Pa. 15219, Telephone 412-391-3300

KOPPERS

March 7, 1978

Dr. James Gallup
USEPA Gum & Wood Chemicals Industry Survey
P. O. Box 13454
Gainsville, FL 32604

Dear Dr. Gallup:

This information is provided in response to your letter of February 1, 1978, which was received at Koppers' plant on February 23, 1978. Based upon the definitions given in Standard Industrial Classifications, it is apparent that the Gum and Wood Chemicals Survey is not applicable to Koppers Co., Inc., Portland, Oregon. The products which are included in the survey are derived from the destructive distillation of wood (SIC 2861). Although Koppers Co. does process creosote, it is derived from the distillation of coal tar (SIC 2865). Thus it is beyond the scope of this survey.

Very truly yours,

Jordan M. Dern

JMD/sj

cc: Dr. A. W. Lawrence
Mr. Templeton Smith

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

February 1, 1978

Koppers Co., Inc.
7540 N. W. Street Helens Road
Portland, OR 97229

Dear Sir:

The Environmental Protection Agency (EPA) is currently conducting studies of the gum and wood chemicals manufacturing industry (SIC 2861) for the purpose of developing effluent limitations, pretreatment standards, and new source performance standards which EPA is required to develop pursuant to Section 301(b) and (d), 304(b) and (c), 306(b), and 307(a), (b) and (c) of the Federal Water Pollution Control Act (P.L. 92-500, 33 U.S.C. 1151 et seq) and in accordance with the Settlement Agreement approved by the U.S. District Court of the District of Columbia in Natural Resources Defense Council et al., vs. Train, No. 2153-73, June 8, 1976. This agreement sets forth a court approved timetable for EPA's promulgation of effluent limitations, pretreatment standards, and new source performance standards under P.L. 92-500 for 21 specific industrial categories, including gum and wood chemicals. In developing these regulations, the agreement further requires EPA to examine and regulate the discharge of 65 named compounds and classes of compounds.

Initially this task will involve the collection of basic technical and economic data from the industry so that EPA can profile the industry and identify those plants whose products, processes, waste disposal procedures, and control technologies warrant further investigation. In-depth studies will be made of selected plants, and, based on the technical and economic data developed in these studies as well as information gathered from other sources, EPA will develop technology-based effluent limitations, pretreatment, and new source performance standards for the industry.

Experience has shown that it is in the best interest of both the industry and EPA to develop an accurate and complete data base, and we trust we can look forward to your assistance and cooperation in this effort.

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In addition to its own staff, EPA has contracted with Environmental Science and Engineering, Inc., Gainesville, Florida, to assist in the collection and analysis of technical information. The first phase of EPA's information gathering activities for this project is the dissemination of the attached industry survey to all gum and wood chemicals manufacturing sites. This survey asks a number of questions about your plant's production, general operations, water usage, waste water disposal practices, and waste treatment facilities and has been developed by EPA and the technical contractor in cooperation with the Pulp Chemicals Association. We request that you answer all questions contained in the enclosed survey and return the completed survey and any supplemental information, no later than thirty days after receipt of the survey to:

U.S.E.P.A. Gum & Wood Chemicals Industry Survey
P.O. Box 13454
Gainesville, Florida 32604

This request for information is made under authority provided by Section 308 of the Federal Water Pollution Control Act, 33 U.S.C. Section 1318. Section 308 provides that, "Whenever required to carry out the objective of this Act, including but not limited to . . . developing or assisting in the development of any effluent limitation . . . pretreatment standard, or standard of performance under this Act" the Administrator may require the owner or operator of any point source to establish and maintain records, make reports, install, use and maintain monitoring equipment, sample effluent and provide "such other information as he may reasonably require." In addition, the Administrator or his authorized representative, upon presentation of credentials, has right of entry to any premises where an effluent source is located or where records which must be maintained are located and may at reasonable times have access to and copy such records, inspect monitoring equipment and sample effluents.

Information may not be withheld from the Administrator or his authorized representative because it is confidential. However, when requested to do so the Administrator is required to consider information to be confidential and to treat it accordingly if disclosure would divulge methods or processes entitled to protection as trade secrets. EPA regulations concerning confidentiality of business information are contained in 40 CFR Part 2, Subpart B, 41 Federal Register 36902-36924 (September 1, 1976). These requlations provide that a business may, if it desires, assert a business confidentiality claim covering part or all of the information furnished to EPA. The manner of asserting such claims is specified in 40 CFR Section 2.203(b). Information covered by such a claim will be treated by EPA in accordance with the procedures set forth in the Subpart B regulations. In the event that a request is

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made for release of information covered by a claim of confidentiality or EPA otherwise decides to make a determination whether or not such information is entitled to confidential treatment, notice will be provided to the business which furnished the information. No information will be disclosed by EPA as to which a claim of confidentiality has been made except to the extent and in accordance with 40 CFR Part 2, Subpart B. However, if no claim of confidentiality is made when information is furnished to EPA, the information may be made available to the public without notice to the business.

Effluent data (as defined in 40 CFR Section 2.302(a)(2)) may not be considered by EPA as confidential. In addition, any information may be disclosed to other officers, employees or authorized representatives of the United States concerned with carrying out the Federal Water Pollution Control Act or when relevant in any proceeding under this Act.

EPA has found that only with the complete cooperation of all parties concerned can effective and equitable regulations be developed. Should you have any questions regarding this letter or the enclosed survey, please contact Dr. James Gallup of my staff at 202-426-2554. We look forward to receiving your replies to the enclosed survey and working with you further to develop effluent limitations and pretreatment and new source performance standards for your industry.

Sincerely,

Robert B. Schaffer

Robert B. Schaffer, Director
Effluent Guidelines Division (WH-552)

Enclosure

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INSTRUCTIONS

Please Read All Instructions Carefully Before Proceeding With Your Response

1. This survey must be completed separately for each facility that produces gum and wood chemicals regardless of whether such chemicals are the facility's primary products. These operations are classified as SIC 2861 in the 1972 Standard Industrial Classification Manual (See attached copy).

2. A list of definitions of technical terms used in this survey has been provided to assist you in understanding the questions asked and to insure that your interpretation of the terms is the same as that of the persons who developed the survey. Please read these definitions prior to completing any questions and refer to them as often as necessary to assure accuracy in the completion of your response.

3. If this survey is received by a non-manufacturing site (e.g. corporate office, warehouse, sales office):

   a. Complete questions 1 through 6 and return the complete survey.

   b. Determine if each of your company's manufacturing locations has received a survey. If any location has not received a survey, request additional copies from the EPA Technical Project Officer (James D. Gallup, (202) 426-2554).

4. All questions contained in this survey are intended to obtain information about your manufacturing operations or other activities included in SIC 2861. Other plant operations should not be considered in determining your responses unless a question specifically requests them to be.

5. Questions should be answered by marking the appropriate box or boxes. Those questions requiring a written response should be answered by printing or typing in the appropriate space.

6. Attempt to answer all questions. If you cannot provide a full response to a question, answer as much of it as possible. If a question is not relevant to your plant operation or the information requested is not available, please provide an explanation.

7. If clarification or supplementation of any response is necessary, please attach separate sheet(s) with response referenced to question number.

NWT 001376

8. If you have difficulty understanding or completing any of the applicable questions, please call Gum and Wood Chemicals Survey, 904/372-3697.

9. Please forward the completed survey, along with any supplemental information to:

U.S. EPA Gum and Wood Chemicals Industry Survey
P.O. Box 13454
Gainesville, Florida 32604

10. Please retain a file copy of your completed survey along with the cover letter, instructions and definitions. Plants will be contacted as necessary to verify responses.

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KUPPERS CO INC
7540 NW ST HELENS RD
PORTLAND OR
97229

Plant Code/Subcat._____
Date Response Rec'd._____

GUM AND WOOD CHEMICALS MANUFACTURING POINT SOURCE CATEGORY

(SIC 2861)

Note: Carefully read Instructions and Definition of Terms before responding to these questions.

A. GENERAL INFORMATION

(1) Plant/firm name _____

(2) Plant Location _____

(3) Plant mailing address _____

(4) Name of Respondent _____ Title _____

(5) Address of Respondent _____

(6) Telephone number of Respondent _____

B. PLANT OPERATIONS

(7) [] If this plant does no manufacturing on site (i.e., a sales office, warehouse, etc.), do not complete the remainder of this survey. Check this block and return the entire form in the enclosed envelope.

(8) [] If this plant manufactures only char and charcoal briquets, check this block and answer questions 64 or 65, then return the entire form in the enclosed envelope.

Has this plant filled out another industry survey for the EPA Effluent Guidelines Division?
(9) [] Yes
(10) [] No
If yes, in what category was the questionnaire submitted? (11)_____

Indicate the type of operations at this site:
(12) [] Only Gum and Wood Chemicals (SIC 2861) are produced at this site.
(13) [] This plant produces gum and wood chemicals (SIC 2861), but also, produces other classes of products. (Specify)_____

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KOPPERS

Interoffice Correspondence

To P. W. Guth

From Organic Materials Division

Location Northwest Plant

Location Manufacturing Services

Subject EPA EFFLUENT FORM

Date January 9, 1978

Attached for your file is a copy of the EPA effluent guideline questionnaire. The original has been sent directly to EPA.

JMA

Jon M. Anderson

JMA:em
Attachment

cc: A. W. Lawrence (With Attachment)
R. L. Shannon " "

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K-5 REV 2

308 LETTER QUESTIONNAIRE FOR THE ORGANIC CHEMICALS AND PLASTICS AND SYNTHETICS MANUFACTURING POINT SOURCE CATEGORIES

PART I GENERAL INFORMATION AND PRODUCT-PROCESS INFORMATION

To be returned within 60 days from date of receipt to:

Robert B. Schaffer, Director
ATTN: P. D. Fahrenthold
Effluent Guidelines Division
U.S. EPA (WH-552)
Washington, D. C. 20460

1. Name of Corporation

Koppers Company, Inc.

2. Address of Corporation Headquarters

Street: Koppers Building

City: Pittsburgh

State: Pa. Zip Code: 15219

3. Name of Plant

Northwest

4. Address of Plant

Street: 7540 N.W. St. Helens Road

City: Portland

State: Oregon Zip Code: 97229

5. Name(s) of personnel to be contacted for information pertaining to this data collection portfolio

Name and Title	Telephone	Location (plant or Corp.)
Jon M. Anderson, Coordinator-Environmental Control	412-227-2329	Corp.

Pages not included do not apply.

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Corporation Koppers Company, Inc.
Plant Northwest
City Portland State Oregon

6. Plant NPDES Permit Number 2180-J

Date of Expiration November 30, 1979

If No Permit, Application Number

Date of Application

7. This question consists of four parts, some or all of which may apply to your facility. The parts of the question are labeled i through iv, corresponding to questions 7a, 7b, 7c and 7d. Where questions relate to Lists 1, 2, or 3 an update of the previously submitted portfolio (October 18, 1976) is intended. The heading beside the question and the Instructions provide more detail regarding the intent of the questions.

Has your plant (since October 18, 1976)

i. Added new production processes for chemicals on Lists 1, 2, 3, or does it use or produce either as a product, by-product or intermediate any chemical on List 4.

ii. Changed design production capacity or average daily production by means of debottlenecking, removal/replacement of process equipment, etc.

iii. Discontinued production process(es) that is(are) on Lists 1, 2 or 3 (see Part I, Pages 7, 8 and 9).

iv. Installed any new process modifications or in-plant controls which affect raw waste characteristics.

[x] None Apply. Proceed directly to Part II.

[ ] Some or all Apply. Continue through Part I.

[ ] The data submitted in response to the October 18, 1976, request substantially represents current plant operations. Proceed to Question 1, Part II.

Production inactive at this facility during this period.
Therefore, no process wastewater.

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NWT 001381

LIST 1

PLASTICS & SYNTHETICS

ABS/SAN
Acrylic Resins
Alkyds and Unsaturated Polyester Resins
Cellulose Acetate Fiber/Resin
Cellulose Derivatives
Cellulose Nitrate
Cellophane
Epoxy Resins
Ethylene-Vinyl Acetate Copolymers
Fluorocarbon Polymers
Melamine Resins
Nylon Resins/Fiber
Phenolic Resins
Polyamides
Polyester Resin/Fiber
Polyethylene
Polypropylene Resin/Fiber
Polystyrene
Polyurethane Resins
Polyvinyl Acetate
Polyvinyl Chloride
Rayon
Silicones
Urea Resins

LIST 2

ORGANIC CHEMICALS

Acetaldehyde
Acetic acid
Acetone
Acetylene
Acrylates (includes acrylic acid, methacrylic acid, and esters)
Acrylonitrile
Adiponitrile
Aniline
Benzene
Benzoic acid
Bisphenol A
Caprolactam
Chloromethanes (Methyl Chloride, Methylene Chloride, Chloroform, and Carbon tetrachloride)
Citronellol
Coal Tar
Cumene
Cyclohexane
Dimethyl terephthalate
Diphenylamine
Ethyl acetate
Ethyl benzene
Ethylene
Ethylene dichloride
Ethylene glycol
Ethylene oxide
Formaldehyde
Hexamethylenediamine
Isobutylene
Isopropanol
Maleic Anhydride
Methanol
meta-Xylene
Methyl amines (including mono-, di- and tri-methyl amine)
Methyl ethyl ketone
Methyl salicylate
ortho-Nitroaniline
ortho-Xylene
Oxo-Chemicals
para-Aminophenol
para-Cresol
para-Nitroaniline
para-Xylene
Phenol
Phthalic anhydride
Plasticizers (esters of phthalic acid)
Propylene
sec-Butyl-alcohol
Styrene
Tannic acid
Terephthalic acid
Tetraethyl lead
Toluene
Vinyl acetate
Vinyl chloride

NWT 001383

LIST 3

ORGANIC CHEMICALS

Acetic acid salts, Total
Acetic anhydride
α-Chlorotoluene (Benzyl chloride)
Adipic acid
2-Aminoethanol (Monoethanolamine)
Aspirin
Benzyl alcohol
Benzoyl peroxide
Benzoic acid salts: Sodium Benzoate, technical and U.S.P. grades
Castor Oil, Ethoxylated
Choline chloride (All Grades)
Cresols, Total
Cyclohexanone
Dichlorodifluoromethane
Diethylene glycol
2-Dimethylaminoethanol
Dipropylene glycol
Dodecyl mercaptans
Ethanolamines, Total
Ethyl alcohol, Synthetic
2-Ethylhexanoic acid (α-Ethylcaproic Acid)
Epoxidized esters, Total
Fumaric acid
Glutamic acid, Monosodium salt
Hexamethylenetetramine, Technical grade
2,2-Iminodiethanol (Diethanolamine)
4,4-Isopropylindenediphenol (Bisphenol A)
2-Methoxyethanol (Ethylene Glycol Monomethyl Ether)
Methyl bromide
N-Butyl Alcohols (N-Propyl carbinol)
Nitrobenzene
5-Nitro-ortho-toluenesulfonic acid (SO_3H-1)
ortho-Dichlorobenzene
para-Nitrophenol and Sodium salt
Pentachlorophenol (PCP)
Pentaerythritol
Propionic acid
Propylene glycol (1,2-Propanediol)
Propylene oxide
Salicylic acid
Tetrachloroethylene (Perchloroethylene)
Trichloroethylene
Trichlorofluoromethane
Triethylene glycol
Xylenesulfonic acid, Sodium Salt

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NWT 001384

Corporation Koppers Company, Inc.
Plant Northwest
City Portland State Oregon

PART II

INTRODUCTION

The objective of this part is to obtain information related to the analysis of wastewaters, and the detection, quantification and treatment of the 129 priority pollutants named on List 4. The logic flow of the questions in this section is as follows:

(1) Identify which wastewater streams have been analyzed for the 129 priority pollutants.

(2) Report the analytical results for those streams where compounds on List 4 have been detected.

(3) Describe all efforts of any scale directed toward the removal of one or more compounds on List 4 by a wastewater treatment or in-process control system since October 1972.

---

1. The identification of compounds on List 4 has been categorized into three areas as follows: (please check the appropriate box)

[X] a. No analyses have been conducted for any of the compounds on List 4. Please go to Question 4 of Part II.

[ ] b. Wastewaters have been analyzed for some of the compounds on List 4. Please go to Question 2 of Part II.

[ ] c. Wastewaters have been analyzed for some of the compounds on List 4 (e.g., metals, etc.) and part of the data was reported in the previous Section 308 questionnaire (October 18, 1976). Those priority pollutants previously reported are as follows:

_____	_____	_____
_____	_____	_____
_____	_____	_____

Please go to Question 2 of Part II and report on those not included in the previous questionnaire. If there are no additional List 4 pollutants to those listed above, please go to Question 4 of Part II.

LIST 4

129 PRIORITY POLLUTANTS

Compound Name	Compound Name
acenaphthene	4-chlorophenyl phenyl ether
acrolein	4-bromophenyl phenyl ether
acrylonitrile	bis(2-chloroisopropyl) ether
benzene	bis(2-chloroethoxy) methane
benzidine	methylene chloride (dichloromethane)
carbon tetrachloride (tetrachloromethane)	methyl chloride (chloromethane)
chlorobenzene	methyl bromide (bromomethane)
1,2,4-trichlorobenzene	bromoform (tribromomethane)
hexachlorobenzene	dichlorobromomethane
1,2-dichloroethane	trichlorofluoromethane
1,1,1-trichloroethane	dichlorodifluoromethane
hexachloroethane	chlorodibromomethane
1,1-dichloroethane	hexachlorobutadiene
1,1,2-trichloroethane	hexachlorocyclopentadiene
1,1,2,2-tetrachloroethane	isophorone
chloroethane	naphthalene
bis(chloromethyl) ether	nitrobenzene
bis(2-chloroethyl) ether	2-nitrophenol
2-chloroethyl vinyl ether (mixed)	4-nitrophenol
2-chloronaphthalene	2,4-dinitrophenol
2,4,6-trichlorophenol	4,6-dinitro-o-cresol
chloroform (trichloromethane)	N-nitrosodimethylamine
2-chlorophenol	N-nitrosodiphenylamine
1,2-dichlorobenzene	pentachlorophenol
1,3-dichlorobenzene	phenol
1,4-dichlorobenzene	bis(2-ethylhexyl) phthalate
3,3'-dichlorobenzidine	butyl benzyl phthalate
1,1-dichloroethylene	di-n-butyl phthalate
1,2-trans-dichloroethylene	di-n-octyl phthalate
2,4-dichlorophenol	diethyl phthalate
1,2-dichloropropane	dimethyl phthalate
1,2-dichloropropylene (1,3-dichloropropene)	benzo(α)anthracene (1,2-benzanthracene)
2,4-dimethylphenol	benzo (α) pyrene (3,4-benzopyrene)
2,4-dinitrotoluene	3,4-benzofluoranthene
2,6-dinitrotoluene	benzo(k)fluoranthane (11,12-benzofluoranthene)
1,2-diphenylhydrazine	chrysene
ethylbenzene	acenaphthylene
fluoranthene	anthracene
	benzo(ghi)perylene (1,12-benzoperylene)

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NWT 001386

LIST 4

129 PRIORITY POLLUTANTS
(Continued)

Compound Name	Compound Name
fluorene	Antimony (Total)
phenanthrene	Arsenic (Total)
dibenzo (a,h) anthracene (1,2,5,6-dibenzanthracene)	Asbestos (Fibrous)
indeno (1,2,3-cd)pyrene (2,3-o-phenylenepyrene)	Beryllium (Total)
pyrene	Cadmium (Total)
tetrachloroethylene	Chromium (Total)
toluene	Copper (Total)
trichloroethylene	Cyanide (Total)
vinyl chloride (chloroethylene)	Lead (Total)
aldrin	Mercury (Total)
dieldrin	Nickel (Total)
chlordane (technical mixture & metabolites)	Selenium (Total)
4,4'-DDT	Silver (Total)
4,4'-DDE (p,p'-DDX)	Thallium (Total)
4,4'-DDD (p,p'-TDE)	Zinc (Total)
a-endosulfan-Alpha	2,3,7,8- tetrachlorodibenzo-p-dioxin (TCDD)
b-endosulfan-Beta	
endosulfan sulfate	
endrin	
endrin aldehyde	
heptachlor	
heptachlor epoxide	
a-BHC-Alpha	
b-BHC-Beta	
r-BHC (lindane)-Gamma	
g-BHC-Delta	
PCB-1242 (Arochlor 1242)	
PCB-1254 (Arochlor 1254)	
PCB-1221 (Arochlor 1221)	
PCB-1232 (Arochlor 1232)	
PCB-1248 (Arochlor 1248)	
PCB-1260 (Arochlor 1260)	
PCB-1016 (Arochlor 1016)	
Toxaphene	

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NWT 001387

Corporation Koppers Company, Inc.
Plant Northwest
City Portland State Oregon

3. Describe the sampling and analytical techniques used for priority pollutants.

   . Was/is EPA protocol used for the sampling?_____

   . Was/is the EPA protocol used for the analysis?_____

   . Describe other techniques by pollutant parameter. (attach additional material if clarification of the technique is desirable).

Pollutant	Technique

4. If you have not analyzed for all of the 129 priority pollutants in various waters and wastewaters in your plant, please answer the following questions for those pollutants for which analyses have not been made.

   A. Do you have reason to believe or would you suspect that any of the 129 priority pollutants are present in your plant's raw wastewater or treatment plant effluent as a result of your manufacturing operations or as a result of the presence of your facility at your site? (Do not list suspected presence in intake waters as a source of priority pollutants in answering this question).

   [ ] No - Go to Question 6.

   [X] Yes - Continue below.

   B. If the answer to 4A is yes, please list the priority pollutants you would suspect to be present and the suspected product source.

Pollutant	Suspected Source
phenol	present in raw material
cyanide	present in raw material

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NWT 001388

Corporation Koppers Company, Inc.
Plant Northwest
City Portland State Oregon

Questions 5 through 8 ask for information on the treatment and research on the treatment of the List 4 priority pollutants. If the information requested was supplied in the previous Section 308 questionnaire, in all cases, please name the priority pollutant and state that the information was already submitted.

---

5. Have treatment facilities (end-of-pipe or in-plant control) been installed specifically for removal of any of the priority pollutants (List 4)?

[X] No - Go to Question 7.

[ ] Yes - Continue below.

If the answer is yes, please list the treatment unit process or processes, the pollutant(s) removed and whether installed in-plant or end-of-pipe.

- If in-plant, list the product on which installed.
- Attach data, flow sheets and drawings as appropriate to define the design criteria and process effectiveness (e.g., removal efficiency, etc.). If this was supplied in the previous questionnaire, please state so after listing the pollutant(s).

Treatment Unit Process(es)	Pollutants removed	Indicate end-of-pipe or specific product on which installed

6. Do you have any data on the removal of specific priority pollutants by existing end-of-pipe treatment facilities or in-process pollutant control processes which were originally designed for removal of conventional pollutant parameters? (e.g., BOD_5, COD, NH, TSS, etc.)

[X] No

[ ] Yes

If answer is yes, please indicate the treatment process, the priority pollutant(s) studied, the design criteria, and the removal efficiency by the process. Attach flow sheets or other data as appropriate to define.

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NWT 001389

Corporation Koppers Company, Inc.
Plant Northwest
City Portland State Oregon

7. Have you conducted research and/or bench-scale or pilot-scale programs for studying the treatability or removal of one or more of the 129 priority pollutants exclusive of heavy metals?

[X] No

[ ] Yes

If the answer is yes, please describe the studies conducted, the priority pollutants examined, and the results of the studies. (attach extra pages if necessary, or provide a copy of the study to complete your answer).

8. Do you have data on the adsorption capacity of activated carbon for specific process wastewaters resulting from the production of any of the compounds presented in Lists 1, 2, 3 or 4.

[X] No

[ ] Yes

If yes, list the product/process effluents, the type of carbon tested (granules or powdered) and the adsorption capacity.

Product/Process	Activated Carbon Tested	Adsorption Capacity* (grams adsorbed/ gram carbon)

*Specify adsorbate basis (e.g., COD, TOC, phenol, butadiene, PVA) and concentration ranges evaluated.

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NWT 001390

Corporation Koppers Company, Inc.
Plant Northwest
City Portland State Oregon

PART III - TREATMENT INFORMATION

PLEASE READ THE INSTRUCTIONS FURNISHED PRIOR TO PROCEEDING TO THIS PART.

1. Even though you may not now be discharging to a municipal sewer system, is there an adequate municipal trunk sewer close by to which you could discharge?

   [ ] No

   [ ] Yes - Distance from production facilities _____ ft.

   [X] Already discharging to a municipal system

2. If the recent data from your plant production or wastewater treatment plant operation is, in your opinion, more representative than that submitted in the previous questionnaire, you may submit new data (since October 18, 1976) on Tables A and C attached, being careful to:

   A. Include the beginning and end dates of the period covered.

   B. Show average daily production for each product corresponding to the time period that treatment plant and raw waste parameters are reported in Tables A and C. You may use any of the tables in Part I, Question 7 to report production data.

   C. If raw waste is discharged without treatment, describe discharge point (e.g., municipal sewer, river, etc.).

   D. Indicate where (location) the samples were taken which generated the analytical data presented in Tables A and C.

   E. Continue responding to the questions in this part.

3. Does your plant operate an activated sludge process for treatment of either a single process wastewater effluent or a combination of two or more product/process wastewater effluents?

   [X] No - It is not necessary to complete the remainder of Part III

   [ ] Yes - (1) If you reported data from your plant in the previous portfolio, dated October 18, 1976, please continue below with Parts A & B.
   (2) If you commenced operation or modified an activated sludge plant since October 18, 1976, and did not report on it or its operation, please go to Question 4.

   Certain areas of the previous question portfolio dated October 18, 1976, were not adequate to provide the necessary information for an effective performance evaluation of the existing wastewater treatment plants. The performance evaluation is essential in determining the cost of waste treatment as a function of plant operating criteria, external factors such as temperature, etc.

NWT 001391

XEROX COPY

FORM WPC-19

MEMBERS OF THE AUTHORITY
HAROLD WENDEL, CHAIRMAN, PORTLAND
RICHARD H. WILCOX, PORTLAND
S. L. WHEELER, SALEM
[illegible]HAN P. MEIERJURGEN, BEAVERTON
D. A. McPHILLIPS, McMINNVILLE
EDWARD C. HARMS, JR., SPRINGFIELD
JOHN P. AMACHER, WINCHESTER
KENNETH H. SPIES, SECRETARY
PORTLAND

STATE OF OREGON
OREGON STATE SANITARY AUTHORITY
A DIVISION OF THE OREGON STATE BOARD OF HEALTH
STATE OFFICE BUILDING
1400 S. W. 5TH AVENUE
PORTLAND, OREGON 97201

MAILING ADDRESS:
P. O. BOX 231
PORTLAND, OREGON 97207

TELEPHONE:
AREA CODE 503
226-2161

January 11, 1966

Mr. Robert C. Shannon
Kopper's Company, Inc.
1250 Kopper's Building
Pittsburg, Pennsylvania 15219

Re: IW 3-0 Chemical & Petroleum
Kopper's Co., Inc., Portland

Dear Mr. Shannon:

Reference is made to our meeting on December 16, 1965, with you and Mr. Fisher to discuss informally possible methods of disposing of the sewage and industrial wastes from your proposed Northwest Tar Plant in Portland, Oregon.

Messrs. B. M. Johnson and C. A. Ayer of this office inspected the proposed leaching site and determined that tentative approval could be given to proposed methods of disposal of your wastes subject to the following conditions:

1) That domestic sewage be disposed of temporarily by means of septic tanks and tile fields or dry wells which meet the requirements of the City of Portland Bureau of Health.

2) That disposal of the approximately 1500 GPD of industrial effluent onto a 20,000 sq.ft. leaching bed, with the provision of monitoring wells, would be acceptable as a temporary measure until a municipal sewer is made available to serve the area, unless the leaching bed method of disposal is determined to be unsatisfactory before a sewer is available, in which case alternate means of disposal would have to be provided immediately or production curtailed.

3) That both sanitary sewage and industrial waste be discharged to the city sewer, when it is made available, after pretreatment of the industrial waste as required by the city and this office.

This letter does not constitute approval of your proposed installation inasmuch as we would need to receive a formal proposal from you in writing requesting approval of specified disposal procedures for specified waste discharges before taking formal action regarding it.

We will also need to receive construction drawings for the proposed leaching facility including monitoring wells, and agreement by you to provide routine monitoring of the leaching bed drainage and submission of monthly reports to this office.

Very truly yours,

Ely J. Weathersbee
Deputy State Sanitary Engineer

EJW:lb

cc: City of Portland, Bureau of Health
cc: Mr. Clarence W. Fisher
Koppers Co.
Monroeville, Pa.

REPORT OF INDUSTRIAL WASTE WATER DISPOSAL (cont.)	PLANT NAME	SHEET 4 OF 4

SECTION IV - WATER ANALYSES

Complete one of these sheets for each separated waste discharge from the plant (See instructions, item 14, Part B)

14A. NAME OF SEPARATED WASTE DISCHARGE	B. TYPE OF DISCHARGE	C. NO. OF BATCH DISCHARGES PER DAY	D. AVERAGE GALLONS PER BATCH
Surface drainage	(1) [✓] Continuous (2) [ ] Batch	NA	NA

15. EQUIVALENT PRODUCTION UNIT AND AMOUNT PER OPERATING DAY OF PRODUCT ASSOCIATED WITH THIS DISCHARGE: NA

16. POINT OF DISCHARGE	16D. LATITUDE	17A. IF GROUND DISCHARGE, SPECIFY TYPE	17B. LOCATION OF DISCHARGE POINT TO SURFACE WATER BODY
A [ ] Sewer B [✓] Surface Water Body C [ ] Ground	16E. LONGITUDE	(1) [ ] Irrigation (2) [ ] Injection Well (3) [ ] Pond (4) [ ] Other (Specify):	(1) DISTANCE FROM SHORE/BANK: 0 ft. (2) DEPTH BELOW SURFACE: 0 ft.

18. EFFLUENT SAMPLE COLLECTION AND ANALYSIS	A. SOURCE	B. FREQUENCY	C. ANALYSIS BY	D. SAMPLE DATE(S)
	(1) Grab Sample	(1) Daily	(1) In plant	(1)
	(2) Avg. Grab Sample	(2) Weekly	(2) Outside Lab	(2)
	(3) Composite Sample	(3) Monthly	(3) Gov't Agency (Name)	(3)
	(4) Continuous	(4) Other		(4)

19. WATER QUALITY INDICATORS (where applicable)

ITEM	A. INTAKE WATER BEFORE TREATMENT (1)	A. INTAKE WATER AFTER TREATMENT (2)	B. WASTE WATER EFFLUENT BEFORE TREATMENT (1)	B. WASTE WATER EFFLUENT AFTER TREATMENT (2)	ITEM	A. INTAKE WATER BEFORE TREATMENT (1)	A. INTAKE WATER AFTER TREATMENT (2)	B. WASTE WATER EFFLUENT BEFORE TREATMENT (1)	B. WASTE WATER EFFLUENT AFTER TREATMENT (2)
a. FLOW (gal./day)					f. CHEMICAL ANALYSIS (cont.)				
b. pH					(16) NO_2 (as N)				
c. TEMPERATURE (°F)					(17) ORGANIC N				
d. COLOR (units)					(18) KJELDAHL				
e. SPECIFIC CONDUCTANCE (μmhos/cm²)					(19) PHOSPHORUS-ORTHO (as P)				
f. CHEMICAL ANALYSIS (mg/L)					(20) PHOSPHORUS-TOTAL (as P)				
(1) TOTAL SOLIDS					(21) Cr				
(2) TOTAL VOLATILE SOLIDS					(22) Cu				
(3) TOTAL SUSPENDED SOLIDS					(23) Fe				
(4) TOTAL DISSOLVED SOLIDS					(24) Cd				
(5) ACIDITY (as $CaCO_3$)					(25) Pb				
(6) ALKALINITY (as $CaCO_3$)					(26) Mn				
(7) 5-DAY BOD					(27) Zn				
(8) COD					(28) F				
(9) OIL AND GREASE					g. OTHER CHARACTERISTICS				
(10) CHLORIDE					(1) As				
(11) SULFATE					(2) Hg				
(12) SULFIDE					(3) 29				
(13) PHENOLS					(4) 30				
(14) NH_3 (as N)					(5) 31				
(15) NO_3 (as N)					(6) 32				

20. CODED DESCRIPTION OF WASTE TREATMENT PROCESSES (Enter code numbers from Appendix A of instructions, in the order in which treatment steps occur.)

21. REMARKS

Paul Cuth

Northwest Plant

Samples

K. R. Caldwell

Pittsburgh, Pa.

April 22, 1971

I have requested Clarence Fisher to send you sample bottles and preparation instructions for samples of:

1. Three day composite of water to [redacted] irrigation.

2. Three day composite of water in wells at [redacted] irrigation.

3. Three day composite of water from sump in tank farm.

Also as soon as you determine what the limits or specification of water that will be permitted to be discharged in the sanitary district, let me know.

I assume you have checked with C. C. Pratt on analysis methods.

KRC/mak

cc: C. W. Fisher
J. Little
D. L. O'Dell/Attn. R. L. Shannon
C. C. Pratt

File in book NW

SHEET 1 OF 4

U.S. DEPARTMENT OF THE INTERIOR
FEDERAL WATER QUALITY ADMINISTRATION
WASHINGTON, D.C. 20242

REPORT OF INDUSTRIAL WASTE WATER DISPOSAL for Year ending 1970

FOR FWQA USE ONLY

SECTION I - IDENTIFICATION

1. PLANT NAME, LOCATION, AND MAILING ADDRESS (Include ZIP code)
Koppers Co. Inc.
7540 N.W. St. Helens Rd
Portland, Oregon 97229

2. NAME AND MAILING ADDRESS OF COMPANY HEADQUARTERS OR PARENT CORPORATION
Koppers Co. Inc.
Koppers Bld.
Pittsburgh Penna. 15219

3. NAME, TITLE, AND SIGNATURE OF OFFICIAL FORWARDING THIS REPORT
Paul W. Huth Plant Superintendent

TELEPHONE NO. 286-3681

4. DATE OF REPORT 4-23-71

5A. PRINCIPAL PRODUCTS OR PROCESSES OF THIS PLANT
coal tar pitches & creosote

5B. S.I.C. CODE(S) PRIMARY (1) OTHER (2) (3)

6. PLANT OPERATION
A [✓] YEAR-ROUND
B [ ] SEASONAL
If seasonal operation give months: FROM (1) TO (2)

C. HOURS PER WEEK 120

D. NO. WEEKS WORKED 1 SHIFT (1) 2 SHIFTS (2) 3 SHIFTS (3) 50

E. NUMBER OF PRODUCTION EMPLOYEES (1) 10-19 (2) 20-49 (3) 50-99 (4) 100-499 (5) 500-1000 (6) OVER 1000

SECTION II - WATER SOURCES AND WASTE DISCHARGE POINTS

7. WATER INTAKE

NAME, TYPE OF SOURCE	PURPOSE (Check items) Process (1)	Boiler Feed (2)	Sanitary Service (3)	Noncontact Cooling (4)
A. PUBLIC WATER SYSTEM (Give name) Bureau of Water Works Portland, Oregon (a) [✓] Publicly owned (b) [ ] Privately owned		✓	✓	✓
B. SURFACE WATER (Self-supplied, give name)				
C. GROUND WATER (Self-supplied, give type)				

8. WASTE DISCHARGE

NAME, TYPE OF DISCHARGE POINT	TYPE OF DISCHARGE: Industrial (Includes boiler feed) Treated (1)	Not Treated (2)	Sanitary Sewage Treated (3)	Not Treated (4)	Noncontact Cooling (5)
A. PUBLIC SEWER (Give name) (a) [ ] Publicly owned (b) [ ] Privately owned (c) [ ] Check if service charge					
B. SURFACE WATER (Give name) Williamette River	✓	✓			✓
C. GROUND (Give type) Septic Tank Soil Percolation		✓		✓	

9. IF ITEM 8B(5) ABOVE IS CHECKED, GIVE: A. SOURCE WATER TEMP. 50°F B. WASTE WATER TEMP. 80°F C. EFFLUENT VOL. (gal./day) 14000 D. RECIRCULATION INVOLVED? (See instr.) (1) [ ] YES (2) [✓] NO

If all discharge is to a public sewer, see instructions for "NOTE" following Item 9 before completing the rest of this form.

SECTION III - WASTE TREATMENT FACILITIES COSTS & MANPOWER REQUIREMENTS

10. GIVE APPROXIMATE EXPENDITURES FOR EXISTING WASTE WATER TREATMENT FACILITIES AND/OR IN-PLANT CONTROL SINCE 1948.
(Under type, enter code numbers from Appendix A of instructions which correspond to the most advanced degrees of treatment)

ITEM	(1) TYPE	(2) YEAR PLACED IN OPERATION	(3) ORIGINAL COST IN THOUSANDS
A. ORIGINAL FACILITY	101-105-401-601-603	1966	
B. ADDITIONS/IMPROVEMENTS, (See instructions) (1)			
(2)			
(3)			
C. UNDER CONSTRUCTION			

11. LIST NUMBER OF EMPLOYEES IN EACH CATEGORY BELOW WHO SPEND MORE THAN 40% OF THEIR TIME IN WATER POLLUTION CONTROL WORK. See Appendix B, instructions for definitions of categories.

PROFESSIONAL/TECHNICAL	NO.	OPERATIONS/MAINTENANCE	NO.	OTHER	NO.
A. SUPERINTENDENT		E. SENIOR OPERATOR/FOREMAN		K. UNSKILLED	
B. ENGINEER/SAN. ENGR.		G. EQUIPMENT OPERATOR		L. CLERICAL	
C. CHEMIST		H. INSTRUMENT REPAIRMAN		M.	
D. BIOLOGIST		I. MAINTENANCE MAN		N.	
E. LAB TECHNICAL		J. ATTENDANT		O.	

12. EXPENDITURES (thousands of dollars) AND MANPOWER LEVELS FOR WASTE TREATMENT OR CONTROL FOR PAST YEAR AND ESTIMATES FOR NEXT FIVE CALENDAR YEARS.

ITEM	PAST YEAR (1)	YEAR (2)	YEAR (3)	YEAR (4)	YEAR (5)	YEAR (6)	FIVE YEAR PROJECTED TOTAL (7)
A. FACILITIES AND/OR IN-PLANT CONTROL	0						
B. OPERATION/MAINTENANCE	0.5						
C. NUMBER OF PERSONNEL (See instructions)	0						
D. TOTAL MAN-YEARS	12.6						

13. REMARKS

NWT 001396

REPORT OF INDUSTRIAL WASTE WATER DISPOSAL (cont.)

PLANT NAME: Koppers Co Inc. (Northwest)

SHEET 2 OF 4

SECTION IV - WATER ANALYSES

Complete one of these sheets for each separated waste discharge from the plant (See Instructions, item 14, Part II)

14A. NAME OF SEPARATED WASTE DISCHARGE: water separated from oils

14B. TYPE OF DISCHARGE: (1) [ ] Continuous (2) [X] Batch

14C. NO. OF BATCH DISCHARGES PER DAY: 1 per wk

14D. AVERAGE GALLONS PER BATCH: 10000

15. EQUIVALENT PRODUCTION UNIT AND AMOUNT PER OPERATING DAY FOR PRODUCT ASSOCIATED WITH THIS DISCHARGE: 1000 gals coal tar input — 30

16A. POINT OF DISCHARGE: A [ ] Sewer; B [ ] Surface Water Body; C [X] Ground

16C. LATITUDE: NA

16D. LONGITUDE: NA

17A. METHOD OF DISCHARGE: (1) [ ] Irrigation (2) [ ] Injection Well (3) [X] Pond (4) [ ] Other (Specify):

17B. LOCATION OF DISCHARGE POINT TO SURFACE WATER BODY: (1) DISTANCE FROM SHORE/BANK: NA ft. (2) DEPTH BELOW SURFACE: NA ft.

18. EFFLUENT SAMPLE COLLECTION AND ANALYSIS

A. SOURCE	B. FREQUENCY	C. ANALYSIS BY	D. SAMPLE DATE(S)
[X] (1) Grab Sample	(1) Daily	[X] (1) In-plant	(1)
[ ] (2) Avg. Grab Sample	(2) Weekly	(2) Outside Lab	(2)
[ ] (3) Composite Sample	[X] (3) Monthly	(3) Gov't Agency (Name)	(3)
[ ] (4) Continuous	(4) Other		(4)

19. WATER QUALITY INDICATORS (where applicable)

ITEM	A. INTAKE WATER BEFORE TREATMENT (1)	A. INTAKE WATER AFTER TREATMENT (2)	B. WASTE WATER EFFLUENT BEFORE TREATMENT (1)	B. WASTE WATER EFFLUENT AFTER TREATMENT (2)
a. FLOW (gal./day)				
b. pH				
c. TEMPERATURE (°F)				60° F
d. COLOR (units)				
e. SPECIFIC CONDUCTANCE (μmhos/cm2)				
f. CHEMICAL ANALYSIS (mg/l)				
(1) TOTAL SOLIDS				
(2) TOTAL VOLATILE SOLIDS				
(3) TOTAL SUSPENDED SOLIDS				
(4) TOTAL DISSOLVED SOLIDS				
(5) ACIDITY (as $CaCO_3$)				
(6) ALKALINITY (as $CaCO_3$)				
(7) 5-DAY BOD				
(8) COD				
(9) OIL AND GREASE				O
(10) CHLORIDE				
(11) SULFATE				
(12) SULFIDE				O
(13) PHENOLS				<0.1 PPM
(14) NH_3 (as N)				
(15) NO_3 (as N)				

ITEM	A. INTAKE WATER BEFORE TREATMENT (1)	A. INTAKE WATER AFTER TREATMENT (2)	B. WASTE WATER EFFLUENT BEFORE TREATMENT (1)	B. WASTE WATER EFFLUENT AFTER TREATMENT (2)
f. CHEMICAL ANALYSIS (cont.)				
(16) NO_2 (as N)				
(17) ORGANIC N				
(18) PHENOLS				
(19) PHOSPHORUS (ORTHO) (as P)				
(20) PHOSPHORUS (TOTAL) (as P)				
(21) Cr				
(22) Cu				
(23) Fe				
(24) Cd				
(25) Pb				
(26) Mn				
(27) Zn				
(28) F				
g. OTHER CHARACTERISTICS				
1) As				
2) Hg				
3) 29				
4) 30				
5) 31				
6) 32				

20. CODED DESCRIPTION OF WASTE TREATMENT PROCESSES (Enter code numbers from Appendix A of Instructions, in the order in which treatment steps occur.)

21. REMARKS

PCQA-152 (Rev. 4-72) (Page 2)

FORM APPROVED

NWT 001397

PROPOSED WASTE DISCHARGE PERMIT PROVISIONS

Prepared by the Staff of the
DEPARTMENT OF ENVIRONMENTAL QUALITY

PRELIMINARY PROPOSAL

Recommended Expiration Date: 12-31-71
Page 1 of 3

APPLICANT:

Northwest Natural Gas Company
123 N. W. Flanders Street
Portland, Oregon 97209

REFERENCE INFORMATION

File Number: 62231
Appl. No.: 1124 Received: 9-9-70
Major Bn: Willamette Minor Bn:
Receiving Stream: Willamette River
River Mile:
County: Multnomah

Until such time as this permit expires or is modified or revoked, Northwest Natural Gas Company is herewith permitted to:

a. Extend an existing cooling water line so that it will be submerged below low water level of the Willamette River.
b. Discharge uncontaminated cooling waters to the Willamette River for the company's natural gas plant.

All of the above activities must be carried out in conformance with the requirements, limitations, and conditions which follow.

All other waste discharges are prohibited.

1. Prior to March 31, 1971, the permittee shall complete all necessary negotiations with the City of Portland and shall submit to the Department of Environmental Quality evidence of agreement together with a schedule for completing construction of necessary facilities so that all wastes acceptable, or that can be made acceptable by pretreatment, be discharged to the city's sanitary sewer. These facilities shall be completed by September 1, 1971 such that the wastes can be discharged to the city's sanitary sewer system within 30 days after notification of the completion of such sewer in the area. Plans for collection, pretreatment and disposal facilities shall be submitted to the Department of Environmental Quality (and the city) for review and approval prior to construction.

2. For all wastes which are not acceptable for discharge to the city system, the permittee shall construct and place into operation before September 1, 1971 such facilities as are necessary to provide the highest and best treatment in accordance with the following requirements:

   a. Prior to March 31, 1971, detailed engineering plans and specifications shall be submitted to the Department of Environmental Quality for review and approval in writing prior to construction as required by ORS 449.395.

   b. All facilities shall be constructed in accordance with the approved plans.

   c. The Department of Environmental Quality shall be notified in writing when the facilities are complete and ready to be placed in operation.

3. Prior to March 31, 1971, the permittee shall submit to the Department of Environmental Quality a program and time schedule for the continuation of a land fill which will eliminate the two existing waste disposal ponds.

4. All plant processes and all existing waste collection, treatment, and disposal facilities shall be operated and maintained at all times at maximum efficiency and in a manner which will minimize waste discharges.

5. Sanitary wastes shall be disposed of to a septic tank and drainfield system which has been installed in accordance with the recommendations of the Oregon State Board of Health and the local county health department or by other approved means.

6. All solids which are removed from the waste shall be utilized or disposed of in a manner which will prevent their entry into the waters of the state and such that health hazards and nuisance conditions are not created.

7. No petroleum base products or other substances which might cause the Water Quality Standards of the State of Oregon to be violated shall be discharged or otherwise allowed to reach any of the waters of the state.

8. In the event the permittee is temporarily unable to comply with any of the conditions of this permit, due to breakdown of equipment or other cause, the permittee shall immediately notify the Department of Environmental Quality of the breakdown or cause, and the steps taken to correct the problem and prevent its recurrence.

9. Authorized representatives of the Department of Environmental Quality shall be permitted access to the premises of all facilities owned and operated by the permittee at all reasonable times for the purpose of making inspections, surveys, collecting samples, obtaining data, and carrying out other necessary functions related to this permit.

10. Whenever a significant change in the character of the waste is anticipated or whenever a change in the waste to be discharged in excess of the conditions of this permit is anticipated, a new application shall be submitted together with the necessary reports, plans, and specifications for the proposed changes. No change shall be made until plans are approved and a new permit issued.

11. In the event that a change in the conditions of the receiving waters results in a dangerous degree of pollution, the Department of Environmental Quality may specify additional conditions to this permit.

12. This permit is subject to termination if the Department of Environmental Quality finds:

    a. That it was procured by misrepresentation of any material fact or by lack of full disclosure in the application.

PROPOSED WASTE DISCHARGE PERMIT PROVISIONS

Prepared by the Staff of the
DEPARTMENT OF ENVIRONMENTAL QUALITY

Recom. Expir. Date: 12-31-71
Page 3 of 3

b. That there has been a violation of any of the conditions contained herein.

c. That there has been a material change in quantity or character of waste or method of waste disposal.

REPORT OF INDUSTRIAL WASTE WATER DISPOSAL (cont.)	PLANT NAME: Koppers Co. Inc. (NorthWest)	SHEET 3 OF 4

SECTION IV - WATER ANALYSES

Complete one of these sheets for each separated waste discharge from the plant *(See Instructions, Item 14, Part B)*

14A. NAME OF SEPARATED WASTE DISCHARGE	B. TYPE OF DISCHARGE	C. NO. OF BATCH DISCHARGES PER DAY	D. AVERAGE GALLONS PER BATCH
Cooling water Surface Drainage & boiler blowdown	(1) [X] Continuous (2) [ ] Batch	NA	NA

15. EQUIVALENT PRODUCTION UNIT AND AMOUNT PER OPERATING DAY OF PRODUCT ASSOCIATED WITH THIS DISCHARGE

NA

16. POINT OF DISCHARGE	16C. LATITUDE	17A. IF GROUNDWATER DISCHARGE, SPECIFY TYPE	17B. LOCATION OF DISCHARGE POINT TO SURFACE WATER BODY
A [ ] Sewer B [X] Surface Water Body C [ ] Ground	16E. LONGITUDE	(1) [ ] Irrigation (2) [ ] Injection Well (3) [ ] Pond (4) [ ] Other (Specify):	(1) DISTANCE FROM SHORE / BANK: 0 ft. (2) DEPTH BELOW SURFACE: 0 ft.

18. EFFLUENT SAMPLE COLLECTION AND ANALYSIS	A. SOURCE	B. FREQUENCY	C. ANALYSIS BY	D. SAMPLE DATE(S)
	(1) Grab Sample	(1) Daily	(1) In plant	(1)
	(2) Avg. Grab Sample	(2) Weekly	(2) Outside Lab	(2)
	(3) Composite Sample	(3) Monthly	(3) Gov't Agency *(Name)*	(3)
	(4) Continuous	(4) Other		(4)

19. WATER QUALITY INDICATORS *(where applicable)*

ITEM	A. INTAKE WATER BEFORE TREATMENT (1)	A. INTAKE WATER AFTER TREATMENT (2)	B. WASTE WATER EFFLUENT BEFORE TREATMENT (1)	B. WASTE WATER EFFLUENT AFTER TREATMENT (2)
a. FLOW *(gal./day)*				
b. pH				
c. TEMPERATURE *(°F)*				
d. COLOR *(units)*				
e. SPECIFIC CONDUCTANCE *(μmhos/cm²)*				
f. CHEMICAL ANALYSIS *(mg/L)*				
(1) TOTAL SOLIDS				
(2) TOTAL VOLATILE SOLIDS				
(3) TOTAL SUSPENDED SOLIDS				
(4) TOTAL DISSOLVED SOLIDS				
(5) ACIDITY *(as $CaCO_3$)*				
(6) ALKALINITY *(as $CaCO_3$)*				
(7) 5-DAY BOD				
(8) COD				
(9) OIL AND GREASE				
(10) CHLORIDE				
(11) SULFATE				
(12) SULFIDE				
(13) PHENOLS				
(14) NH_3 *(as N)*				
(15) NO_3 *(as N)*				

ITEM	A. INTAKE WATER BEFORE TREATMENT (1)	A. INTAKE WATER AFTER TREATMENT (2)	B. WASTE WATER EFFLUENT BEFORE TREATMENT (1)	B. WASTE WATER EFFLUENT AFTER TREATMENT (2)
f. CHEMICAL ANALYSIS *(cont.)*				
(16) NO_2 *(as N)*				
(17) ORGANIC N				
(18) KJELDAHL				
(19) PHOSPHORUS-ORTHO *(as P)*				
(20) PHOSPHORUS-TOTAL *(as P)*				
(21) Cr				
(22) Cu				
(23) Fe				
(24) Cd				
(25) Pb				
(26) Mn				
(27) Zn				
(28) F				
g. OTHER CHARACTERISTICS (1) Aa				
(1) Hg				
29				
30				
31				
32				

20. CODED DESCRIPTION OF WASTE TREATMENT PROCESSES *(Enter code numbers from Appendix A of instructions, in the order in which treatment steps occur.)*

21. REMARKS

NWT 001401

In book on Northwest

Rec'd 12/21/70 D.

Rec'd 4/14/71 KRC

DEPARTMENT OF ENVIRONMENTAL QUALITY

STATE OFFICE BUILDING • 1400 S.W. 5th AVENUE • PORTLAND, OREGON • 97201

TOM McCALL
GOVERNOR
KENNETH H. SPIES
Director
ENVIRONMENTAL QUALITY COMMISSION
B. A. McPHILLIPS
Chairman, McMinnville
EDWARD C. HARMS, JR.
Springfield
STORRS S. WATERMAN
Portland
GEORGE A. McMATH
Portland
ARNOLD M. COGAN
Portland

December 18, 1970

Northwest Natural Gas Company
123 N. W. Flanders Street
Portland, Oregon 97209

Attention: Mr. W. A. Cook, Senior Vice President

Gentlemen:

Re: Waste Discharge Permit
File No. 62231

Your application for a Waste Discharge Permit has been reviewed by the Department of Environmental Quality, and proposed waste discharge permit provisions have been drafted. You are invited to review the attached copy and submit any comments you may have in writing prior to January 6, 1971.

After that date, all comments received will be evaluated by the Department of Environmental Quality and final action on your application will be taken in accordance with the procedures set forth in Paragraph 45.040 of the attached copy of Regulations Pertaining to Waste Discharge Permits (Oregon Administrative Rules, Chapter 340). You will be advised of the action taken as soon as possible after January 6, 1971.

Very truly yours,

Spies

Kenneth H Spies

Kenneth H. Spies, Director
Department of Environmental Quality

HLS:mjb
Attachments

cc: Commission Members
cc: Portland District Office

Mailing Address: P.O. Box 231, Portland, Oregon 97207 — Telephone: (503) 229-5696

DEQ-1

State of Oregon

DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMO

To: Environmental Quality Commission Members

Date: DEC 18 1970

From: Bob Gilbert, Portland District Office

Subject: Northwest Natural Gas Company, Portland
Proposed Waste Discharge Permit Provisions

Northwest Natural Gas Company operates a liquified natural gas plant near the St. Johns Bridge in Northwest Portland. Natural gas is liquified during the summer months, when consumer demand is lowest, and stored for use in the winter months when consumption is at its peak.

To supply natural gas during the high-demand winter months, liquid gas is pumped from storage, revaporized and released to provide increased gas supplies. In order to operate the plant, the company purchases approximately 70 gallons per minute of water from the city of Portland. This water is used in the closed shell and tube heat exchange for cooling natural gas. No chemicals are utilized for rust corrosion control.

Presently, this cooling water is discharged into a pond where a petroleum-based substance was disposed of in recent years. As the cooling water flows through the pond, an oily film is retained. Separating the uncontaminated cooling water from this pond is the necessary first step in solving the company's present discharge problem. At this time, the staff feels that the waste flow (70 gpm at 100° F.) will have a minimal effect on the Willamette River.

Northwest Natural Gas also leases a portion of its property to Koppers Company, Incorporated, Organic Materials Division. Koppers presently discharges approximately 20 gpm into another part ot the property. This part was also used as a disposal site for a petroleum-based substance. As the waste flows through the pond, an oily film is retained. The waste must be separated from the pond and some type of pre-treatment installed before the waste can be acceptable for discharge into a city of Portland sewer.

The staff feels that separate treatment facilities for these particular industries should not be considered, but that all acceptable wastes should be discharged into an area-wide system when completed by the city of Portland.

mjb
Attachment

DEQ 4

Rec'd 4/14/71
ltr

January 6, 1971

Department of Environmental Quality
1400 S.W. 5th Avenue
Portland, Oregon

Attention: Mr. Kenneth H. Spies, Director

Gentlemen:

Re: Waste Discharge Permit
File No. 62231

We contacted Mr. Bob Gilbert of your office about the provisions of your Waste Discharge Permit.

We had several questions which he has answered as follows:

1. The present drain line which carries clean cooling water from our Liquid Natural Gas plant to the river will require a yearly renewable permit for its operation. It does not need to be diverted from the river in the forseeable future.

2. We are preparing plans for the disposal of an existing tar pond. It is one of the areas referred to in Item 3 of the permit. The second area referred to will be eliminated as a result of piping the cooling water from the Liquid Natural Gas plant to the river. The plan for the tar pond disposal has been submitted to our management for approval. Upon their acceptance and prior to March 31, 1971 we will submit it to the Department of Environmental Quality. The present rain water runoff will be trapped to keep it free of oil or contaminants. We have contacted Koppers Company about the water from the process boiler blowdown. We will give them copies of Waste Discharge Permit No. 62231 so they can comply with Item 1 and other items that may be of concern.

3. We have three sanitary sewers and Koppers has one. These are to be connected to the City of Portland sanitary sewer within 30 days of the notification of the completion of the sewer past the plant.

4. The present storm drains carry rain water to the river. These will continue to be acceptable without a permit in the forseeable future.

5. The present rain water that enters our property from the Rivergate Rock Plant across St. Helens Road and then turns off our property onto the Allen Tract is not a problem to us as long as we or Koppers do not discharge any untreated process water to it.

We will contact you as soon as possible with preliminary drafts of our proposal for the tar pond disposal. Please contact us about any changes in our permit and feel free to inspect the area whenever necessary. We would appreciate it if your representative would contact the plant engineer of the Liquid Natural Gas plant, H.A. Grobey at the plant or by phone (226-4211) when they do visit the site.

Very truly yours,

D.F. DeVine
Engineering Department

D:f

cc: R.T. Miller
E.D. Rowan
C.A. Roberts
H.A. Grobey

KOPPERS

Interoffice Correspondence

To W. B. Jackson

Location

Subject Northwest Plant

From K. R. Caldwell

Location

Date May 3, 1971

The Northwest plant will have to file for a Corps of Engineers Permit. We have been operating and discharging in effect under the Northwest Natural Gas Company's permit. I talked to Northwest and was told that we would have to file for our own permit as they were not going to cover us. Arrangements have been made to get samples to Research to characterize the effluent.

Installation of the Portland sanitary sewer system will be completed in the fall of 1971 and it is hoped we can discharge into it. I have asked Paul Cuth to obtain from them what water they will accept. I don't believe that they will take decanter water (currently being irrigated) without treatment. Since Northwest is currently getting topped tar for raw material, the contaminated water load is lower than for a normal tar plant. At Portland we have to do the following:

(1) Analyze contaminated water to irrigation and determine volume

(2) Confirm location of sewer outlet from tank farm drains and amount of water and volume

(3) Apply for Oregon permit

(4) Apply for Corps of Engineers permit - may be simultaneous

The Northwest plant is a clean plant and it is obvious that plant personnel are proud of the plant.

Although this plant has not had major problems on air pollution, we need some engineering work and a plan formulated. If we have this, I think we could make modest improvements over a period of time, and be all right when questioned by air enforcement people.

K R Cockrell

KRC/mak

cc: P. Bost/J. Little
E. Eynon
P. Guth
D. L. O'Dell
B. Pospishil
T. Smith

O. M.

QUESTIONNAIRE

I. Liquid Wastes

1. (a) What liquid wastes other than sanitary sewage are being discharged into the municipal sewage system?

No municipal sewage at present time, but sewer is being put in near future.

(b) What type of purification does the municipal sewage system employ?

(c) Is the municipal sewage system able to handle other industrial wastes in the area, i. e., from other plants?

2. (a) What liquid wastes are being disposed of by other means than municipal systems?

Run off water goes to river

(b) What problems exist presently with these disposals?

none

(c) If there is no tie-in to a municipal sewage system what is done with plant sanitary wastes?

septic tank

(d) What problems can you foresee in the future in disposing of plant liquid wastes?

none

3. (a) How is storm drainage handled?

goes directly to river

(b) Does storm drainage from your plant ever carry any specific pollutants?

yes, in case of spill

(c) Are plant floor or roof drains a possible source of pollution of a non-treated system?

Yes

II. Gaseous Wastes

1. (a) What type of boiler fuel is used?

natural gas
fuel oil
crude

(b) What is average analysis of boiler stack gas?

CO_2 8-9% on gas
CO_2 12% on fuel oil

(c) Is boiler stack effluent visible?

no

2. (a) What other gaseous effluents exist at your location?

tube heater
fumes from still & pans

(b) Do other gaseous effluents carry any chemicals or solids?

yes, oil droplets

(c) Are other gaseous effluents visible?

yes, from pitch pans.

III. Solid Wastes

1. (a) What process wastes must be disposed of?

none

(b) Are existing methods of disposal satisfactory at present?

(c) Are existing methods of disposal going to be satisfactory in the future?

III. Solid Wastes (continued)

2. (a) How is non-process trash and solid waste handled?

hauled to land fill

(b) Are these methods satisfactory at present?

no, running out of fill area

(c) Are these methods going to be satisfactory in the future?

no

IV. Thermal

1. (a) Is the plant a contributor to thermal pollution of a local stream or river?

no

(b) What is the extent of this thermal problem?

2. (a) Is the plant a contributor to a local fog problem through steam or water vapor from a water cooling system?

no water cooling tower

(b) What is the extent of this problem?

V. Noise

1. (a) Are there any noise problems at the plant which are objectionable to the employees?
air blower at tube heater

(b) Are there noise problems which are objectionable to the neighbors?
no

(c) Are there noise problems which will become objectionable in the future (if, for example, someone builds a residence on available land near the plant)?
no

VI. Plant Appearance and Miscellaneous

1. (a) Are there any conditions at the plant which are objectionable to the neighbors because of appearance, such as a trash dump or scrap pile?
none

2. (a) Is the plant fenced?
yes

(b) What type of fence is used?
chain link, with 3 strand barb wire at t

3. (a) Does the plant have an identification sign?
yes

(b) What type?
entrance sign

4. (a) Does the plant contain any "attractive nuisances", that is, any situations which small boys would be tempted to investigate and where they might be injured?
no

VII. Products

1. (a) Are there any problems inherent in the handling of plant products?

pitch dust at dock & at pitch pans

2. (a) Are there any problems inherent in the disposal of plant products after use?

no

VIII. Legal Requirements

1. (a) What Federal, state, or local laws and regulations apply to your facility?

clean air & clean streams

(b) Have you a copy of all these laws and regulations?

clean air, yes water, no

2. (a) Assuming that all laws and regulations are applied uniformly what problems have you which are facing a deadline for correction?

none at the present time

Paul W. Huth
Northwest Plant
Portland, Oregon

4-1-70

JAN 1 2 1970

December 4, 1969

NORTHWEST
(Portland, O.)

ENVIRONMENTAL HEALTH AND SAFETY SECTION
MONROEVILLE RESEARCH CENTER
KOPPERS COMPANY, INC.

AIR POLLUTION CONTROL QUESTIONNAIRE

I. GENERAL

A. Describe and give the status of any recent contacts with Air Pollution Control Agencies.

None

B. Describe and give the status of Pollution Abatement Programs recently completed or presently underway.

Fog nozzles were put on pitch conveyor to control dust while loading pitch aboard ship.

Replaced worn belt on pitch conveyor for loading ship. Both of these projects have been completed.

NWT 001413

II. PRODUCTS AND RAW MATERIALS

Complete the following table, indicating the primary products produced and the raw materials required.

Product	Raw Materials	Production Rate/Year	Raw Material Usage/Year
hard carbon pitch	coal tar	1500 T	5,250,000 gal

NWT 001414

III. PROCESS EMISSIONS

List all atmospheric emissions and indicate how the composition and amount discharged were obtained, i.e. calculated, measured, or best estimate.

Source of Discharge (1)	Plant and/or Process Operation	Composition	Quantity Discharged	Type of Discharge		Control Equipment Installed		Type of Control Equipment
				Continuous	Intermittent	Yes	No	
pitch bay					✓	✓		fume system

1. Example - stack, tank vent, flare, pitch bay, etc.

IV. COMBUSTION

List all types of combustion equipment other than incinerators in the Table below. This would include boilers, fired heaters, metallurgical furnaces, etc.

Make	Type and Use	Rated Input	Method of Firing	Operation		STACK			FUEL(1)				% Excess Air	Type of Control Equipment
				Normal	Stand-by	Dia.	Height	Temp.	Type	Quantity/yr	% S	% Ash		
Beron	[illegible] tube heater for [illegible]	6 million BTU/hr	gas or oil	✓		2'-5½"	31'-4"	5[illegible]°F						Standard
N. America	Tube boiler for steam	21 million BTU/hr	gas or oil	✓		2'-6"	15'-4"							Standard

1. If a fuel other than coal, natural gas or fuel oil is used, give composition under "Type" column.

NWT 001416

V. NON-COMBUSTIBLE WASTE DISPOSAL

Include fly ash disposal in the tabulation below.

WASTE MATERIAL			Method of Disposal
Type	Source	Amount/Week	
none			

NWT 001417

VI. COMBUSTIBLE WASTE DISPOSAL

WASTE MATERIAL			Method of Disposal
Type	Source	Amount/Week	
none			

NWT 001418

VII. INCINERATOR

Make	Type (1)	Capacity lb/hr	Forced Draft System Yes No	Auxiliary Burner Yes No	Scrubber Yes No	Type of Scrubber
none						

1. Single or multiple burner.

NWT 001419

VIII. KOPPERS COMPANY - SINCLAIR-KOPPERS: CONTROL POTENTIAL

A. List below any equipment, systems, or processes presently available for air pollltion control.

B. List below any studies or development programs underway to increase Koppers Company - Sinclair-Koppers air control potential.

C. List below any area of air pollution abatement which you feel Koppers Company - Sinclair-Koppers should investigate entering due to present know-how.

NWT 001420

IX. REMARKS

Use the space below for any comments which may clarify or expand any portion of the questionnaire.

NWT 001421

KEYSTONE
ENVIRONMENTAL RESOURCES, INC.

[redacted] file

Interoffice Correspondence

To	John Oxford	From	J. M. Dern
Location	Northwest	Location	K-1928
Subject	Coffey Laboratories	Date	August 25, 1988

During our recent conversation, we discussed some apparent errors made by Coffey Laboratories in phenols analysis which, if unchecked, could have resulted in non-compliance with your NPDES permit. These results do not suggest that Coffey Labs should not be used but rather that the results are, for the moment, "suspect". I would suggest that we do one (or both) of the following:

1. Split samples should be analyzed by both Keystone and Coffey to assure Coffey's accuracy. These should continue until you feel comfortable.

2. Keystone should prepare a series of spiked samples for Coffey Labs to analyze.

Please advise me if I can be of any further service.

Jordan M. Dern/mrw

Jordan M. Dern

JMD/mrw

cc: L. F. Flaherty
B. Hepner

11000

[redacted]

cc: LFF
JBlundon
JOxford

TO: James Lampe

LOCATION: A-416

DATE: April 22, 1988

FROM: Gary P.Kerr

LOCATION: D-143

Enclosed you will find the results of the BAT and BPT sampling performed at the North West Terminal plant. The values have been tabulated for both discharge points Tank #3 and Tank #4). It should be noted that Tank #4 was aerated and Tank #3 was not.

P.S. Remember that we promised the state the report within 3-weeks from receipt of the analysis. The anaylsis was received on April 20, 1988.

cc:John Petkunas
Donald Bryant

RECEIVED
APR 22 1988
KEYSTONE ENVIRO-
RESOURCES, INC.
11000

NORTH WEST TERMINAL
BAT AND BPT SAMPLING

Location Sampled		Tank #3	Tank #4	FB
Date Sampled		07-Mar-88	07-Mar-88	07-Mar-88
Parameter				
pH	units	6.4	6.6	---
BOD (5-Day Total)	mg/l	21	40.5	---
Total Suspended Solids	mg/l	48	134	---
Chromium	ug/l	<10	<10	<10
Copper	ug/l	<10	34.7	<10
Lead	ug/l	5.5	19.2	<5
Nickel	ug/l	<10	<10	<10
Zinc	ug/l	128	346	<10
Cyanide(Total)	mg/l	0.035	0.028	---
VOLATILES				
Chloromethane	ug/l	<10	<10	<10
Bromomethane	ug/l	<10	<10	<10
Vinyl Chloride	ug/l	<10	<10	<10
Chloroethane	ug/l	<10	<10	<10
Metylene chloride	ug/l	<5	<5	11
1,1-dichloroethene	ug/l	<10	<10	<5
1,1-dichloroethane	ug/l	<5	<5	<5
1,2-dichloroethene (Total)	ug/l	<5	<5	<5
Chloroform	ug/l	<5	<5	<5
1,2-dichloroethane	ug/l	<5	<5	<5
1,1,1-trichloroethane	ug/l	<5	<5	<5
Carbon tetrachloride	ug/l	<5	<5	<5
Bromodichloromethane	ug/l	<5	<5	<5
1,2-dichloropropane	ug/l	<5	<5	<5
Cis-1,3-dichloropropene	ug/l	<5	<5	<5
Trichloroethene	ug/l	<5	<5	<5
Dibromochloromethane	ug/l	<5	<5	<5
1,1,2-trichloroethane	ug/l	<5	<5	<5
Benzene	ug/l	4400 *	5000 *	<5
Trans-1,3-dichloropropene	ug/l	<5	<5	<5
2-chloroethylvinylether	ug/l	<10	<10	<10
Bromoform	ug/l	<5	<5	<5
Tetrachloroethene	ug/l	<5	<5	<5
1,1,2,2-tetrachloroethane	ug/l	<5	<5	<5
Toluene	ug/l	1600*	1600 *	32
Chlorobenzene	ug/l	<5	<5	<5
Ethylbenzene	ug/l	26	7	7
Trichlorofluoromethane	ug/l	<10	<10	<10
Acrylonitrile	ug/l	<10	<10	<10
Acrolein	ug/l	<20	<20	<20

--- Sample not analyzed for these constituents.
* Amount determined from a 1:50 dilution.

NORTH WEST TERMINAL
BAT AND BPT SAMPLING

Location Sampled		Tank #3	Tank #4	TB
Date Sampled		07-Mar-88	07-Mar-88	07-Mar-88
SEMI-VOLATILES				
Phenol	ug/l	34	38	---
2-chlorophenol	ug/l	<10	<10	---
1,3-dichlorobenzene	ug/l	<10	<10	---
1,4-dichlorobenzene	ug/l	<10	<10	---
1,2-dichlorobenzene	ug/l	<10	<10	---
Bis(2-chloroisopropyl)ether	ug/l	<10	<10	---
Hexachloroethane	ug/l	<10	<10	---
Nitrobenzene	ug/l	<10	<10	---
2-nitrophenol	ug/l	<10	<10	---
2,4-dimethylphenol	ug/l	38	10	---
2,4-dichlorophenol	ug/l	<10	<10	---
1,2,4-trichlorobenzene	ug/l	<10	<10	---
Naphthalene	ug/l	340 **	68	---
Hexachlorobutadiene	ug/l	<10	<10	---
Dimethyl phthalate	ug/l	<10	<10	---
Acenaphthylene	ug/l	14	27	---
2,6-dinitrotoluene	ug/l	<10	<10	---
Acenaphthene	ug/l	71	910	---
2,4-dinitrophenol	ug/l	<10	<10	---
4-nitrophenol	ug/l	<10	<10	---
2,4-dinitrotoluene	ug/l	<10	<10	---
Diethyl phthalate	ug/l	<10	<10	---
Fluorene	ug/l	35	570	---
4,6-dinitro-2-methylphenol	ug/l	<10	<10	---
Hexachlorobenzene	ug/l	<10	<10	---
Phenanthrene	ug/l	25	<1500	---
Anthracene	ug/l	4 J	68	---
Di-n-butyl phthalate	ug/l	<10	<10	---
Fluoranthene	ug/l	27	730	---
Pyrene	ug/l	21	560	---
Benzo(a)anthracene	ug/l	2 J	86	---
Chrysene	ug/l	2 J	42	---
Bis(2-ethylhexyl)phthalate	ug/l	190 **	380	---
Benzo(b)fluoranthene	ug/l	<10	44	---
Benzo(k)fluoranthene	ug/l	<10	<10	---
Benzo(a)pyrene	ug/l	<10	19	---

--- Sample not analyzed for these constituents.
** Result calculated from a 1:5 dilution.
Results calculated from a 1:20 dilution.
J Recorded value below the detection limit.

Page 1 KEYSTONE REPORT Work Order # 88-03-025

Received: 03/08/88 03/28/88 16:16:27

REPORT TO: Keystone Env. Resources, Inc.
440 College Park Drive
Monroeville, PA. 15146-1536

ATTEN: R.D. Hepner

CLIENT: NW TERMINAL SAMPLES: 4
COMPANY: Keystone Env. Resources, Inc.
FACILITY: NORTHWEST TERMINAL

WORK ID: 462500-00
TAKEN: Client
TRANS: Federal
TYPE: Water
P.O. #:
INVOICE: under separate cover

PREPARED BY: Keystone Env. Resources, Inc.
3911 Fondren
Suite 100
Houston, Texas 77063-5821
ATTEN: Data Management
PHONE: (713) 266-6800

[redacted]
CERTIFIED BY

CONTACT DOTY

Please call the above number if you have any questions.
NOTE: ALL SAMPLES WILL BE RETAINED FOR 60 DAYS. UNUSED SOIL AND WASTE SAMPLES WILL BE RETURNED TO YOU AT NO CHARGE. ALTERNATIVELY, DISPOSAL BY KEYSTONE CAN BE ARRANGED FOR A FEE.

SAMPLE IDENTIFICATION

01 LAB BLANK
02 TANK #3
03 TANK #4
04 TRIP BLANK

RECEIVED
APR 22 1988
Environmental Resources

INST. ID: 4000 SAMPLE NUMBER: TANK#3

ORGANICS ANALYSIS DATA SHEET

LABORATORY NAME: KEYSTONE ENV. CASE NO.: --
LAB SAMPLE ID NO.: 880302502 QC REPORT NO.:
SAMPLE MATRIX: WATER CONTRACT NO.: --
DATA RELEASE AUTHORIZED BY: ..... DATE SAMPLE RECEIVED: 03-08-88

VOLATILES

CONCENTRATION: LOW DATAFILE: 4U03025V02
DATE ANALYZED: 03/17/86 DILUTION FACTOR: 1.00

	COMPOUND	DETECTION LIMIT (MICROGRAMS / LITER)	AMOUNT FOUND (MICROGRAMS / LITER)
C010	CHLOROMETHANE	10 U	
C015	BROMOMETHANE	10 U	
C020	VINYL CHLORIDE	10 U	
C025	CHLOROETHANE	10 U	
C030	METHYLENE CHLORIDE	5 U	
C045	1,1-DICHLOROETHENE	10 U	
C050	1,1-DICHLOROETHANE	5 U	
C053	1,2-DICHLOROETHENE (TOTAL)	5 U	
C060	CHLOROFORM	5 U	
C065	1,2-DICHLOROETHANE	5 U	
C115	1,1,1-TRICHLOROETHANE	5 U	
C120	CARBON TETRACHLORIDE	5 U	
C130	BROMODICHLOROMETHANE	5 U	
C140	1,2-DICHLOROPROPANE	5 U	
C143	CIS-1,3-DICHLOROPROPENE	5 U	
C150	TRICHLOROETHENE	5 U	
C155	DIBROMOCHLOROMETHANE	5 U	
C160	1,1,2-TRICHLOROETHANE	5 U	
C165	BENZENE	250	4400 *
C172	TRANS-1,3-DICHLOROPROPENE	5 U	
C175	2-CHLOROETHYLVINYLETHER	10 U	
C180	BROMOFORM	5 U	
C220	TETRACHLOROTHENE	5 U	
C225	1,1,2,2-TETRACHLOROETHANE	5 U	
C230	TOLUENE	250	1600 *
C235	CHLOROBENZENE	5 U	
C240	ETHYLBENZENE	5	26
C265	TRICHLOROFLUOROMETHANE	10 U	
C275	ACRYLONITRILE	10 U	
C360	ACROLEIN	20 U	

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
* = AMOUNT DETERMINED FROM A 1:50 DILUTION.

1000

Laboratory Name: KEYSTONE ENV. RES., INC.
Case No: 03025

Sample Numbe
Tank #3

ORGANICS ANALYSIS DATA SHEET
Semivolatile
(Page 2)

BAT BNA Analyses

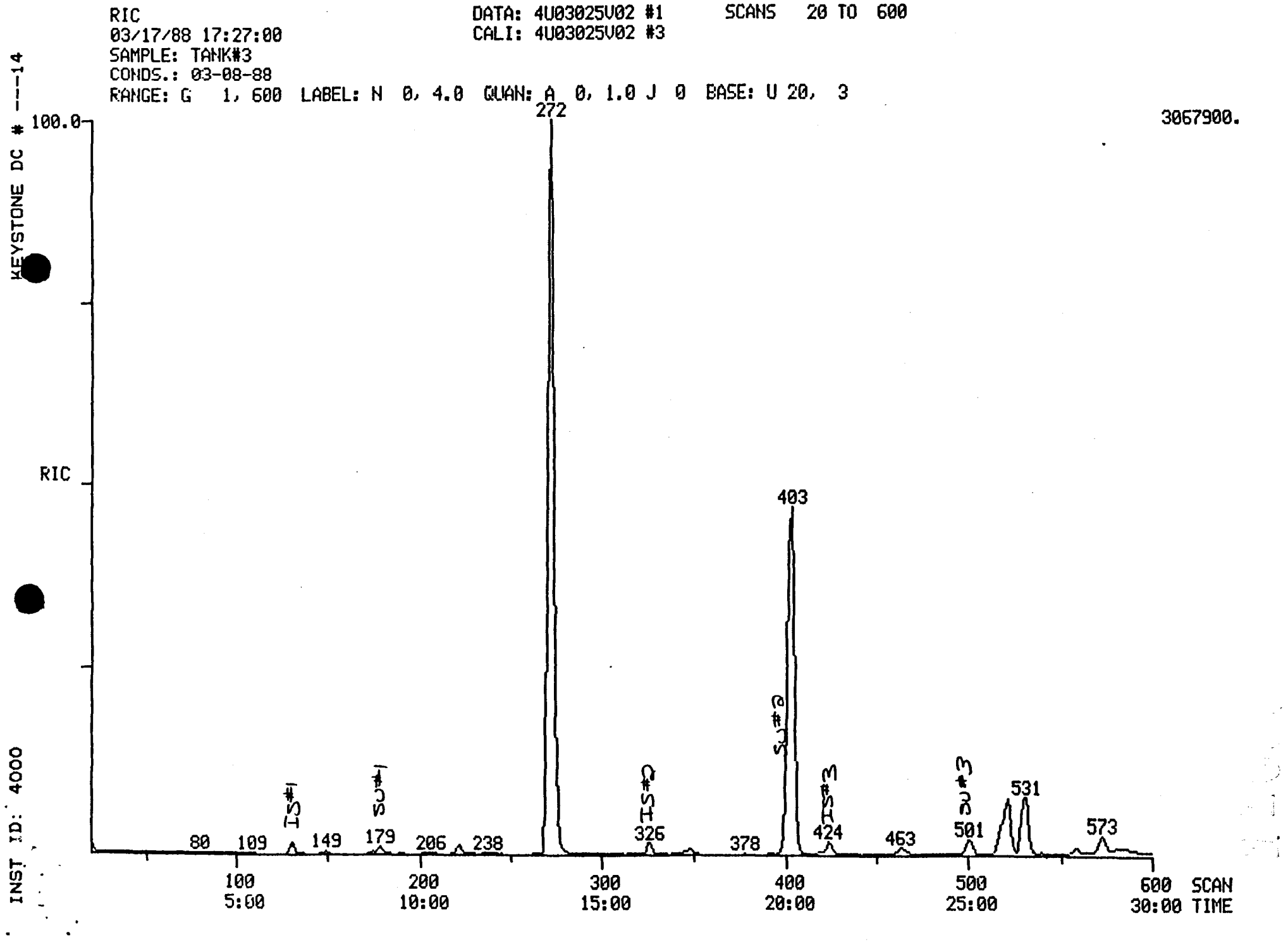
Concentration: LOW
Date Extracted/Prepared: 3/8/88
Date Analyzed: 3/21/88
Conc/Dil Factor: 1.
Percent Moisture: (Decanted)

GPC Cleanup ___ Yes X No
Separatory Funnel Extraction ___ Yes
Continuous Liquid-Liquid Extraction X

CAS Number		UG/L		CAS Number		UG
108-95-2	Phenol	34		51-28-5	2,4-Dinitrophenol	1
95-57-8	2-Chlorophenol	10	U	100-02-7	4-Nitrophenol	1
541-73-1	1,3-Dichlorobenzene	10	U	121-14-2	2,4-Dinitrotoluene	1
106-46-7	1,4-Dichlorobenzene	10	U	84-66-2	Diethylphthalate	1
95-50-1	1,2-Dichlorobenzene	10	U	86-73-7	Fluorene	3
39638-32-9	bis(2-Chloroisopropyl)Ether	10	U	534-52-1	4,6-Dinitro-2-Methylphenol	1
67-72-1	Hexachloroethane	10	U	118-74-1	Hexachlorobenzene	1
98-95-3	Nitrobenzene	10	U	85-01-8	Phenanthrene	2
88-75-5	2-Nitrophenol	10	U	120-12-7	Anthracene	
105-67-9	2,4-Dimethylphenol	38		84-74-2	Di-n-Butylphthalate	1
120-83-2	2,4-Dichlorophenol	10	U	206-44-0	Fluoranthene	2
120-82-1	1,2,4-Trichlorobenzene	10	U	129-00-0	Pyrene	2
91-20-3	Naphthalene	* 340		56-55-3	Benzo(a)Anthracene	
87-68-3	Hexachlorobutadiene	10	U	218-01-9	Chrysene	
131-11-3	Dimethyl Phthalate	10	U	117-81-7	bis(2-Ethylhexyl)Phthalate	* 1
208-96-8	Acenaphthylene	14		205-99-2	Benzo(b)Fluoranthene	
606-20-2	2,6-Dinitrotoluene	10	U	207-08-9	Benzo(k)Fluoranthene	
83-32-9	Acenaphthene	71		50-32-8	Benzo(a)Pyrene	

U = Undetected at the listed detection limit.
J = Compound present below the listed detection limit.
* = Result calculated from 1:5 dilution

11000


RIC
03/17/88 17:27:00
SAMPLE: TANK#3
CONDS.: 03-08-88
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
DATA: 4U03025V02 #1
CALI: 4U03025V02 #3
SCANS 20 TO 600
KEYSTONE DC # ---14
INST ID: 4000
100.0
RIC
3067900.
272
403
80
109
149
179
206
238
326
378
424
463
501
531
573
IS#1
SU#1
HS#2
SU#2
HS#3
SU#3
100
5:00
200
10:00
300
15:00
400
20:00
500
25:00
600 SCAN
30:00 TIME

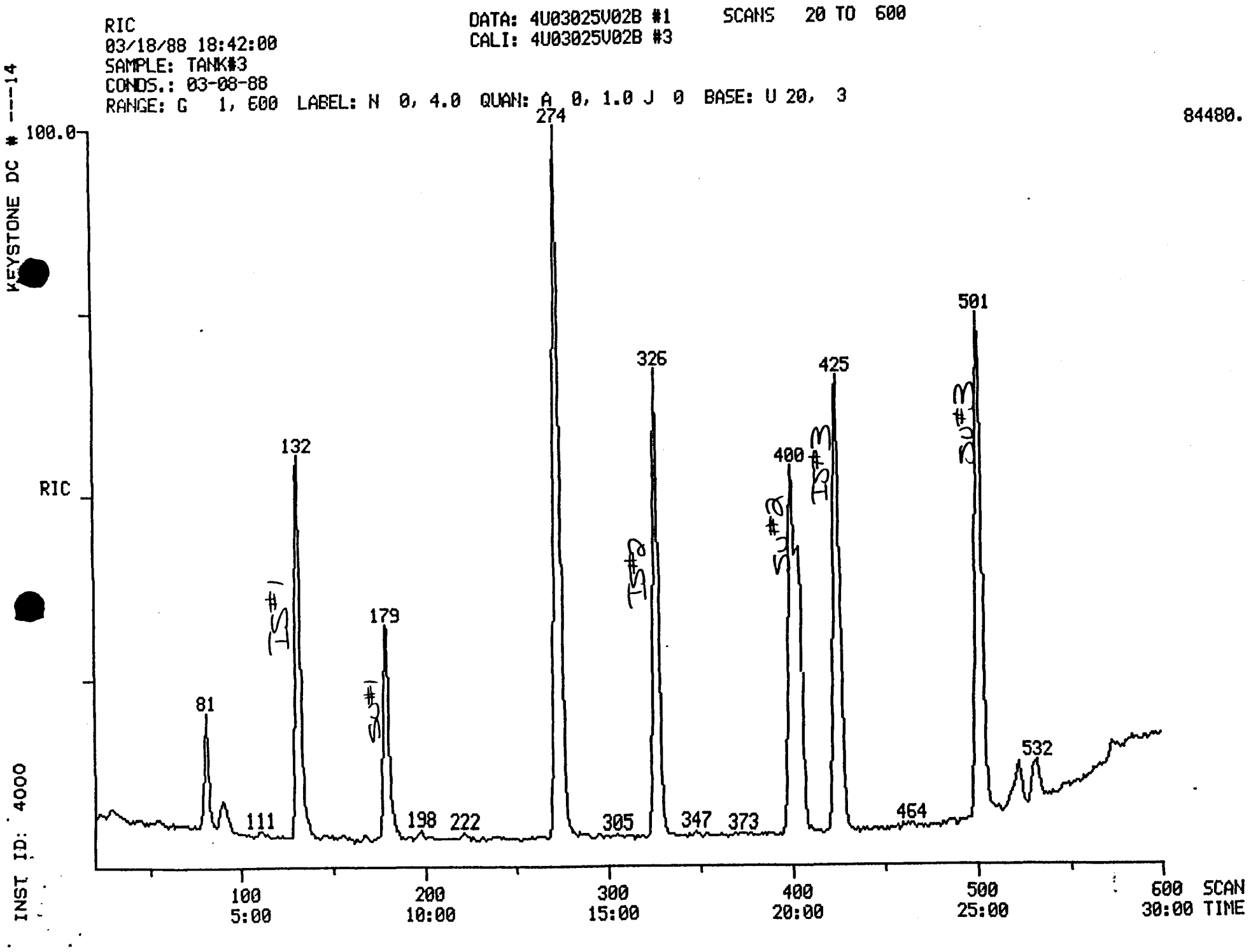
NWT 001429

KEYSTONE DC # ---14

VOA QUANTITATION REPORT

SAMPLE ID.	TANK#3		
FILENAME	4U03025V02	INST	4000
CLIENT	NWTERM	ANALYST	RCJ
DATE INJECTED	03/17/88 17:27:00	VERIFIED BY	RCJ
CALIB STD DATE	2-23-88	CORR. FACTOR	1.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT		RRT	AREA
131	CI01	BROMOCHLOROMETHANE	**IS1**	128	50	UG/L	1.000	18289
326	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50	UG/L	1.000	64941
424	CI20	D5-CHLOROBENZENE	**IS3**	117	50	UG/L	1.000	51614
179	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	108	%	1.366	36725
399	CS05	D8-TOLUENE	**SU2**	98	101	%	0.941	58462
501	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	101	%	1.182	50917
272	C165	BENZENE		78	2593	UG/L	0.834	3566963
403	C230	TOLUENE		92	1368	UG/L	0.950	1173809
463	C240	ETHYLBENZENE		106	26	UG/L	1.092	11796


RIC
03/18/88 18:42:00
SAMPLE: TANK#3
CONDS.: 03-08-88
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
DATA: 4U03025V02B #1 SCANS 20 TO 600
CALI: 4U03025V02B #3
84480.
KEYSTONE DC # ---14
100.0
RIC
INST ID: 4000
81
111
132
IS#1
179
SU#1
198
222
274
305
326
IS#2
347
373
400
SU#2
425
IS#3
464
501
SU#3
532
100
5:00
200
10:00
300
15:00
400
20:00
500
25:00
600 SCAN
30:00 TIME

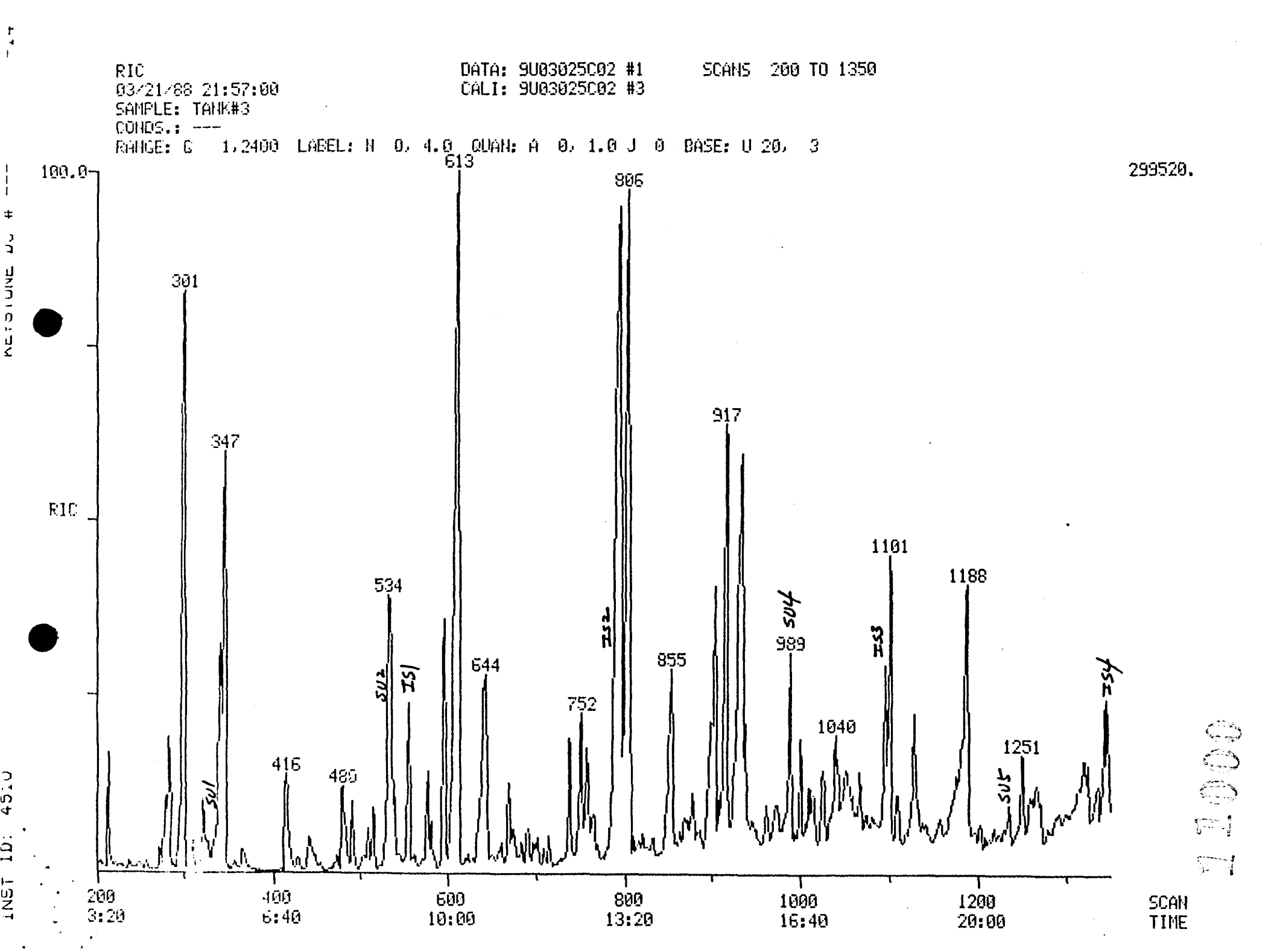
NWT 001431

KEYSTONE DC # ---14

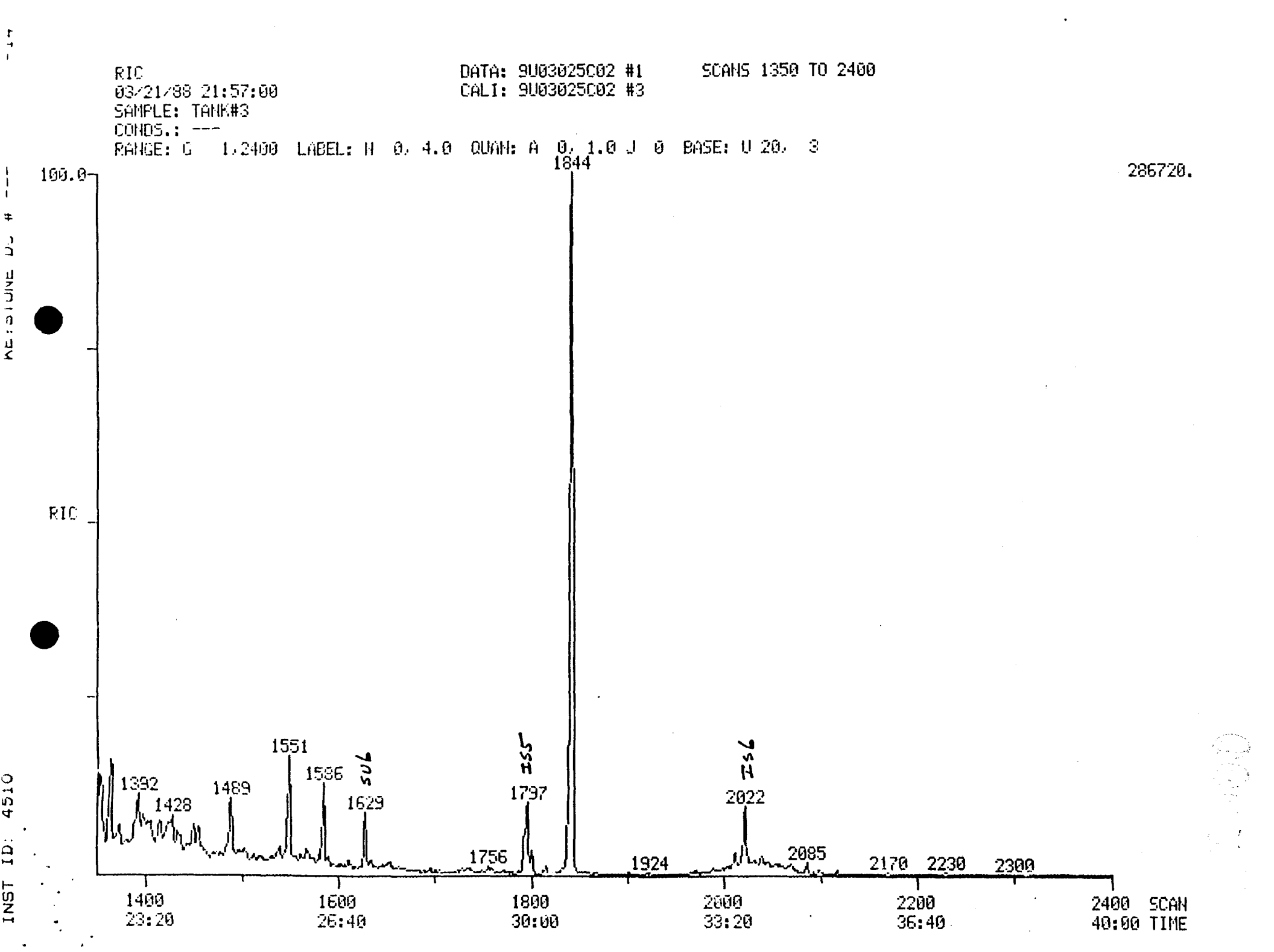
VOA QUANTITATION REPORT

SAMPLE ID.	TANK#3		
FILENAME	4U03025V02B	INST	4000
CLIENT	NWTERM	ANALYST	MB
DATE INJECTED	03/18/88 18:42:00	VERIFIED BY	RCJ
CALIB STD DATE	2-23-88	CORR. FACTOR	50.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
131	CI01	BROMOCHLOROMETHANE	**IS1**	128	2500 UG/L	1.000	18701
326	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	2500 UG/L	1.000	72387
424	CI20	D5-CHLOROBENZENE	**IS3**	117	2500 UG/L	1.000	55793
179	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	95 %	1.366	30777
400	CS05	D8-TOLUENE	**SU2**	98	89 %	0.943	50914
501	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	87 %	1.182	42953
81	C030	METHYLENE CHLORIDE		84	674 UG/L	0.618	6210
274	C165	BENZENE		78	4439 UG/L	0.840	117317
404	C230	TOLUENE		92	1640 UG/L	0.953	25494


RIC
03/21/88 21:57:00
SAMPLE: TANK#3
CONDS.: ---
DATA: 9U03025C02 #1
CALI: 9U03025C02 #3
SCANS 200 TO 1350
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
100.0
299520.
RIC
301
347
416
480
534
613
644
752
806
855
917
989
1101
1188
1251
SU1
SU2
IS1
IS2
SU4
IS3
SU5
IS4
200
3:20
400
6:40
600
10:00
800
13:20
1000
16:40
1200
20:00
SCAN
TIME

NWT 001433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03/21/88 21:57:00
SAMPLE: TANK#3
CONDS.: ---
RANGE: G 1.2400 LABEL: N 0. 4.0 QUAN: A 0. 1.0 J 0 BASE: U 20. 3
DATA: 9U03025C02 #1
CALI: 9U03025C02 #3
SCANS 1350 TO 2400
100.0
286720.
RIC
1844
1392
1428
1489
1551
1586
1629
1756
1797
1924
2022
2085
2170
2230
2300
1400
23:20
1600
26:40
1800
30:00
2000
33:20
2200
36:40
2400 SCAN
40:00 TIME
INST ID: 4510

NWT 001434

SEMIVOLATILE WATER REPORT

SAMPLE ID. TANK#3

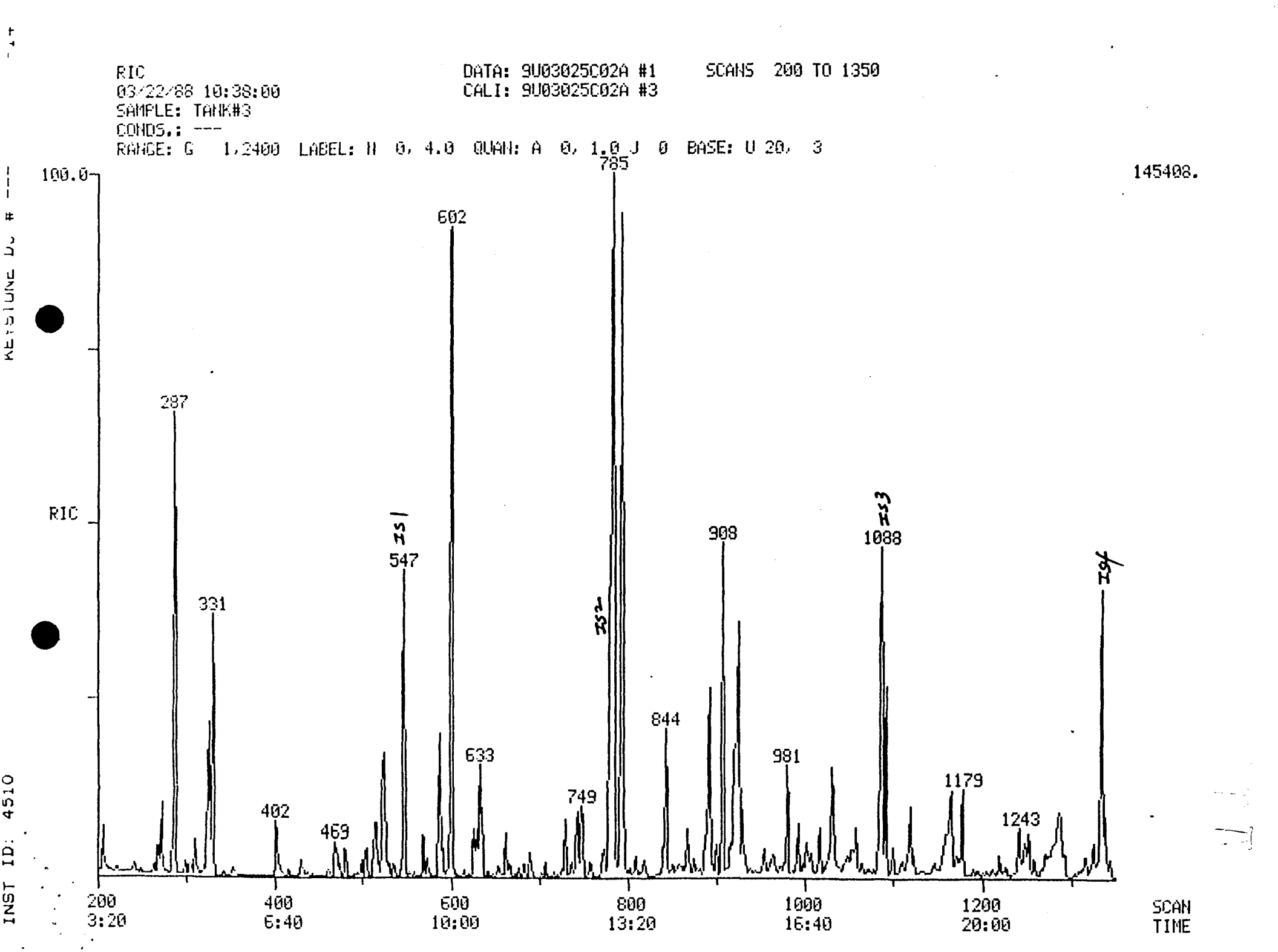
FILENAME 9U03025C02 INST ID. 4510

CLIENT NW TERMI ANALYST CEB

DATE INJECTED 03/21/88 21:57:00 VERIFIED BY CEB

CALIB STD DATE 03/17/88 CORR. FACTOR 1.00

SCAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
556	CI30	1,4-DICHLOROBENZENE-D4 ** IS	152	40 UG/L	1.000	3200
791	CI40	NAPHTHALENE-D8 ** IS2 **	136	40 UG/L	1.000	10311
1096	CI50	ACENAPHTHENE-D10 ** IS3 **	164	40 UG/L	1.000	6020
1344	CI60	PHENANTHRENE-D10 ** IS4 **	188	40 UG/L	1.000	8268
1797	CI70	CHRYSENE-D12 ** IS5 **	240	40 UG/L	1.000	4229
2022	CI75	PERYLENE-D12 ** IS6 **	264	40 UG/L	1.000	3447
334	CS50	2-FLUOROPHENOL ** SU1 **	112	12 ~~6~~ %	0.601	753
532	CS45	PHENOL-D5 ** SU2 **	99	64 ~~32~~ %	0.957	4778
1237	CS55	2,4,6-TRIBROMOPHENOL ** SU5	330	14 ~~7~~ %	1.129	96
989	CS25	2-FLUOROBIPHENYL ** SU4 **	172	96 ~~48~~ %	0.902	8600
1629	CS30	TERPHENYL-D14 ** SU6 **	244	76 ~~38~~ % ypm	0.907	1862
535	C315	PHENOL	94	34 UG/L	0.962	5786
764	C425	2,4-DIMETHYLPHENOL	107	38 UG/L	0.966	3882
796	C450	NAPHTHALENE	128	254 UG/L	1.006	82897
1067	C540	ACENAPHTHYLENE	152	14 UG/L	0.974	422C
1101	C550	ACENAPHTHENE	153	71 UG/L	1.005	12290
1188	C590	FLUORENE	166	35 UG/L	1.084	704C
1348	C640	PHENANTHRENE	178	25 UG/L	1.003	6343
1354	C645	ANTHRACENE	178	4 UG/L	1.007	1024
1551	C655	FLUORANTHENE	202	27 UG/L	1.154	5653
1586	C715	PYRENE	202	21 UG/L	0.883	4131
1794	C730	BENZO(A)ANTHRACENE	228	2 UG/L	0.998	305
1844	C745	BIS(2-ETHYLHEXYL)PHTHALATE	149	194 UG/L	1.026	29921
1800	C740	CHRYSENE	228	2 UG/L	1.002	339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03/22/88 10:38:00
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CONDS.: ---
RANGE: G 1.2400 LABEL: H 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
DATA: 9U03025C02A #1
CALI: 9U03025C02A #3
SCANS 200 TO 1350
100.0
145408.
RIC
287
331
402
463
547
602
633
749
785
844
908
981
1088
1179
1243
200
3:20
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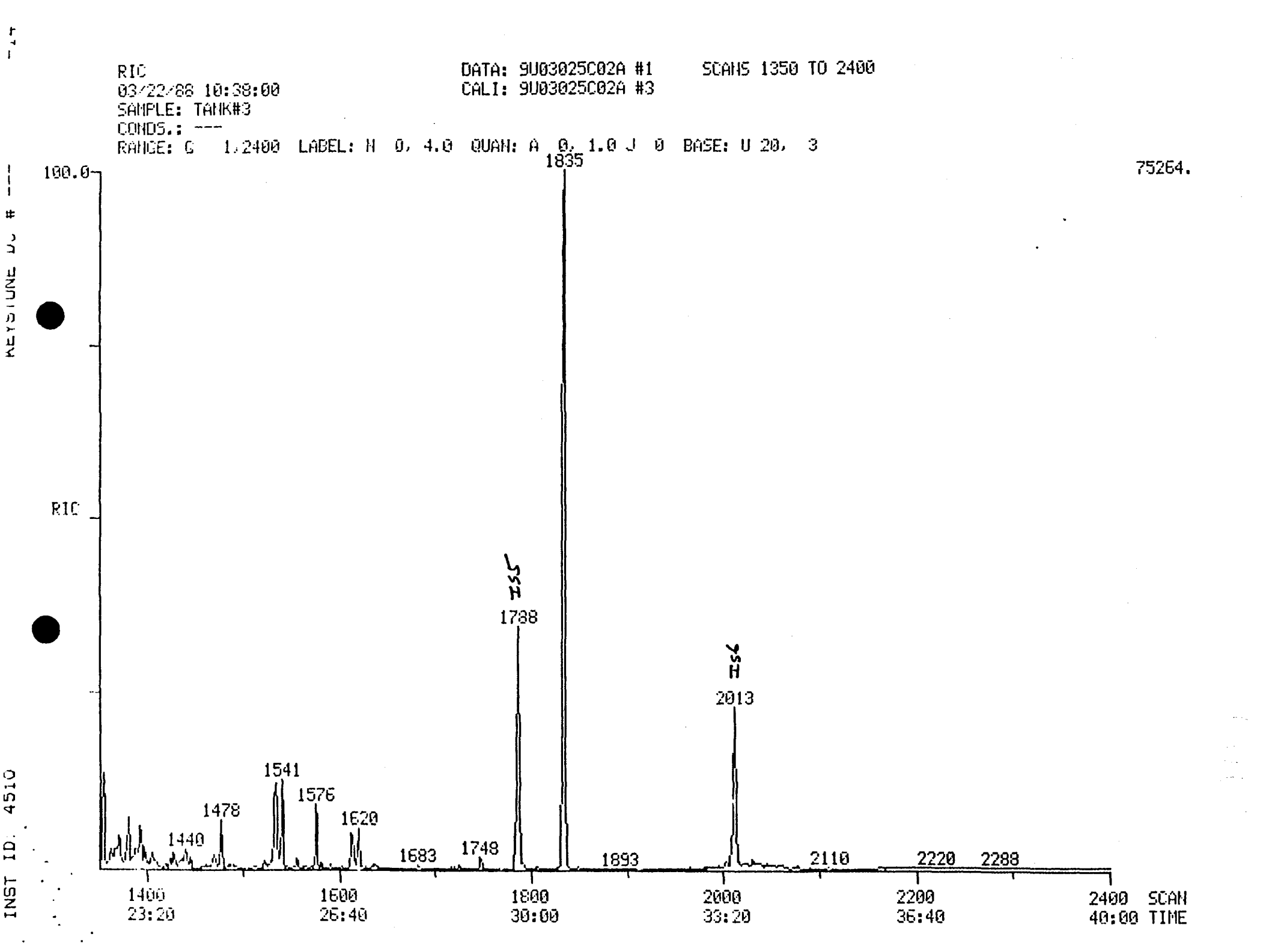
6:40
600
10:00
800
13:20
1000
16:40
1200
20:00
SCAN
TIME

NWT 001436


RIC
03/22/88 10:38:00
SAMPLE: TANK#3
CONDS.: ---
RANGE: G 1.2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
DATA: 9U03025C02A #1
CALI: 9U03025C02A #3
SCANS 1350 TO 2400
100.0
75264.
RIC
1835
1738
2013
1541
1576
1478
1620
1440
1683
1748
1893
2110
2220
2288
1400
23:20
1600
26:40
1800
30:00
2000
33:20
2200
36:40
2400
40:00
SCAN
TIME
INST ID. 4510

NWT 001437

SEMIVOLATILE WATER REPORT

SAMPLE ID.	TANK#3		
FILENAME	9U03025C02A	INST ID.	4510
CLIENT	NW TERMI	ANALYST	CEB
DATE INJECTED	03/22/88 10:38:00	VERIFIED BY	
CALIB STD DATE	03/17/88	CORR. FACTOR	5.00

SCAN#		SEMIVOLATILE COMPOUNDS		M/E	AMOUNT	RRT	AREA
547	CI30	1,4-DICHLOROBENZENE-D4 ** IS		152	200 UG/L	1.000	2712
781	CI40	NAPHTHALENE-D8 ** IS2 **		136	200 UG/L	1.000	9467
1088	CI50	ACENAPHTHENE-D10 ** IS3 **		164	200 UG/L	1.000	4974
1336	CI60	PHENANTHRENE-D10 ** IS4 **		188	200 UG/L	1.000	6986
1788	CI70	CHRYSENE-D12 ** IS5 **		240	200 UG/L	1.000	3376
2013	CI75	PERYLENE-D12 ** IS6 **		264	200 UG/L	1.000	2457
516	C315	PHENOL		94	40 UG/L	0.943	1207
748	C425	2,4-DIMETHYLPHENOL		107	30 UG/L	0.958	570
785	C450	NAPHTHALENE		128	337 UG/L	1.005	19673
1093	C550	ACENAPHTHENE		153	86 UG/L	1.005	2455
1179	C590	FLUORENE		166	42 UG/L	1.084	1406
1339	C640	PHENANTHRENE		178	30 UG/L	1.002	1266
1541	C655	FLUORANTHENE		202	34 UG/L	1.153	1129
1576	C715	PYRENE		202	24 UG/L	0.881	816
1834	C745	BIS(2-ETHYLHEXYL)PHTHALATE	*	149	235 UG/L	1.026	6061

**SURROGATES WERE DILUTED OUT

* BLANK CORRECTED ON DATA SHEET

INST ID: 4000 SAMPLE NUMBER: TANK#4

ORGANICS ANALYSIS DATA SHEET

LABORATORY NAME: KEYSTONE ENV. CASE NO.: --
LAB SAMPLE ID NO.: 880302503 QC REPORT NO.:
SAMPLE MATRIX: WATER CONTRACT NO.: --
DATA RELEASE AUTHORIZED BY: MB DATE SAMPLE RECEIVED: 03-08-88

VOLATILES

CONCENTRATION: LOW DATAFILE: 4U03025V03
DATE ANALYZED: 03/17/88 DILUTION FACTOR: 1.00

	COMPOUND	DETECTION LIMIT (MICROGRAMS / LITER)	AMOUNT FOUND (MICROGRAMS / LITER)
C010	CHLOROMETHANE	10 U	
C015	BROMOMETHANE	10 U	
C020	VINYL CHLORIDE	10 U	
C025	CHLOROETHANE	10 U	
C030	METHYLENE CHLORIDE	5 U	
C045	1,1-DICHLOROETHENE	10 U	
C050	1,1-DICHLOROETHANE	5 U	
C053	1,2-DICHLOROETHENE (TOTAL)	5 U	
C060	CHLOROFORM	5 U	
C065	1,2-DICHLOROETHANE	5 U	
C115	1,1,1-TRICHLOROETHANE	5 U	
C120	CARBON TETRACHLORIDE	5 U	
C130	BROMODICHLOROMETHANE	5 U	
C140	1,2-DICHLOROPROPANE	5 U	
C143	CIS-1,3-DICHLOROPROPENE	5 U	
C150	TRICHLOROETHENE	5 U	
C155	DIBROMOCHLOROMETHANE	5 U	
C160	1,1,2-TRICHLOROETHANE	5 U	
C165	BENZENE	250	5000 *
C172	TRANS-1,3-DICHLOROPROPENE	5 U	
C175	2-CHLOROETHYLVINYLETHER	10 U	
C180	BROMOFORM	5 U	
C220	TETRACHLOROTHENE	5 U	
C225	1,1,2,2-TETRACHLOROETHANE	5 U	
C230	TOLUENE	250	1600 *
C235	CHLOROBENZENE	5 U	
C240	ETHYLBENZENE	5	7
C265	TRICHLOROFLUOROMETHANE	10 U	
C275	ACRYLONITRILE	10 U	
C360	ACROLEIN	20 U	

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT
* = AMOUNT DETERMINED FROM A 1:50 DILUTION.

4000?

Laboratory Name: KEYSTONE EN[redacted]RES., INC.
Case No: 03025

Sample Number
Tank #4

ORGANICS ANALYSIS DATA SHEET
Semivolatile
(Page 2)

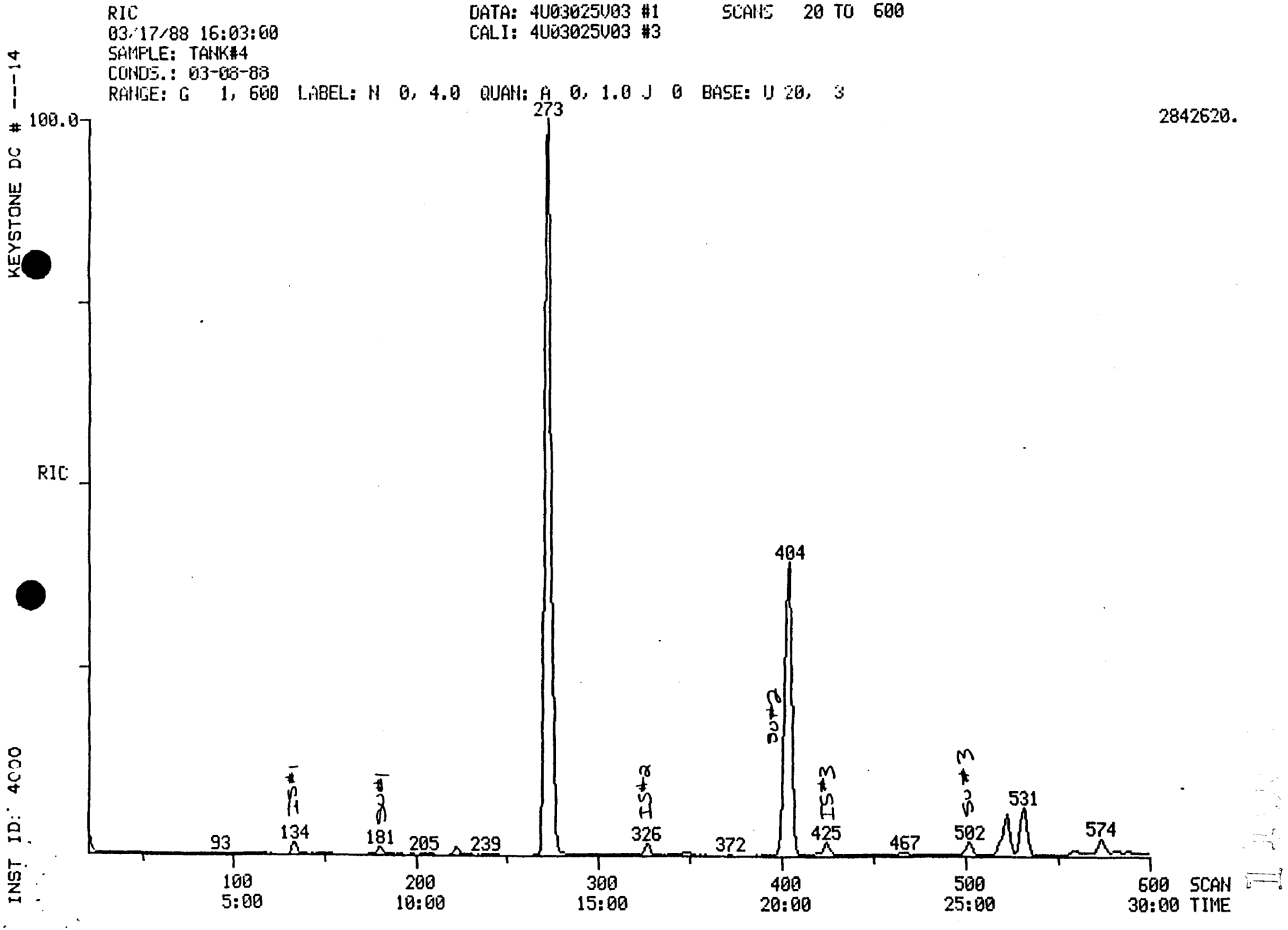
BAT BNA Analyses

Concentration: LOW
Date Extracted/Prepared: 3/8/88
Date Analyzed: 3/22/88
Conc/Dil Factor: 1.
Percent Moisture: (Decanted)

GPC Cleanup ___ Yes _X_ No
Separatory Funnel Extraction ___ Yes
Continuous Liquid-Liquid Extraction _X_ Yes

CAS Number		UG/L		CAS Number		UG/L	
108-95-2	Phenol	38		51-28-5	2,4-Dinitrophenol	10	U
95-57-8	2-Chlorophenol	10	U	100-02-7	4-Nitrophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U	121-14-2	2,4-Dinitrotoluene	10	U
106-46-7	1,4-Dichlorobenzene	10	U	84-66-2	Diethylphthalate	10	U
95-50-1	1,2-Dichlorobenzene	10	U	86-73-7	Fluorene	*570	
39638-32-9	bis(2-Chloroisopropyl)Ether	10	U	534-52-1	4,6-Dinitro-2-Methylphenol	10	U
67-72-1	Hexachloroethane	10	U	118-74-1	Hexachlorobenzene	10	U
98-95-3	Nitrobenzene	10	U	85-01-8	Phenanthrene	*1500	
88-75-5	2-Nitrophenol	10	U	120-12-7	Anthracene	68	
105-67-9	2,4-Dimethylphenol	10		84-74-2	Di-n-Butylphthalate	10	U
120-83-2	2,4-Dichlorophenol	10	U	206-44-0	Fluoranthene	*730	
120-82-1	1,2,4-Trichlorobenzene	10	U	129-00-0	Pyrene	*560	
91-20-3	Naphthalene	68		56-55-3	Benzo(a)Anthracene	86	
87-68-3	Hexachlorobutadiene	10	U	218-01-9	Chrysene	42	
131-11-3	Dimethyl Phthalate	10	U	117-81-7	bis(2-Ethylhexyl)Phthalate	*380	
208-96-8	Acenaphthylene	27		205-99-2	Benzo(b)Fluoranthene	44	
606-20-2	2,6-Dinitrotoluene	10	U	207-08-9	Benzo(k)Fluoranthene	10	U
83-32-9	Acenaphthene	*710		50-32-8	Benzo(a)Pyrene	19	

U = Undetected at the listed detection limit.
J = Compound present below the listed detection limit.
* = Result calculated from 1:20 dilution.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03/17/88 16:03:00
SAMPLE: TANK#4
CONDS.: 03-08-88
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
DATA: 4U03025V03 #1
CALI: 4U03025V03 #3
SCANS 20 TO 600
KEYSTONE DC # ---14
INST ID: 4000
100.0
RIC
2842620.
273
404
IS#1
Surr1
IS#2
Surr2
IS#3
Surr3
93
134
181
205
239
326
372
425
467
502
531
574
100
5:00
200
10:00
300
15:00
400
20:00
500
25:00
600
30:00
SCAN
TIME

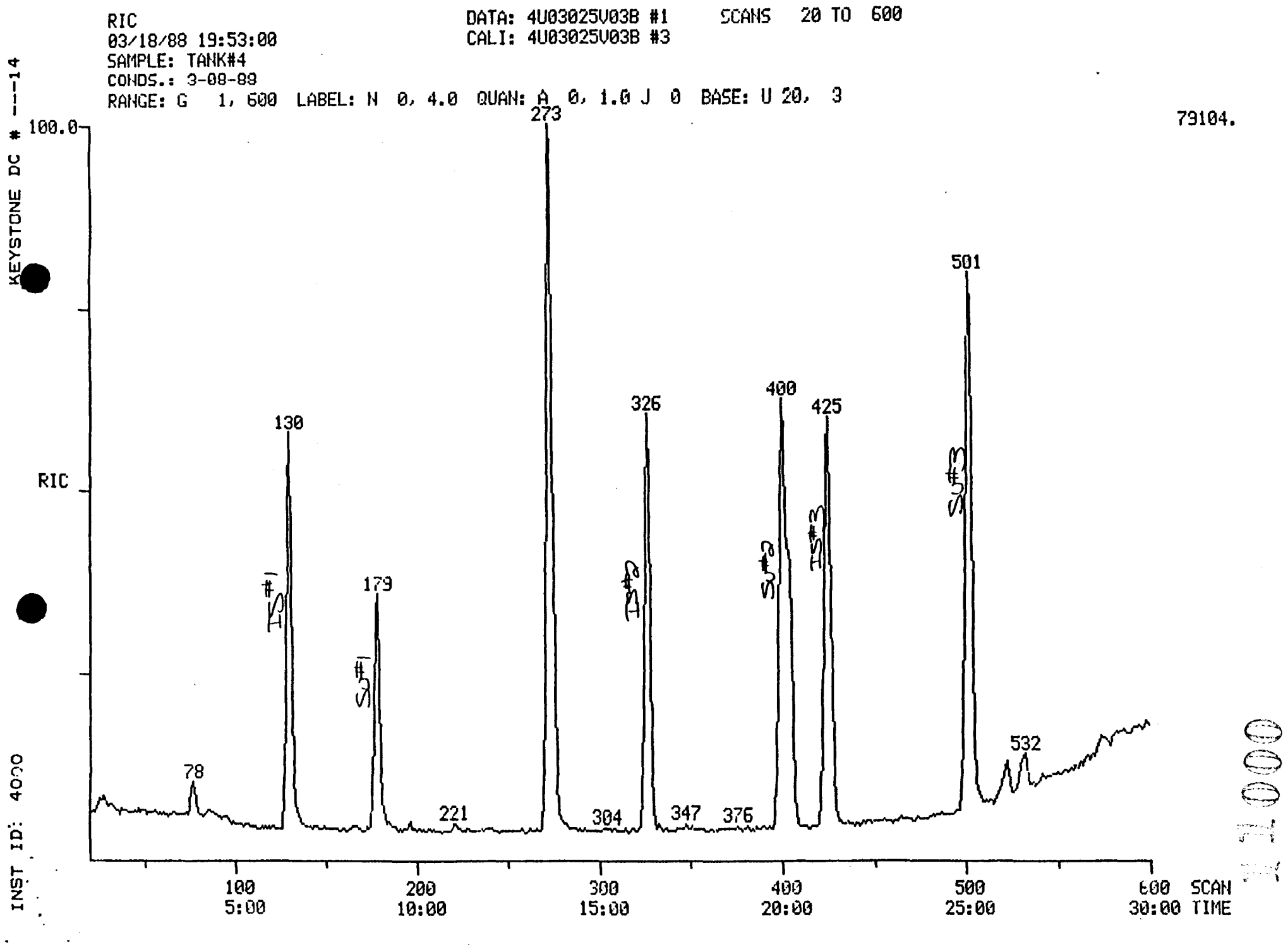
NWT 001441

KEYSTONE DC # ---14

VOA QUANTITATION REPORT

SAMPLE ID.	TANK#4		
FILENAME	4U03025V03	INST	4000
CLIENT	NWTERM	ANALYST	RCJ
DATE INJECTED	03/17/88 16:03:00	VERIFIED BY	WB
CALIB STD DATE	2-23-88	CORR. FACTOR	1.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT		RRT	AREA
134	CI01	BROMOCHLOROMETHANE	**IS1**	128	50	UG/L	1.000	17229
326	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50	UG/L	1.000	59986
425	CI20	D5-CHLOROBENZENE	**IS3**	117	50	UG/L	1.000	46049
181	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	112	%	1.351	35895
400	CS05	D8-TOLUENE	**SU2**	98	93	%	0.941	48401
501	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	90	%	1.179	40479
272	C165	BENZENE		78	2682	UG/L	0.834	3408123
404	C230	TOLUENE		92	1224	UG/L	0.951	936897
464	C240	ETHYLBENZENE		106	7	UG/L	1.092	2785


RIC
03/18/88 19:53:00
SAMPLE: TANK#4
CONDS.: 3-08-89
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
DATA: 4U03025V03B #1 SCANS 20 TO 600
CALI: 4U03025V03B #3
79104.
KEYSTONE DC # ---14
INST ID: 4020
100.0
RIC
78
130
179
221
273
304
326
347
376
400
425
501
532
100
5:00
200
10:00
300
15:00
400
20:00
500
25:00
600 SCAN
30:00 TIME

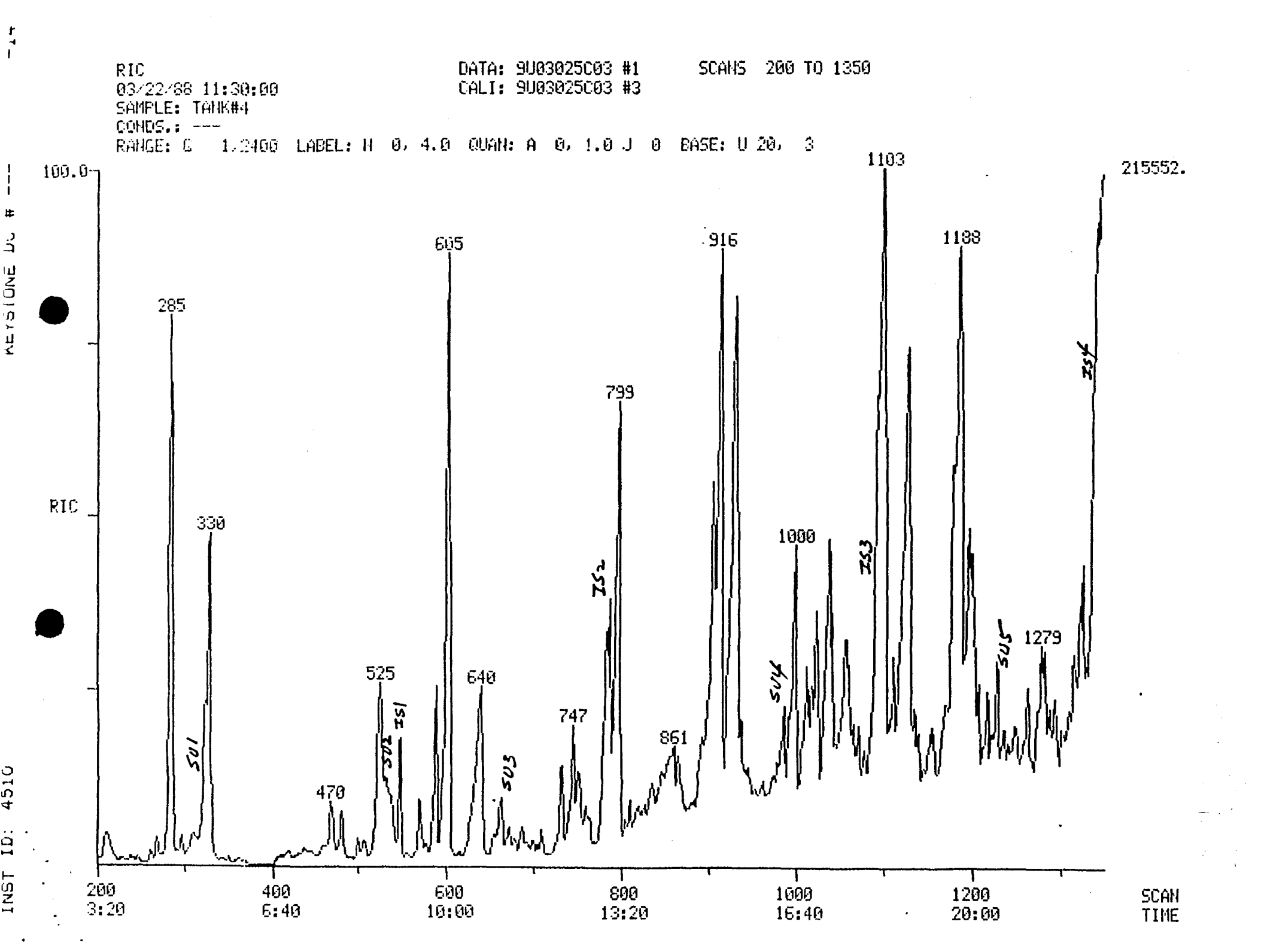
NWT 001443

KEYSTONE DC # ---14

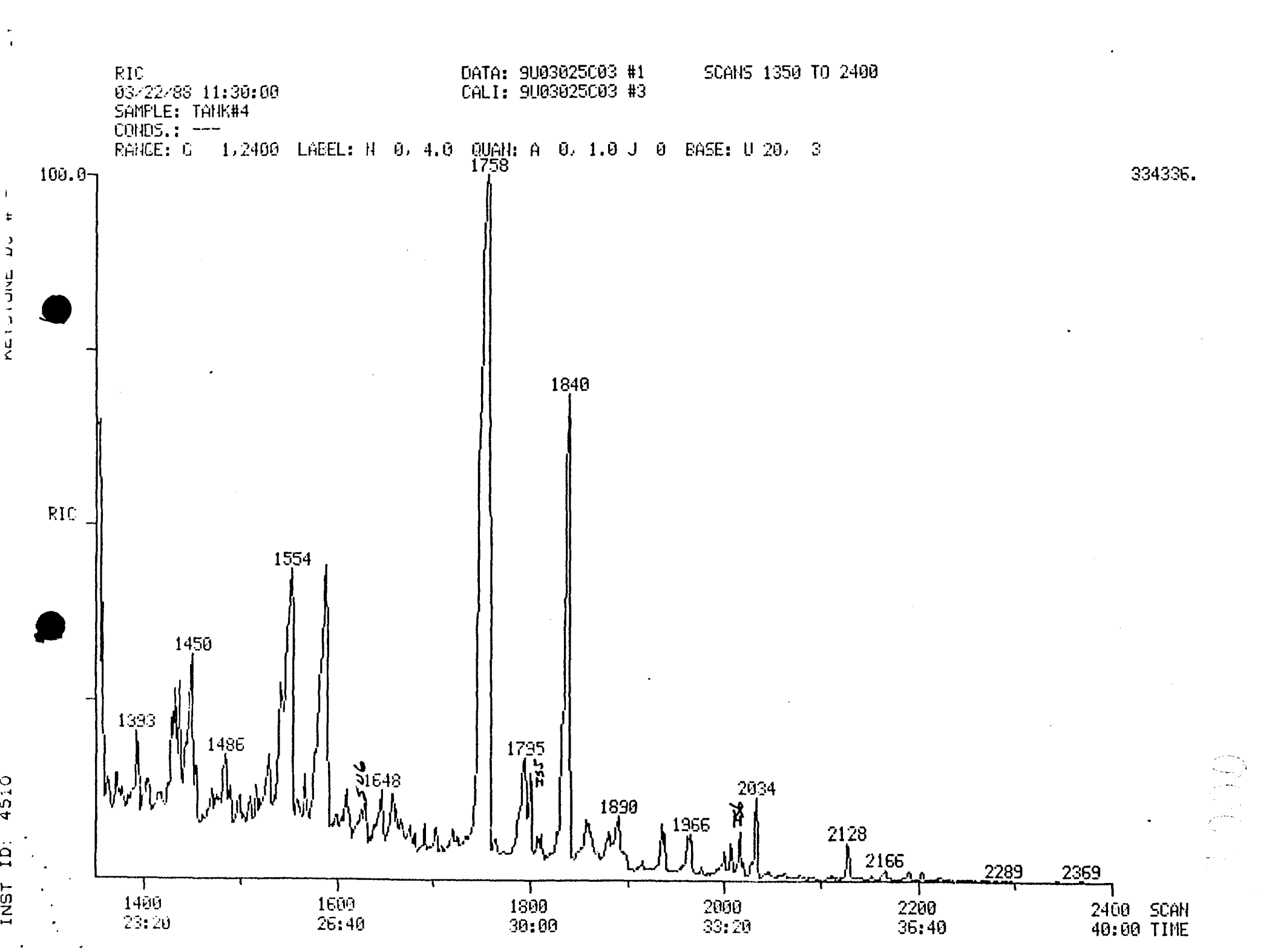
VOA QUANTITATION REPORT

SAMPLE ID.	TANK#4		
FILENAME	4U03025V03B	INST	4000
CLIENT	NWTERM	ANALYST	RCJ
DATE INJECTED	03/18/88 19:53:00	VERIFIED BY	RCJ
CALIB STD DATE	2-23-88	CORR. FACTOR	50.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
130	CI01	BROMOCHLOROMETHANE	**IS1**	128	2500 UG/L	1.000	17784
326	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	2500 UG/L	1.000	61444
425	CI20	D5-CHLOROBENZENE	**IS3**	117	2500 UG/L	1.000	46476
179	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	110 %	1.377	33931
400	CS05	D8-TOLUENE	**SU2**	98	108 %	0.941	51158
501	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	109 %	1.179	44786
77	C030	METHYLENE CHLORIDE		84	223 UG/L	0.592	1951
273	C165	BENZENE		78	4963 UG/L	0.837	111335
404	C230	TOLUENE		92	1650 UG/L	0.951	21371


RIC
03/22/88 11:30:00
SAMPLE: TANK#4
CONDS.: ---
RANGE: C 1.2400 LABEL: H 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
DATA: 9U03025C03 #1
CALI: 9U03025C03 #3
SCANS 200 TO 1350
100.0
215552.
RIC
285
330
470
525
605
640
747
799
861
916
1000
1103
1188
1279
SU1
SU2
IS1
SU3
IS2
SU4
IS3
SU5
IS4
200
3:20
400
6:40
600
10:00
800
13:20
1000
16:40
1200
20:00
SCAN
TIME

NWT 001445


RIC
03/22/88 11:30:00
SAMPLE: TANK#4
CONDS.: ---
DATA: 9U03025C03 #1
CALI: 9U03025C03 #3
SCANS 1350 TO 2400
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
100.0
334336.
RIC
1758
1840
1554
1450
1393
1486
1648
1735
1890
1966
2034
2128
2166
2289
2369
1400
23:20
1600
26:40
1800
30:00
2000
33:20
2200
36:40
2400
40:00
SCAN
TIME

NWT 001446

SEMIVOLATILE WATER REPORT

SAMPLE ID. TANK#4

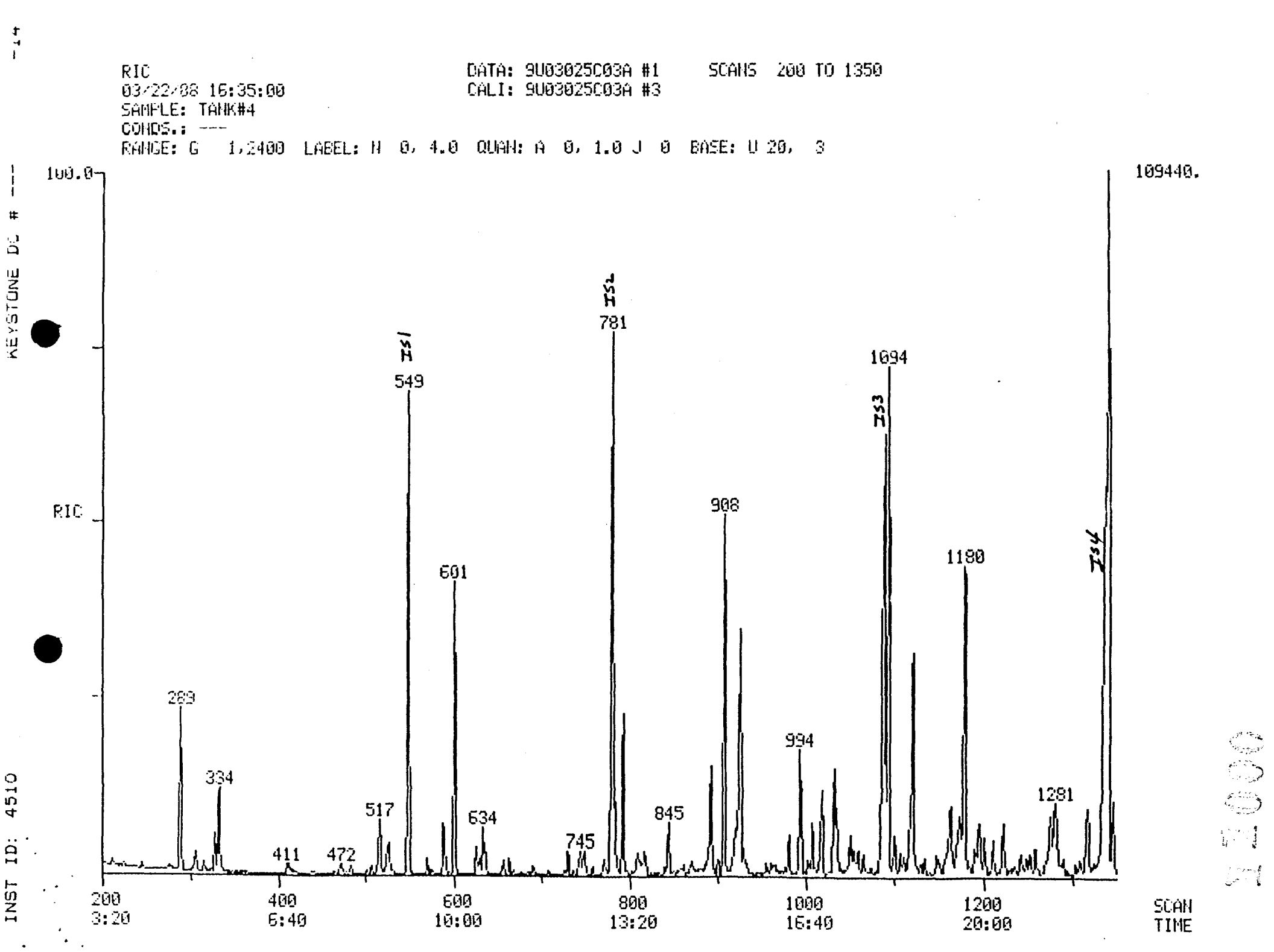
FILENAME 9003025C03 INST ID. 4510

CLIENT NW TERMI ANALYST CEB

DATE INJECTED 03/22/88 11:30:00 VERIFIED BY ypm

CALIB STD DATE 03/17/88 CORR. FACTOR 1.00

SCAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
548	CI30	1,4-DICHLOROBENZENE-D4 ** IS	152	40 UG/L	1.000	2640
785	CI40	NAPHTHALENE-D8 ** IS2 **	136	40 UG/L	1.000	8216
1096	CI50	ACENAPHTHENE-D10 ** IS3 **	164	40 UG/L	1.000	3856
1347	CI60	PHENANTHRENE-D10 ** IS4 **	188	40 UG/L	1.000	4764
1797	CI70	CHRYSENE-D12 ** IS5 **	240	40 UG/L	1.000	3338
2017	CI75	PERYLENE-D12 ** IS6 **	264	40 UG/L	1.000	2824
311	CS50	2-FLUOROPHENOL ** SU1 **	112	7~~0~~35 %	0.568	4211
532	CS45	PHENOL-D5 ** SU2 **	99	66~~33~~ %	0.971	4207
1235	CS55	2,4,6-TRIBROMOPHENOL ** SU5	330	108~~54~~ %	1.127	448
662	CS20	NITROBENZENE-D5 ** SU3 **	82	86~~43~~ % ypm	0.843	1969
987	CS25	2-FLUOROBIPHENYL ** SU4 **	172	86~~43~~ % ypm	0.901	4773
1626	CS30	TERPHENYL-D14 ** SU6 **	244	46~~23~~ %	0.905	919
534	C315	PHENOL	94	38 UG/L	0.974	5586
764	C425	2,4-DIMETHYLPHENOL	107	10 UG/L	0.973	789
788	C450	NAPHTHALENE	128	68 UG/L	1.004	17313
1066	C540	ACENAPHTHYLENE	152	27 UG/L	0.973	4885
1103	C550	ACENAPHTHENE	153	442 UG/L	1.006	48986
1188	C590	FLUORENE	166	361 UG/L	1.084	46564
1354	C640	PHENANTHRENE	178	889 UG/L	1.005	128974
1357	C645	ANTHRACENE	178	68 UG/L	1.007	9473
1554	C655	FLUORANTHENE	202	509 UG/L	1.154	57090
1589	C715	PYRENE	202	279 UG/L	0.884	46266
1795	C730	BENZO(A)ANTHRACENE	228	86 UG/L	0.999	10764
1840	C745	BIS(2-ETHYLHEXYL)PHTHALATE	149	301 UG/L	1.024	38382
1801	C740	CHRYSENE	228	42 UG/L	1.002	4952
1963	C765	BENZO(B)FLUORANTHENE	252	44 UG/L	0.973	5054
2008	C775	BENZO(A)PYRENE	252	19 UG/L	0.996	1957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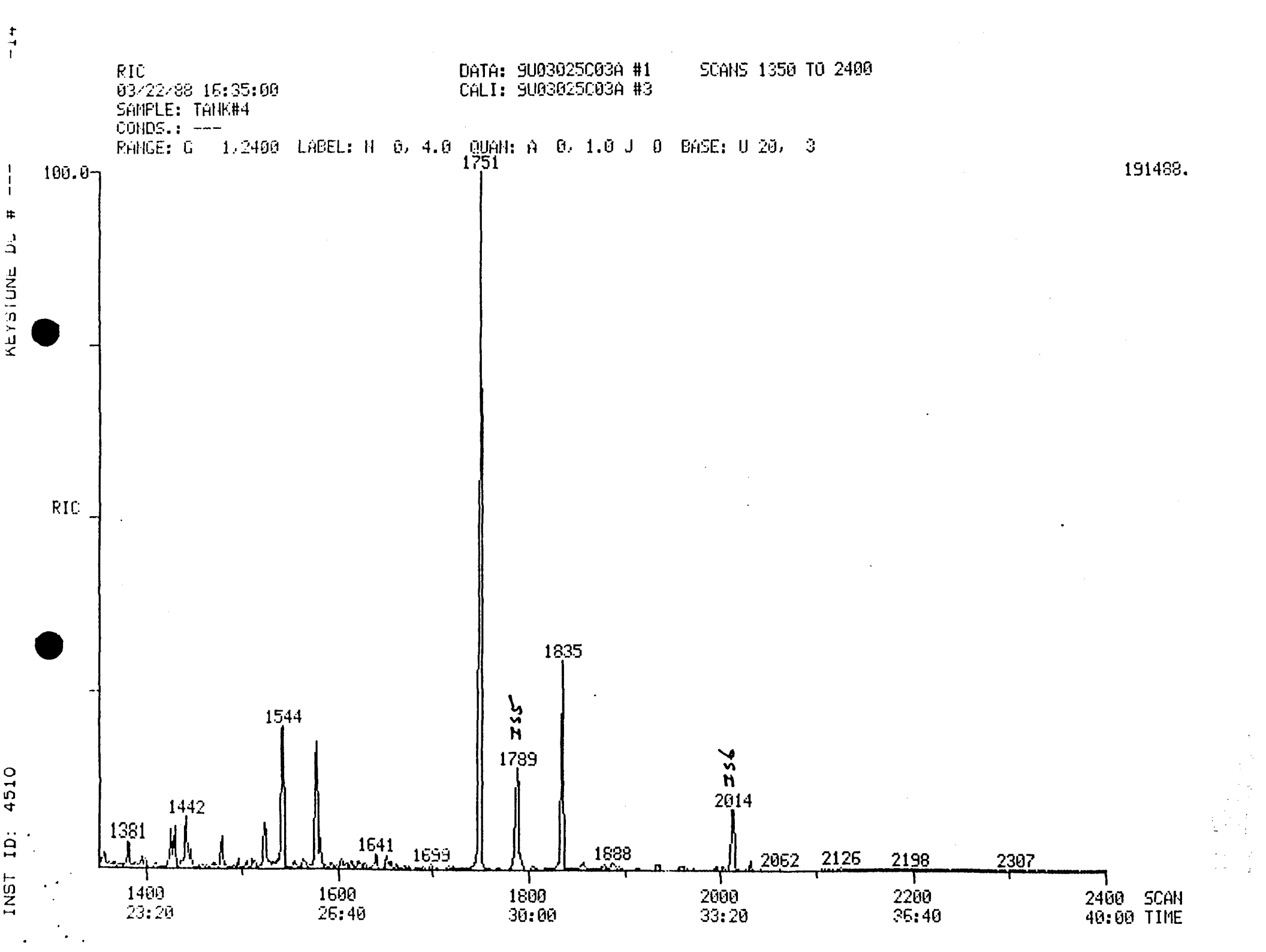
03/22/08 16:35:00
SAMPLE: TANK#4
CONDS.: ---
DATA: 9U03025C03A #1
CALI: 9U03025C03A #3
SCANS 200 TO 1350
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
100.0
109440.
RIC
IS1
549
IS2
781
IS3
1094
IS4
289
334
411
472
517
601
634
745
845
908
994
1180
1281
200
3:20
400
6:40
600
10:00
800
13:20
1000
16:40
1200
20:00
SCAN
TIME
KEYSTONE DE # ---
INST ID: 4510

NWT 001448


RIC
03/22/88 16:35:00
SAMPLE: TANK#4
CONDS.: ---
DATA: 9U03025C03A #1
CALI: 9U03025C03A #3
SCANS 1350 TO 2400
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
100.0
191488.
RIC
1751
1835
1544
1789
2014
1442
1381
1641
1699
1888
2062
2126
2198
2307
1400
23:20
1600
26:40
1800
30:00
2000
33:20
2200
36:40
2400
40:00
SCAN
TIME
KEYSTONE DL # ---
INST ID: 4510

NWT 001449

SEMIVOLATILE WATER REPORT

SAMPLE ID. TANK#4

FILENAME 9U03025C03A INST ID. 4510

CLIENT NW TERMI ANALYST CEB

DATE INJECTED 03/22/88 16:35:00 VERIFIED BY

CALIB STD DATE 03/17/88 CORR. FACTOR 20.00

SCAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
549	CI30	1,4-DICHLOROBENZENE-D4 ** IS	152	800 UG/L	1.000	2851
781	CI40	NAPHTHALENE-D8 ** IS2 **	136	800 UG/L	1.000	10087
1089	CI50	ACENAPHTHENE-D10 ** IS3 **	164	800 UG/L	1.000	5331
1338	CI60	PHENANTHRENE-D10 ** IS4 **	188	800 UG/L	1.000	7429
1789	CI70	CHRYSENE-D12 ** IS5 **	240	800 UG/L	1.000	3627
2013	CI75	PERYLENE-D12 ** IS6 **	264	800 UG/L	1.000	2663
517	C315	PHENOL	94	107 UG/L	0.942	846
784	C450	NAPHTHALENE	128	105 UG/L	1.004	1637
1094	C550	ACENAPHTHENE	153	711 UG/L	1.005	5453
1180	C590	FLUORENE	166	566 UG/L	1.084	5038
1342	C640	PHENANTHRENE	178	1504 UG/L	1.003	17006
1348	C645	ANTHRACENE	178	95 UG/L	1.007	1025
1543	C655	FLUORANTHENE	202	726 UG/L	1.153	6350
1579	C715	PYRENE	202	559 UG/L	0.883	5041
1786	C730	BENZO(A)ANTHRACENE	228	94 UG/L	0.998	634
1835	C745	BIS(2-ETHYLHEXYL)PHTHALATE *	149	556 UG/L	1.026	3854
1792	C740	CHRYSENE	228	97 UG/L	1.002	627

* Blank Corrected On Data Sheet

** SURROGATES WERE DILUTED OUT

INST. ID: 51EF SAMPLE NUMBER: TRIP BLANK

ORGANICS ANALYSIS DATA SHEET

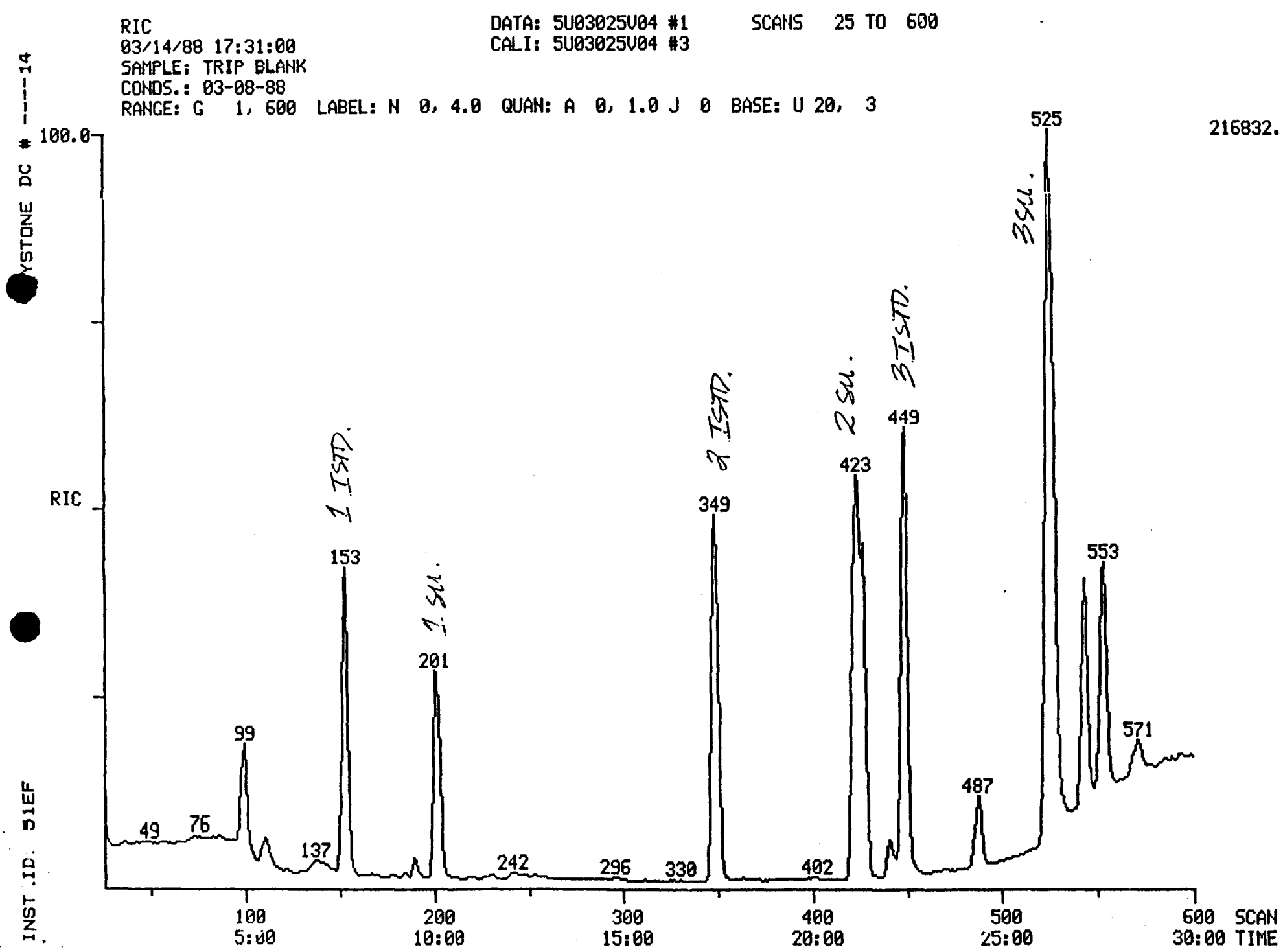
LABORATORY NAME: KEYSTONE ENV. CASE NO.: ---
LAB SAMPLE ID NO.: 880302504 QC REPORT NO.:
SAMPLE MATRIX: WATER CONTRACT NO.: --
DATA RELEASE AUTHORIZED BY:..... DATE SAMPLE RECEIVED: 03-08-88

VOLATILES

CONCENTRATION: LOW DATAFILE: 5U03025V04
DATE ANALYZED: 03/14/88 DILUTION FACTOR: 1.00

	COMPOUND	DETECTION LIMIT (MICROGRAMS / LITER)	AMOUNT FOUND
C010	CHLOROMETHANE	10 U	
C015	BROMOMETHANE	10 U	
C020	VINYL CHLORIDE	10 U	
C025	CHLOROETHANE	10 U	
C030	METHYLENE CHLORIDE	5	11
C045	1,1-DICHLOROETHENE	5 U	
C050	1,1-DICHLOROETHANE	5 U	
C053	1-2,DICHLOROETHENE (TOTAL)	5 U	
C060	CHLOROFORM	5 U	
C065	1,2-DICHLOROETHANE	5 U	
C115	1,1,1-TRICHLOROETHANE	5 U	
C120	CARBON TETRACHLORIDE	5 U	
C130	BROMODICHLOROMETHANE	5 U	
C140	1,2-DICHLOROPROPANE	5 U	
C143	CIS-1,3-DICHLOROPROPENE	5 U	
C150	TRICHLOROETHENE	5 U	
C155	DIBROMOCHLOROMETHANE	5 U	
C160	1,1,2-TRICHLOROETHANE	5 U	
C165	BENZENE	5 U	
C172	TRANS-1,3-DICHLOROPROPENE	5 U	
C175	2-CHLOROETHYLVINYLETHER	10 U	
C180	BROMOFORM	5 U	
C220	TETRACHLOROETHENE	5 U	
C225	1,1,2,2-TETRACHLOROETHANE	5 U	
C230	TOLUENE	5	32
C235	CHLOROBENZENE	5 U	
C240	ETHYLBENZENE	5	7
C265	TRICHLOROFLUOROMETHANE	10 U	
C275	ACRYLONITRILE	10 U	
C360	ACROLEIN	20 U	

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT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03/14/88 17:31:00
SAMPLE: TRIP BLANK
CONDS.: 03-08-88
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
DATA: 5U03025V04 #1
CALI: 5U03025V04 #3
SCANS 25 TO 600
216832.
100.0
RIC
INST.ID. 51EF
1 ISTD.
1 SU.
2 ISTD.
2 SU.
3 ISTD.
3 SU.
49
76
99
137
153
201
242
296
330
349
402
423
449
487
525
553
571
100
5:00
200
10:00
300
15:00
400
20:00
500
25:00
600 SCAN
30:00 TIME

NWT 001452

KEYSTON[redacted]DC # ----14

VOA QUANTITATION REPORT

SAMPLE ID.	TRIP BLANK		
FILENAME	5U03025V04	INST	51EF
CLIENT	NW TERMI	ANALYST	SC
DATE INJECTED	03/14/88 17:31:00	VERIFIED BY	NB
CALIB STD DATE	03-09-88	CORR. FACTOR	1.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT		RRT	AREA
152	CI01	BROMOCHLOROMETHANE	**IS1**	128	50	UG/L	1.000	34983
349	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50	UG/L	1.000	151227
448	CI20	D5-CHLOROBENZENE	**IS3**	117	50	UG/L	1.000	138936
201	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	89	%	1.322	69101
423	CS05	D8-TOLUENE	**SU2**	98	91	%	0.944	145041
524	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	102	%	1.170	139368
99	C030	METHYLENE CHLORIDE		84	11	UG/L	0.651	15714
427	C230	TOLUENE		92	32	UG/L	0.953	75002
487	C240	ETHYLBENZENE		106	7	UG/L	1.087	9438

INST ID: 4000 SAMPLE NUMBER: VLBKW

ORGANICS ANALYSIS DATA SHEET

LABORATORY NAME: KEYSTONE ENV.
LAB SAMPLE ID NO.: 88
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: MB

CASE NO.: --
QC REPORT NO.:
CONTRACT NO.: --
DATE SAMPLE RECEIVED: 03-18-88

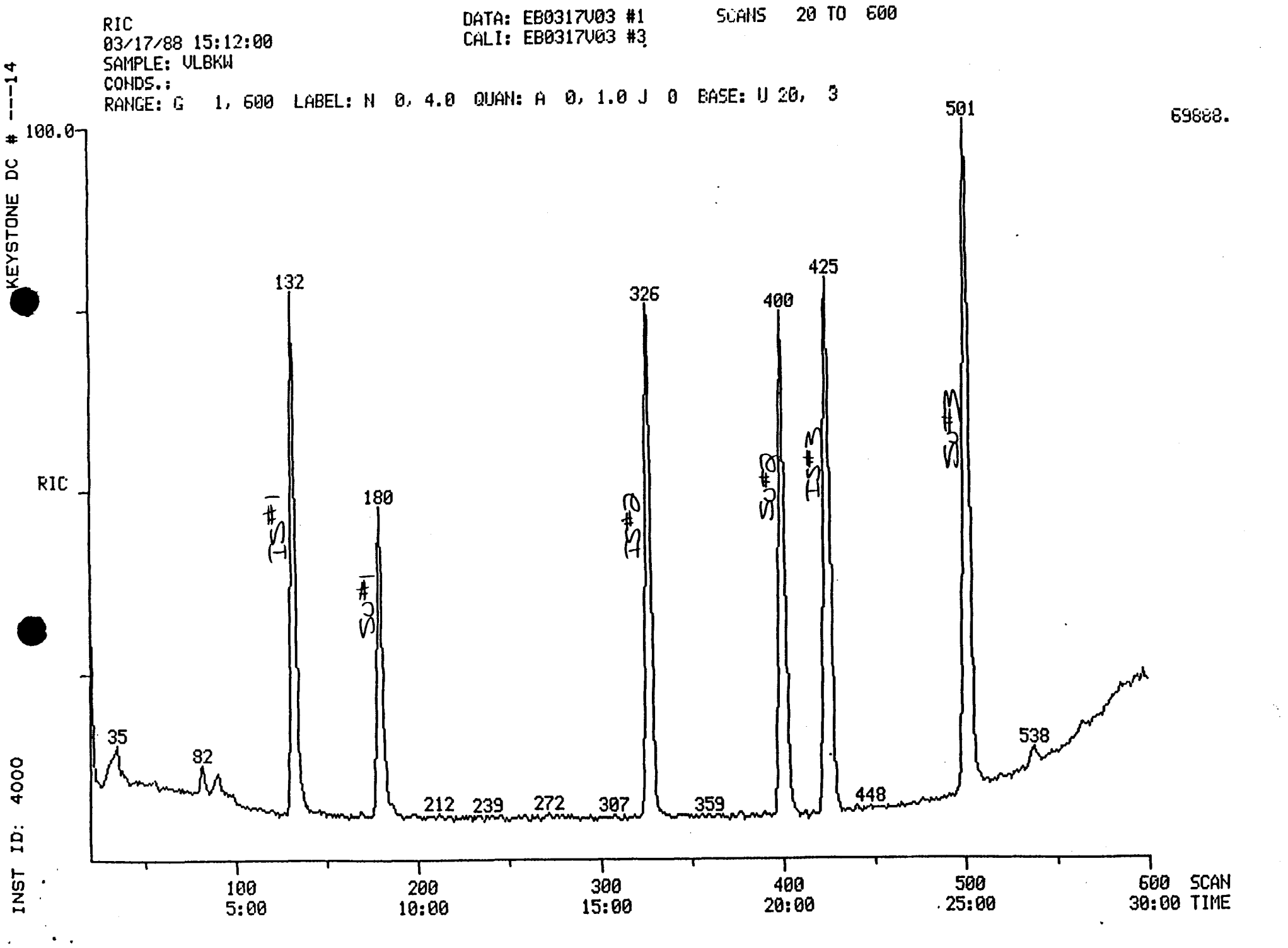
VOLATILES

CONCENTRATION: LOW
DATE ANALYZED: 03/17/88

DATAFILE: EB0317V03
DILUTION FACTOR: 1.00

	COMPOUND	DETECTION LIMIT (MICROGRAMS / LITER)	AMOUNT FOUND
C010	CHLOROMETHANE	10 U	
C015	BROMOMETHANE	10 U	
C020	VINYL CHLORIDE	10 U	
C025	CHLOROETHANE	10 U	
C030	METHYLENE CHLORIDE	5 U	
C045	1,1-DICHLOROETHENE	10 U	
C050	1,1-DICHLOROETHANE	5 U	
C053	1,2-DICHLOROETHENE (TOTAL)	5 U	
C060	CHLOROFORM	5 U	
C065	1,2-DICHLOROETHANE	5 U	
C115	1,1,1-TRICHLOROETHANE	5 U	
C120	CARBON TETRACHLORIDE	5 U	
C130	BROMODICHLOROMETHANE	5 U	
C140	1,2-DICHLOROPROPANE	5 U	
C143	CIS-1,3-DICHLOROPROPENE	5 U	
C150	TRICHLOROETHENE	5 U	
C155	DIBROMOCHLOROMETHANE	5 U	
C160	1,1,2-TRICHLOROETHANE	5 U	
C165	BENZENE	5 U	
C172	TRANS-1,3-DICHLOROPROPENE	5 U	
C175	2-CHLOROETHYLVINYLETHER	10 U	
C180	BROMOFORM	5 U	
C220	TETRACHLOROTHENE	5 U	
C225	1,1,2,2-TETRACHLOROETHANE	5 U	
C230	TOLUENE	5 U	
C235	CHLOROBENZENE	5 U	
C240	ETHYLBENZENE	5 U	
C265	TRICHLOROFLUOROMETHANE	10 U	
C275	ACRYLONITRILE	10 U	
C360	ACROLEIN	20 U	

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT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03/17/88 15:12:00
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CONDS.:
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
DATA: EB0317V03 #1
CALI: EB0317V03 #3
SCANS 20 TO 600
KEYSTONE DC # ---14
INST ID: 4000
100.0
RIC
69888.
35
82
132
IS#1
180
SU#1
212
239
272
307
326
IS#2
359
400
SU#2
425
IS#3
448
501
SU#3
538
100
5:00
200
10:00
300
15:00
400
20:00
500
25:00
600
30:00
SCAN
TIME

NWT 001455

KEYSTONE DC # ---14

VOA QUANTITATION REPORT

SAMPLE ID.	VLBKW		
FILENAME	EB0317V03	INST	4000
CLIENT	KEYSTONE	ANALYST	RCJ
DATE INJECTED	03/17/88 15:12:00	VERIFIED BY	
CALIB STD DATE	2-23-88	CORR. FACTOR	1.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT		RRT	AREA
132	CI01	BROMOCHLOROMETHANE	**IS1**	128	50	UG/L	1.000	19866
326	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50	UG/L	1.000	67913
424	CI20	D5-CHLOROBENZENE	**IS3**	117	50	UG/L	1.000	53059
180	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	103	%	1.364	37819
400	CS05	D8-TOLUENE	**SU2**	98	100	%	0.943	59535
501	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	102	%	1.182	52659
90	C035	ACETONE		43	12	UG/L	0.682	3272

INST. ID: 51EF SAMPLE NUMBER: BLKW

ORGANICS ANALYSIS DATA SHEET

LABORATORY NAME: KEYSTONE ENV.
LAB SAMPLE ID NO.: 88
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: MB

CASE NO.: ---
QC REPORT NO.:
CONTRACT NO.: --
DATE SAMPLE RECEIVED: 03-09-88

VOLATILES

CONCENTRATION: LOW
DATE ANALYZED: 03/14/88

DATAFILE: 5B0314V01
DILUTION FACTOR: 1.00

	COMPOUND	DETECTION LIMIT (MICROGRAMS / LITER)	AMOUNT FOUND
C010	CHLOROMETHANE	10 U	
C015	BROMOMETHANE	10 U	
C020	VINYL CHLORIDE	10 U	
C025	CHLOROETHANE	10 U	
C030	METHYLENE CHLORIDE	5 U	
C045	1,1-DICHLOROETHENE	5 U	
C050	1,1-DICHLOROETHANE	5 U	
C053	1-2, DICHLOROETHENE (TOTAL)	5 U	
C060	CHLOROFORM	5 U	
C065	1,2-DICHLOROETHANE	5 U	
C115	1,1,1-TRICHLOROETHANE	5 U	
C120	CARBON TETRACHLORIDE	5 U	
C130	BROMODICHLOROMETHANE	5 U	
C140	1,2-DICHLOROPROPANE	5 U	
C143	CIS-1,3-DICHLOROPROPENE	5 U	
C150	TRICHLOROETHENE	5 U	
C155	DIBROMOCHLOROMETHANE	5 U	
C160	1,1,2-TRICHLOROETHANE	5 U	
C165	BENZENE	5 U	
C172	TRANS-1,3-DICHLOROPROPENE	5 U	
C175	2-CHLOROETHYLVINYLETHER	10 U	
C180	BROMOFORM	5 U	
C220	TETRACHLOROETHENE	5 U	
C225	1,1,2,2-TETRACHLOROETHANE	5 U	
C230	TOLUENE	5 U	
C235	CHLOROBENZENE	5 U	
C240	ETHYLBENZENE	5 U	
C265	TRICHLOROFLUOROMETHANE	10 U	
C275	ACRYLONITRILE	10 U	
C360	ACROLEIN	20 U	

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

11000

Laboratory Name: KEYSTONE ENV. RES., INC.
Case No: 03025

Sample Number: SBLK1

ORGANICS ANALYSIS DATA SHEET
Semivolatile
(Page 2)

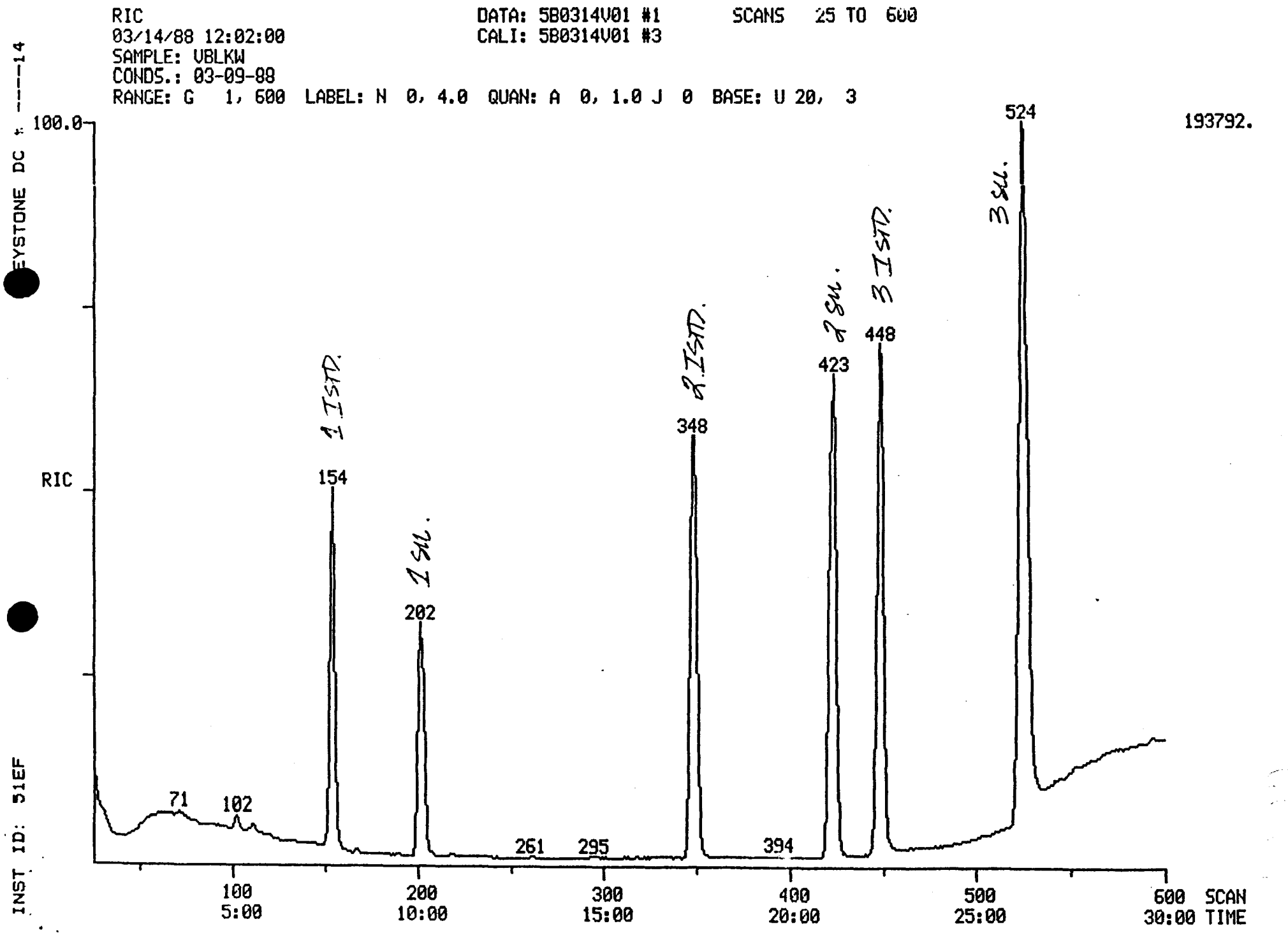
BAT BNA Analyses

Concentration: LOW
Date Extracted/Prepared: 3/8/88
Date Analyzed: 3/24/88
Conc/Dil Factor: 1.
Percent Moisture: (Decanted)

GPC Cleanup ___ Yes _X_ No
Separatory Funnel Extraction ___ Yes
Continuous Liquid-Liquid Extraction _X_ Yes

CAS Number		UG/L		CAS Number		UG/L	
108-95-2	Phenol	10	U	51-28-5	2,4-Dinitrophenol	10	U
95-57-8	2-Chlorophenol	10	U	100-02-7	4-Nitrophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U	121-14-2	2,4-Dinitrotoluene	10	U
106-46-7	1,4-Dichlorobenzene	10	U	84-66-2	Diethylphthalate	10	U
95-50-1	1,2-Dichlorobenzene	10	U	86-73-7	Fluorene	10	U
39638-32-9	bis(2-Chloroisopropyl)Ether	10	U	534-52-1	4,6-Dinitro-2-Methylphenol	10	U
67-72-1	Hexachloroethane	10	U	118-74-1	Hexachlorobenzene	10	U
98-95-3	Nitrobenzene	10	U	85-01-8	Phenanthrene	10	U
88-75-5	2-Nitrophenol	10	U	120-12-7	Anthracene	10	U
105-67-9	2,4-Dimethylphenol	10	U	84-74-2	Di-n-Butylphthalate	10	U
120-83-2	2,4-Dichlorophenol	10	U	206-44-0	Fluoranthene	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U	129-00-0	Pyrene	10	U
91-20-3	Naphthalene	10	U	56-55-3	Benzo(a)Anthracene	10	U
87-68-3	Hexachlorobutadiene	10	U	218-01-9	Chrysene	10	U
131-11-3	Dimethyl Phthalate	10	U	117-81-7	bis(2-Ethylhexyl)Phthalate	9	J
208-96-8	Acenaphthylene	10	U	205-99-2	Benzo(b)Fluoranthene	10	U
606-20-2	2,6-Dinitrotoluene	10	U	207-08-9	Benzo(k)Fluoranthene	10	U
83-32-9	Acenaphthene	10	U	50-32-8	Benzo(a)Pyrene	10	U

U = Undetected at the listed detection limit.
J = Compound present below the listed detection limit.


RIC
03/14/88 12:02:00
SAMPLE: VBLKW
CONDS.: 03-09-88
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
DATA: 5B0314V01 #1
CALI: 5B0314V01 #3
SCANS 25 TO 600
100.0
RIC
193792.
1 ISTD.
1 SU.
2 ISTD.
2 SU.
3 ISTD.
3 SU.
71
102
154
202
261
295
348
394
423
448
524
100
5:00
200
10:00
300
15:00
400
20:00
500
25:00
600 SCAN
30:00 TIME
INST ID: 51EF
EYSTONE DC * ----14

KEYSTO[redacted]DC # ----14

VOA QUANTITATION REPORT

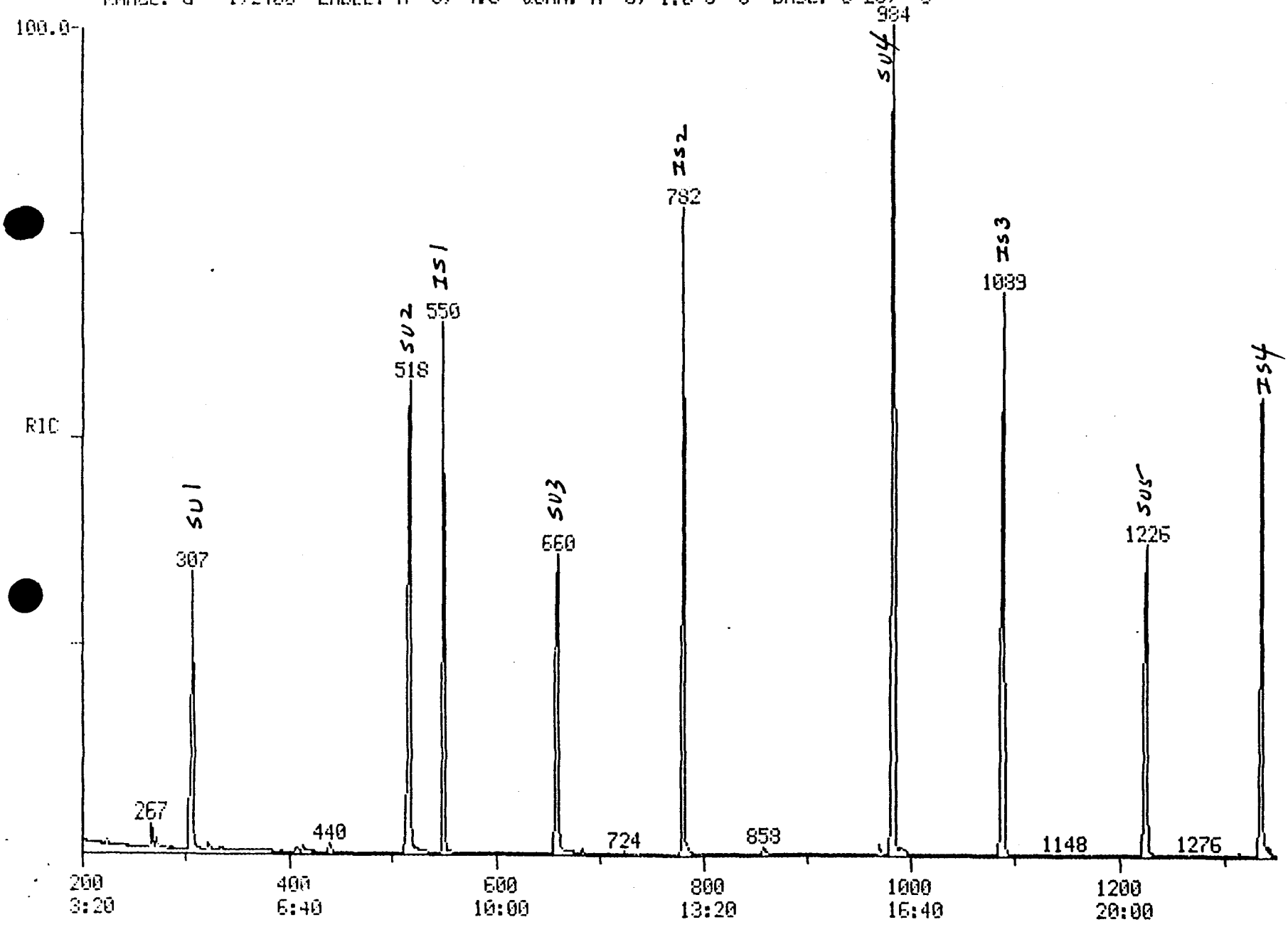
SAMPLE ID.	VBLKW		
FILENAME	5B0314V01	INST	51EF
CLIENT	KEYSTONE	ANALYST	SC
DATE INJECTED	03/14/88 12:02:00	VERIFIED BY	MB
CALIB STD DATE	03-09-88	CORR. FACTOR	1.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT		RRT	AREA
154	CI01	BROMOCHLOROMETHANE	**IS1**	128	50	UG/L	1.000	33577
348	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50	UG/L	1.000	159411
448	CI20	D5-CHLOROBENZENE	**IS3**	117	50	UG/L	1.000	141904
202	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	90	%	1.312	66808
423	CS05	D8-TOLUENE	**SU2**	98	97	%	0.944	157772
524	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	101	%	1.170	141026

RIC
03/24/88 0:18:00
SAMPLE: SBLK1
CONDS.: ---
RANGE: G 1.2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 9B03025C01A #1
CALI: 9B03025C01A #3

SCANS 200 TO 1350

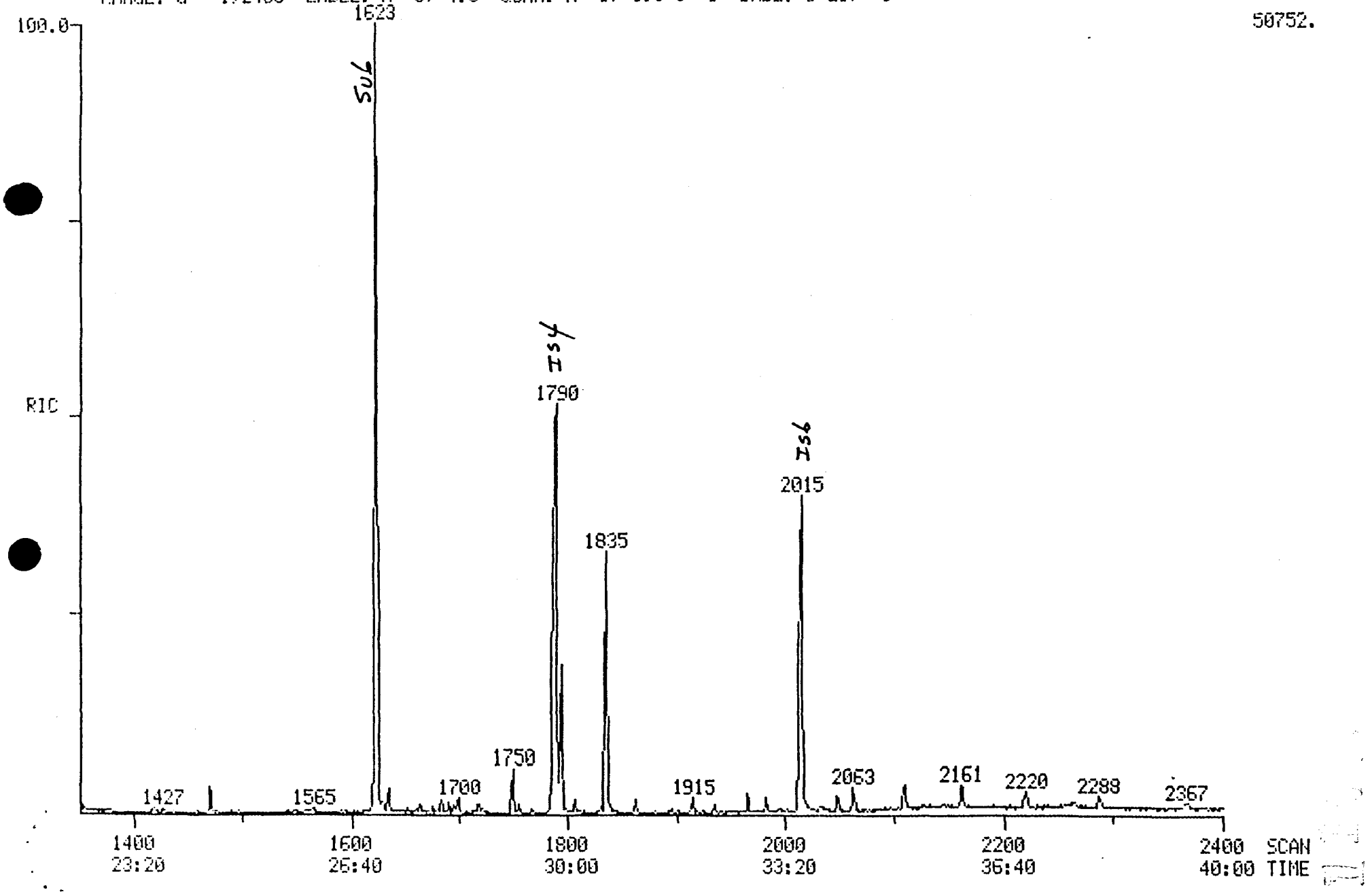


INST ID: 4510

NWT 001461

RIC
03/24/88 0:18:00
SAMPLE: SBLK1
CONDS.: ---
RANGE: G 1.2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 9B03025C01A #1 SCANS 1350 TO 2400
CALI: 9B03025C01A #3



KEYSTONE DL # ---

INST ID: 4510

NWT 001462

SEMIVOLATILE WATER REPORT

SAMPLE ID. SBLK1

FILENAME 9B03025C01A INST ID. 4510

CLIENT NW TERMI ANALYST CEB

DATE INJECTED 03/24/88 0:18:00 VERIFIED BY

CALIB STD DATE 03/17/88 CORR. FACTOR 1.00

SCAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
550	CI30	1,4-DICHLOROBENZENE-D4 ** IS	152	40 UG/L	1.000	3013
782	CI40	NAPHTHALENE-D8 ** IS2 **	136	40 UG/L	1.000	10367
1099	CI50	ACENAPHTHENE-D10 ** IS3 **	164	40 UG/L	1.000	5792
1357	CI60	PHENANTHRENE-D10 ** IS4 **	188	40 UG/L	1.000	8508
1790	CI70	CHRYSENE-D12 ** IS5 **	240	40 UG/L	1.000	3476
2015	CI75	PERYLENE-D12 ** IS6 **	264	40 UG/L	1.000	2784
307	CS50	2-FLUOROPHENOL ** SU1 **	112	31 %	0.558	3854
518	CS45	PHENOL-D5 ** SU2 **	99	71 %	0.942	9927
1225	CS55	2,4,6-TRIBROMOPHENOL ** SU5	330	87 %	1.125	1182
660	CS20	NITROBENZENE-D5 ** SU3 **	82	77 %	0.844	417E
984	CS25	2-FLUOROBIPHENYL ** SU4 **	172	68 %	0.904	1171E
1623	CS30	TERPHENYL-D14 ** SU6 **	244	122 %	0.907	4924
1835	C745	BIS(2-ETHYLHEXYL)PHTHALATE	149	9 UG/L	1.025	1151

INST ID: 4000 SAMPLE NUMBER: VBLK

ORGANICS ANALYSIS DATA SHEET

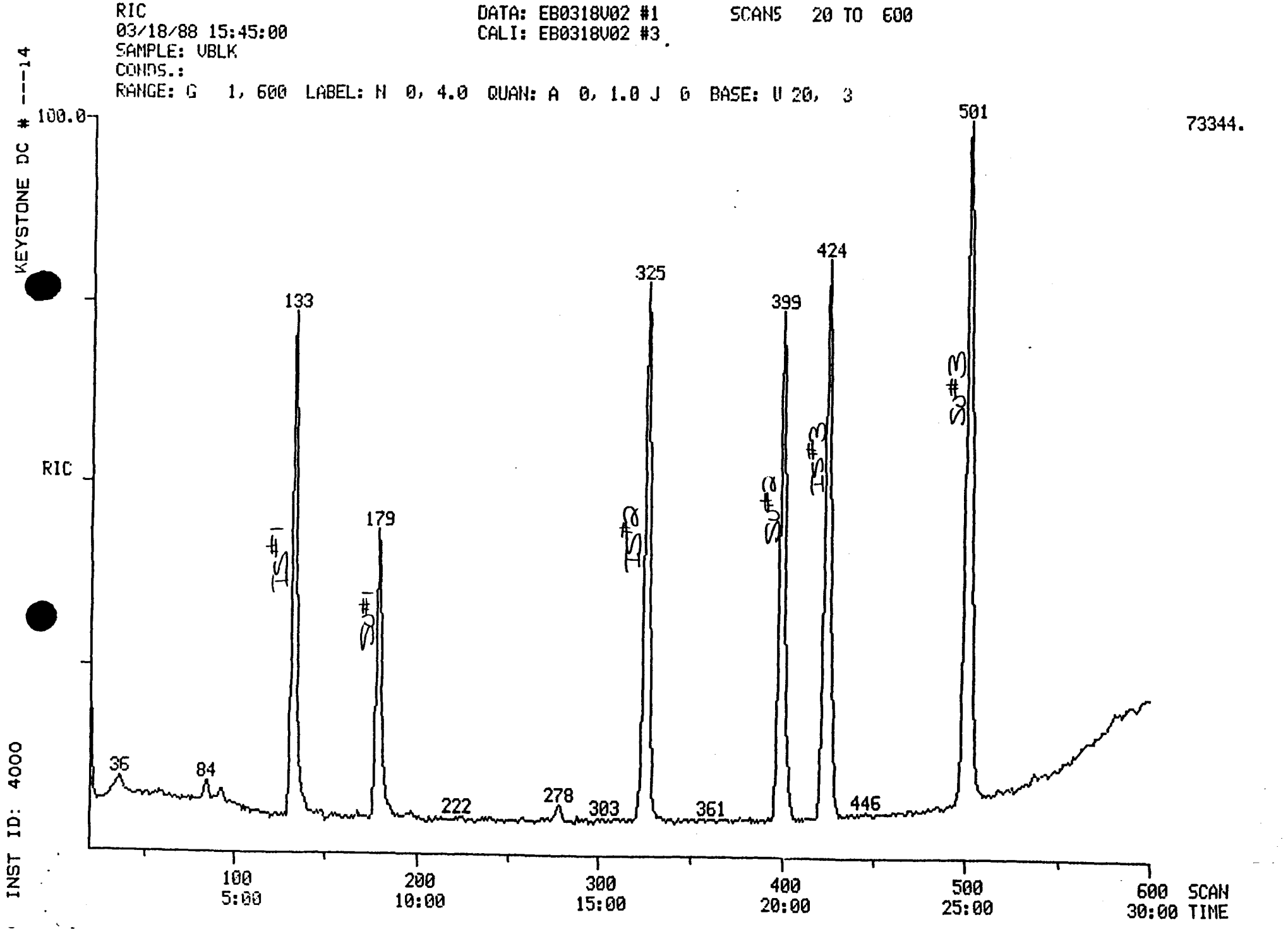
LABORATORY NAME: KEYSTONE ENV. CASE NO.: --
LAB SAMPLE ID NO.: 88 QC REPORT NO.:
SAMPLE MATRIX: WATER CONTRACT NO.: --
DATA RELEASE AUTHORIZED BY: MB DATE SAMPLE RECEIVED: 03-08-88

VOLATILES

CONCENTRATION: LOW DATAFILE: EB0318V02
DATE ANALYZED: 03/18/88 DILUTION FACTOR: 1.00

	COMPOUND	DETECTION LIMIT (MICROGRAMS / LITER)	AMOUNT FOUND
C010	CHLOROMETHANE	10 U	
C015	BROMOMETHANE	10 U	
C020	VINYL CHLORIDE	10 U	
C025	CHLOROETHANE	10 U	
C030	METHYLENE CHLORIDE	5 U	
C045	1,1-DICHLOROETHENE	10 U	
C050	1,1-DICHLOROETHANE	5 U	
C053	1,2-DICHLOROETHENE (TOTAL)	5 U	
C060	CHLOROFORM	5 U	
C065	1,2-DICHLOROETHANE	5 U	
C115	1,1,1-TRICHLOROETHANE	5 U	
C120	CARBON TETRACHLORIDE	5 U	
C130	BROMODICHLOROMETHANE	5 U	
C140	1,2-DICHLOROPROPANE	5 U	
C143	CIS-1,3-DICHLOROPROPENE	5 U	
C150	TRICHLOROETHENE	5 U	
C155	DIBROMOCHLOROMETHANE	5 U	
C160	1,1,2-TRICHLOROETHANE	5 U	
C165	BENZENE	5 U	
C172	TRANS-1,3-DICHLOROPROPENE	5 U	
C175	2-CHLOROETHYLVINYLETHER	10 U	
C180	BROMOFORM	5 U	
C220	TETRACHLOROTHENE	5 U	
C225	1,1,2,2-TETRACHLOROETHANE	5 U	
C230	TOLUENE	5 U	
C235	CHLOROBENZENE	5 U	
C240	ETHYLBENZENE	5 U	
C265	TRICHLOROFLUOROMETHANE	10 U	
C275	ACRYLONITRILE	10 U	
C360	ACROLEIN	20 U	

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT


RIC
03/18/88 15:45:00
SAMPLE: VBLK
CONDS.:
DATA: EB0318V02 #1
CALI: EB0318V02 #3
SCANS 20 TO 600
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
KEYSTONE DC # ---14
INST ID: 4000
RIC
100.0
73344.
IS#1
Su#1
IS#2
Su#2
IS#3
Su#3
36
84
133
179
222
278
303
325
361
399
424
446
501
100
5:00
200
10:00
300
15:00
400
20:00
500
25:00
600
30:00
SCAN
TIME

NWT 001465

KEYSTONE DC # ---14

VOA QUANTITATION REPORT

SAMPLE ID.	VBLK		
FILENAME	EB0318V02	INST	4000
CLIENT	KEYSTONE	ANALYST	RCJ
DATE INJECTED	03/18/88 15:45:00	VERIFIED BY	
CALIB STD DATE	2-23-88	CORR. FACTOR	1.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT		RRT	AREA
132	CI01	BROMOCHLOROMETHANE	**IS1**	128	50	UG/L	1.000	20542
325	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50	UG/L	1.000	75474
424	CI20	D5-CHLOROBENZENE	**IS3**	117	50	UG/L	1.000	59702
179	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	104	%	1.356	36951
399	CS05	D8-TOLUENE	**SU2**	98	106	%	0.941	64563
501	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	106	%	1.182	55916

11000

CHAIN OF CUSTODY RECORD

PLANT CODE: NW | PROJECT NAME: Northwest Terminal Tank Sampling

SAMPLERS (Signature): David C. Hauls

STA. NO.	DATE	TIME	COMP.	GRAB	WELL	STATION LOCATION	NUMBER OF CONTAINERS	625	624	603 Acrolein & Acrylonitrile by GC/MS per Gene Hsieh 3/8/88 (KD)	CONDUCTIVITY	pH	REMARKS OR OBSERVATIONS
TANK #3	3-7-88	0900		X		PORTLAND	6	2	2	2		6.41	
TANK #4	3-7-88	0910		X		OR	6	2	2	2		6.57	
TRIP BLANK	3-7-88			X			2		1	1			

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Reliquished by: (Signature)	Date	Time	Received by: (Signature)
David C. Hauls	3-7-88	1600	Fed X				
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Reliquished by: (Signature)	Date	Time	Received by: (Signature)
Reliquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Ice Chest Temp °C	Ice Chest #	Chain of Custody
FEDERAL EXPRESS	3/8/88	9:00		3/8/88	9:00		697	~~Tag~~ # TAPE

*DISTRIBUTION: Original accompanies shipment; Copy to Coordinator Field Files.

PAGE ____ OF ____

NWT 001467

Houston
Lab #1

SPECTRIX ANALYTICAL REQUEST FORM

To/From:

Reports To: Mr. Bob Hepner

Other: Mike Hollins

Proj. Eng./Scientist Gary P Kerr

Project Study N. W. Terminal

Project No. 462500-00

Phase No. BAT sampling

Week of Sampling: 3/2/88

Requested Turnaround Time

Turnaround: Normal

STUDY DESCRIPTION:		SAMPLE TYPE:		METHOD:	EXTRACTION
Hydrostudy	Drinking Water	Soil	Surface	Composite	Total
RCRA Permitting	NPDES	Sludge	water	Grab	EP-Toxicity
Characterization	permitting	Residue	Process	Bailer	TCLP
Treatability	RIFS	Groundwater	water	Pump	ASTM
Study	Other: BAT & BPT				

Special Instructions: See attached sheet Detection < 10ug/l

Circle Analysis Required

ANALYSIS	EPA METHOD
VOA	624
	8240
Semi-Volatiles (AE/BN)	625
	8270
Pest/PCBs	608
	8080

Other:

Metals

1. Aluminum	(AL)
2. Antimony	(SB)
3. Arsenic	(AS)
4. Barium	(BA)
5. Beryllium	(BE)
6. Cadmium	(CD)
7. Calcium	(CA)
8. Chromium - total	(CR-T)
9. Copper	(CU)
10. Iron - total	(FE)
11. Lead	(PB)
12. Magnesium	(MG)
13. Manganese	(MN)
14. Mercury	(HG)
15. Molybdenum	(MO)
16. Nickel	(NI)
17. Potassium	(K)
18. Selenium	(SE)
19. Silver	(AG)
20. Sodium	(NA)
21. Thallium	(TL)
22. Tin	(SN)
23. Titanium	(TI)
24. Zinc	(ZN)

Containers to be provided by Spectrix Houston? (circle)

Y or (N)

If yes, ship containers to:

Date Containers Needed on Site:

KEYSTONE
ENVIRONMENTAL RESOURCES, INC.

Interoffice Correspondence

To	John Oxford	From	J. M. Dern
Location	Northwest Terminal	Location	K-1928
Subject	PAH Analysis	Date	March 8, 1988

Please sign the attched letter and forward by Certified Mail Return Receipt Requested to Oregon DEQ in Portland.

Jordan M. Dern/mrw

Jordan M. Dern

JMD/mrw

cc: L. F. Flaherty
J. R. Batchelder
M. R. Urbassik
B. S. Nolan

Koppers Company, Inc.
436 Seventh Avenue
Pittsburgh, PA 15219
Telephone 412-227-2000

KOPPERS

March 7, 1988

CERTIFIED MAIL
Return Receipt
Requested

Oregon Department of Environmental
Quality
811 Southwest Sixth Avenue
Portland, OR 97204

RE: Koppers Company, Inc.
Portland, Oregon
NPDES Permit #100419

Dear Sir:

In compliance with special condition Number 4, Section D of the subject permit, please find attached the results of the PAH sampling conducted on February 3, 1988. Questions should be directed to Mr. Jordan Dern of Keystone Environmental Resources, our environmental consultant. His address is :

436 Seventh Avenue
Suite 1928
Pittsburgh, PA 15219

Sincerely,

John A. Oxford
Terminal Manager

JAO/JMD/mrw

Enclosure

11000

CHAIN OF CUSTODY RECORD

PLANT CODE	PROJECT NAME
[illegible]	WASTE WATER PAH

SAMPLERS (Signature): John A O'Hard, George Hoffman

STA. NO.	DATE	TIME	COMP.	GRAB	WELL	STATION LOCATION	NUMBER OF CONTAINERS	PAH	OIL GREASE	PHENOL						CONDUCTIVITY	pH	REMARKS OR OBSERVATIONS
[illegible]	2/3/88	2:30 p		X		Waste Water Tank	3											

Temp of water at time of sample = 46°F

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Reliquished by: (Signature)	Date	Time	Received by: (Signature)
J A O'Hard	2/3/88	3:05p	D Francis				
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Reliquished by: (Signature)	Date	Time	Received by: (Signature)

Reliquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Ice Chest Temp	Ice Chest	Chain of Custody
			J M Edwards	2/5/88	9:00	°C	# P-18	Tag #

*DISTRIBUTION: Original accompanies shipment; Copy to Coordinator Field Files.

Samples received in good condition
No temp. taken for cooler. Sources were not written on sample jars.

PAGE 1 OF 1

NWT 001471

TABLE 2: SUMMARY OF PAH DATA

Sample: 88020162

Source: WASTEWATER TANK
Description: NPDES PERMITTING

Date Collected: 02/03/88
Date Received: 02/05/88

Date Extracted: 02/05/88
Date Analyzed: 02/15/88

Clean up Method

silica gel clean-up	✓ yes	___ no
florisil clean-up	___ yes	___ no
alumina clean-up	___ yes	___ no
sulfur clean-up	___ yes	___ no

Polynuclear Aromatic Hydrocarbons

Acenaphthene	58.1
Acenaphthylene	141
Anthracene	1.92
Benzo(a)anthracene	1.75
Benzo(a)pyrene	0.425
Benzo(b)fluoranthene	0.730
Benzo(g,h,i)perylene	1.13
Benzo(k)fluoranthene	0.247
Chrysene	1.87
Dibenz(ah)anthracene	1.51
Fluoranthene	6.18
Fluorene	21.3
Indeno(123-cd)pyrene	0.766
Phenanthrene	11.5
Pyrene	5.28

Other Polynuclear Aromatic Compounds tested:

Carbazole	<2.00
Naphthalene	366

The above results are reported in ug/L .

All PAH identifications are from retention data only.

[redacted]

COFFEY LABORATORIES, INC.
4914 N.E. 122nd Ave.
Portland, OR 97230
Phone: (503) 254-1794

February 25, 1988
Log #A880217-AH2
PO # None

Koppers Co., Inc.
7540 NW St. Helens Rd.
Portland, OR 97229
Attention: John Oxford

Jordan, This is Coffeys' report on the tank that we sampled and sent to Monroeville for PAH

John

Sample Received: 2-17-88
Sample Collected: 2-17-88
Sample Delivered by: Client

ANALYSIS	METHOD	W-W-T-1	W-W-T-2	UNITS
Total Phenols	EPA 420.1	0.191	0.199	mg/L
Oil & Grease	EPA 413.2	1.0	1.0	mg/L

Sincerely,

Susan M. Coffey

Susan M. Coffey
President

SMC/ale

This report is for the sole and exclusive use of the above client. Samples are retained a maximum of 15 days from the date of this letter.

KOPPERS CO. PORTLAND, OR RECEIVED

FEB 29

11000

RECEIVED

FEB 24 1988

Environmental Resources

KEYSTONE ENVIRONMENTAL RESOURCES

Interoffice Correspondence

To	J. Dern	From	R. D. Hepner
Location	K-19	Location	Monroeville
Subject	Northwest Terminal (455700)	Date	February 23, 1988

Attached are the results of the NPDES Permitting samples received on February 5, 1988.

R. D. Hepner

RDH/mjl

Attachment

cc: S. Hartley

11000

CHAIN OF CUSTODY RECORD

NWT 001475

PLANT CODE	PROJECT NAME	NUMBER OF CONTAINERS
027	WASTE WATER PAH	

SAMPLERS (Signature): John A Ford, George Hoffman

STA. NO.	DATE	TIME	COMP.	GRAB	WELL	STATION LOCATION	NUMBER OF CONTAINERS	PAH	OIL GREASE	PHENOL					CONDUCTIVITY	pH	REMARKS OR OBSERVATIONS
1	2/3/88	2:30 pm		X		Waste Water Tank	3										

Temp of water at time of sample = 46°F

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Reliquished by: (Signature)	Date	Time	Received by: (Signature)
John A Ford	2/3/88	3:05p	D Frances				
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Reliquished by: (Signature)	Date	Time	Received by: (Signature)
Reliquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Ice Chest Temp °C	Ice Chest # P-15	Chain of Custody Tag #
			M C Edwards	2/5/88	9:00			

*DISTRIBUTION: Original accompanies shipment; Copy to Coordinator Field Files.

Samples received in good condition
No temp. taken for cooler. Samples were not
written on sample jars.

PAGE 1 OF 1

KEYSTONE ENVIRONMENTAL RESOURCES, INC.
NARRATIVE - CONVENTIONAL ANALYSIS

I GENERAL

A. WORK ORDER M8802026

B. SAMPLE NUMBERS 88020162

C. SHIPPING PROBLEMS Sources not written on the sample jars.

II ANALYSIS

A. ANALYSIS PROBLEMS None

OTHER PROBLEMS None

Katherine Shepard
CONVENTIONAL CHEMISTRIES MANAGER

11000

KEYSTONE ENVIRONMENTAL RESOURCES, INC.
NARRATIVE - ORGANIC ANALYSIS

I GENERAL

A. WORK ORDER M8802026

B. SAMPLE NUMBERS 88020162

C. SHIPPING PROBLEMS Sources not written on the sample jars.

II PREPARATION

A. EXTRACTION PROBLEMS None

III ANALYSIS

A. ANALYSIS PROBLEMS None

OTHER PROBLEMS None

PREPARATION LABORATORY MANAGER

Stephen J. Ondrey

ORGANIC ANALYSIS MANAGER

KEYSTONE ENVIRONMENTAL RESOURCES, INC.

TABLE OF CONTENTS — PRODUCED ON 02/23/88 AT 12:47 — PAGE 1

SAMPLE #	SOURCE	DESCRIPT	DATE-COL	DATE-REC	ORD #
88020162	WASTEWATER TANK	NPDES PERMITTING	02/03/88	02/05/88	M8802026

KEYSTONE ENVIRONMENTAL RESOURCES, INC.

TABLE 1: SUMMARY OF ANALYTICAL DATA PRODUCED ON 02/23/88 AT 12:48 PAGE 1

SAMPLE #	RSLT. LNE	SOURCE
OIL & GREASE, TOTAL RECOVERABLE, GRAVIMETRIC		
88020162	Oil & Grease, mg/L.. : <6.00	WASTEWATER TANK
TOTAL RECOVERABLE PHENOLICS (AS PHENOL)		
88020162	Phenol, mg/L..... : 0.534	WASTEWATER TANK

11000

TABLE 2: SUMMARY OF PAH DATA

Sample: 88020162

Source: WASTEWATER TANK
Description: NPDES PERMITTING

Date Collected: 02/03/88
Date Received: 02/05/88

Date Extracted: 02/05/88
Date Analyzed: 02/15/88

Clean up Method

silica gel clean-up	✓ yes	___ no
florisil clean-up	___ yes	___ no
alumina clean-up	___ yes	___ no
sulfur clean-up	___ yes	___ no

Polynuclear Aromatic Hydrocarbons

Acenaphthene	58.1
Acenaphthylene	141
Anthracene	1.92
Benzo(a)anthracene	1.75
Benzo(a)pyrene	0.425
Benzo(b)fluoranthene	0.730
Benzo(g,h,i)perylene	1.13
Benzo(k)fluoranthene	0.247
Chrysene	1.87
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Fluoranthene	6.18
Fluorene	21.3
Indeno(123-cd)pyrene	0.766
Phenanthrene	11.5
Pyrene	5.28

Other Polynuclear Aromatic Compounds tested:

Carbazole	<2.00
Naphthalene	366

The above results are reported in ug/L .

All PAH identifications are from retention data only.

KEYSTONE ENVIRONMENTAL RESOURCES, INC.

ANALYTICAL DIVISION-MONROEVILLE

(412) 733-9400

INVOICE NUMBER : M8802026

INVOICE DATE : 02/23/88 09:10:13

PAGE: 1

CLIENT : KOPPERS-NORTHWEST TERMINAL
KEYSTONE CONSULTING

PROJECT MANAGER : J DERN

DATE RECEIVED : 02/05/88
PURCHASE ORDER :
FILE NUMBER : KOP88
SITE : 455700-00
CONTACT : J DERN

ANALYSES	QUANT	COST EACH	% DISC	TOTAL
Phenol(Automated 4AAP Colorimetric Pro.)	1	35.00	15.00	29.75
Polynuclear Aromatic Hydrocarbons by LC	1	200.00	15.00	170.00
Column Clean-up	1	35.00	15.00	29.75
Oil & Grease,Total Recoverable Gravimet.	1	30.00	15.00	25.50
PAH Extraction	1	NO CHARGE		0.00

ANALYSES CHARGES, SUBTOTAL (COST LIST: KOP88) 255.00

TOTAL ORDER CHARGES 255.00

TERMS: NET 30 DAYS

REMIT TO: KEYSTONE ENVIRONMENTAL RESOURCES INC
PO BOX 360549M
PITTSBURGH PA 15251

BACK UP
DO NOT PAY

11000

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

MAILING ADDRESS
Captain of the Port
U.S. Coast Guard
6767 N. Basin Avenue
Portland, OR 97217
Telephone:
(503) 221-6328

TO WHOM IT MAY CONCERN:

The Coast Guard is in the process of upgrading its facility resource and assistance directory as part of the Local Pollution Contingency Plan.

In order to accomplish this task it is requested that your facility complete the enclosed questionnaire. Inquiries regarding the questionnaire may be referred directly to the Inspections Office of MSO Portland, Oregon. The telephone numbers are (503) 221-6325 or 6326.

Your assitance in timely completion of the questionnaire will assist us in updating and modifying our Contingency Plan. The information will make our resource and assistance data base a current and useful tool in prevention, control, and reduction of damages caused by pollution.

Upon completion, information contained in this questionnaire will be shared with other federal response agencies. The questionnaire will also be available to the public under the provisions of the Freedom of Information Act. It should be noted that financial and commercial information will be treated as confidential if the attached form is completed.

Any future changes or modifications to your facility can be relayed directly to the Inspections Department of MSO Portland via letter. This information will afford our office current information for prompt and effective response activities.

Sincerely,

J. M. DUKE
Captain, U.S. Coast Guard
Captain of the Port

RECEIVED

FREEDOM OF INFORMATION STATEMENT

It is requested that the commercial and financial information furnished in this questionnaire not be released to the public but be treated in confidence. I understand that the information will be furnished to federal, state, and local emergency response organizations on a need-to-know basis.

SIGNATURE Carl W. Heath

NAME Koppers Co. Inc

TITLE Dist Sanit.

FACILITY FACT SHEET/QUESTIONNAIRE

For assistance in completing forms please call: U.S. Coast Guard, Marine Safety Office, Portland, Oregon, MEP Branch, telephone number (503) 221-6328/6329

A. GENERAL INFORMATION

1. Name of company Kappers Co Inc.

2. Name of facility Same

3. What type of facility is it? (e.g., chemical manufacturer, fishing fleet, etc.)
Terminal

4. Telephone number of facility: day (Note 1)* (503) 286-3681
night Same

5. Address: 7540 N.W. St Helens Road

6. Location: Portland, Oregon 97229

a. What body of water, if any, are you located on or near?
Willamette River

b. How far up- and/or down-stream or coast are you located from well-known landmarks? (e.g., cities, river junctions, mouth of river, river miles, etc.)
South of St Johns bridge about 1/2 mile

*Explanatory notes are included at the end of this section.

NWT 001484

7. Please describe the area surrounding your facility. Is it a heavily populated area, along a remote part of a river, away from other facilities, or what?

Industrial area & sparsely settled with industry

8. Please describe the land access routes to your site:

Route 30 4 lane hiway

9. Please describe the water access routes to your site:

10. Who is responsible for this facility or should be contacted regarding an incident at the facility?

a. Name and title: Paul W. Huth, Plt Supt

b. Telephone number: day (503) 286-3681

night (503) 644-1570

c. Address: 12760 S.W. Washington St
Beaverton, Oregon 97005

11. Who is the designated alternate if the responsible person is not available?

a. Name and title: Henry E. Rossi

b. Telephone number: day (503) 286-3681

night (503) 253-1962

c. Address: 1313 / N.E. Fremont, Portland, Ore 97230

12. Estimated Size and Nature of Operations: (Note 2)

a. Estimated number of employees at facility: day 7

night 0

weekend 0

b. Estimated daily volume of total production or business: (e.g., 20,000 barrels of gasoline, 70 barges a day contracted out, 12 tons of fish, etc.)

c. Estimated daily volume shipped:

10,000 gals

B. CHEMICAL AND PETROLEUM STORAGE

What types of chemicals or petroleum products are stored or used or ever located near this facility? How much of each is generally on hand? Where and how are they stored? (Disregard small amounts or laboratory sample lots.) (Note 3)

NWT 001486

CHEMICAL NAME	AMOUNT (min.-max.)	PLACED STORED e.g. tank farm, dock warehouse, etc.	HOW STORED e.g. drums, storage tanks, etc.
Creosote	50,000 gallons	Tank farm	Storage tanks

NWT 001487

C. WATER INTAKES

1. Does this facility have water intakes from a nearby body of water?

_____yes ___✓___no: If no, skip this section.

2. What is the name of the body of water?_____

_____

3. Where are these intakes located? If in a river, please give reference to river mile or distance up or down-stream from known landmark. If in a lake or other water body, reference by distance from shore, distance from known landmarks, etc. Please indicate depth of intake.

_____

_____

_____

_____

4. On average, how much water is drawn through your intakes? (cfm, gal./hr.)

_____

_____

5. How is it used?_____

_____

6. If this facility provides water for public use, what communities are served?

_____

_____

_____

7. Is it possible for floating chemicals (e.g., oil) to enter the intakes? (Note 4)

_____yes_____no.

8. Who should be contacted should a problem arise with these intakes?

a. Name:_____

NWT 001488

b. Telephone Number: day _____

night _____

c. Address: _____

d. Title: _____

9. Who is the designated alternate?

a. Name: _____

b. Telephone Number: day _____

night _____

c. Address: _____

d. Title: _____

D. PIPELINES (Note 5)

1. Do any pipelines cross your property lines or go from your plant to the waterfront?

_____yes _____no: If no, go on to next section.

2. Please record all pipelines that enter or leave your property and those used to load or unload materials at the waterfront (not internal pipelines). Indicate lines to waterfront with a W on the far right.

Substance Transmitted	Size	Location of Shutoff Valve (if within property no further detail needed)	W

NWT 001489

3. Who must be contacted if a problem were to arise with these pipelines?

   a. Name and title: _____

   b. Telephone Number: day _____

      night _____

   c. Address: _____

4. Who is the designated alternate?

   a. Name and title: _____

   b. Telephone Number: day _____

      night _____

   c. Address: _____

E. LABORATORIES, EMERGENCY RESPONSE GROUPS, AND HUMAN RESOURCES

1. Does this facility have laboratory or research operation which provides other than routine testing of a specific industrial process? (Note 6)

   _____yes ___/___ no: If no, skip to question 4.

2. What kind of work, in general, is done here?

   _____

   _____

   _____

   _____

3. Who should be contacted in the event that laboratory resources might be helpful to an emergency response team should this facility or community be threatened?

   a. Name: _____

   b. Telephone: day _____

      night _____

   c. Address: _____

   d. Title and position: _____

NWT 001490

4. Does this facility have a fire department or response team of any kind? (Note 7)

✓ yes ____ no; if no, go on to question 7.

a. Briefly describe the team and its capabilities.

To try + control small fires until fire company arrives.

b. Does the team respond to emergencies within your plant only?

✓ yes ____ no

c. Is the group of a nature that might be diverted to an emergency outside of your plant?

____ yes ✓ no

5. Who could mobilize the department/team in an emergency?

a. Name and title: Henry Hazuda

b. Telephone: day (503) 286-3681

night (503) 253-1762

c. Address: 13131 N.E. Fremont, Portland, Oregon

6. Who is the designated alternate?

a. Name and title: Paul Huth

b. Telephone: day (503) 286-3681

night (503) 644-1570

c. Address: 12760 S.W. Washington St Beaverton, Ore

7. Does your company have an emergency response team of any kind? (Note 8)

____ yes ✓ no: if no, go on to question 10.

a. Briefly describe the group and its capabilities:

NWT 001491

b. Does the team respond only to emergencies involving company products?

_____yes_____no.

8. Who could mobilize this team in an emergency?

a. Name and title:_____

b. Telephone: day_____

night_____

c. Address:_____

9. Who is the designated alternate?

a. Name and title:_____

b. Telephone: day_____

night_____

c. Address:_____

10. Does this facility belong to a mutual aid group?

_____yes_____✓_____no: if no, go on to question 12.

11. Identify the group and briefly describe its capabilities:

_____

_____

_____

12. Does your facility have people who could be considered knowledgeable in any of the following areas? (If these people might be contacted for advice in an emergency, please list their areas of expertise and the way in which they could be contacted.) (Note 9)

NWT 001492

AREA	Yes	No
Properties of chemicals or oil	____	____
Techniques of neutralizing chemicals	____	____
Techniques for cleaning up oil spills	____	____
Estimation of the environmental effects of chemicals	____	____
Hazardous chemical disposal	____	____
Salvage work	____	____
Hazardous material transport	____	____
Other	____	____

13. Who should be contacted in the event that your facility might be considered as a source of manpower during or after an emergency?

    a. Name and title: _____

    b. Telephone: day _____

       night _____

    c. Address: _____

14. Who is the alternate person to contact?

    a. Name and title: _____

    b. Telephone: day _____

       night _____

    c. Address: _____

F. DOCKS AND ANCHORAGES (Note 10)

1. Does your facility maintain a fleeting area or anchorage?

    _____yes ✓ no: if no, go to question 6.

2. Describe the location and size of this area as best you can.

    _____

    _____

    _____

NWT 001493

3. How many vessels would ordinarily be found in this area?

_____

4. Who is responsible for this area?

   a. Name and title: _____

   b. Telephone: day _____

      night _____

   c. Address: _____

5. Who is the designated alternate?

   a. Name and title: _____

   b. Telephone: day _____

      night _____

   c. Address: _____

6. Is there a dock or wharf at or near your facility?

   ✓ yes _____ no: if no, go to question 13.

7. How often do ships or barges moor at or near your facility?

   Often - most of the times

8. What generally will be the amount, frequency, and type(s) of cargo transferred if they do?

   bunker C amt? frequency weekly

9. Please describe the size and type of construction of this pier, dock, or wharf (e.g., wood pile, floating offshore, etc).

   Wood

NWT 001494

10. Is the area lighted?

✓ yes _____ no

11. Is an electric current connection available to vessels?

_____ yes ✓ no

If yes, at what voltage (e.g., AC 220 volt 3 phase 60 cycle)

_____

12. Is a water supply available to vessels?

_____ yes ✓ no

If yes, what size lines/connections?

_____

13. Does your facility have an outfall?

✓ yes _____ no

G. PHYSICAL RESOURCES

In the event of a spill, leak or fire involving oil or hazardous chemicals, emergency response personnel may determine that they have need of equipment beyond that normally and immediately available to them. In such a case, it is desirable that they know where such equipment can be found, and who must be contacted to obtain it. Please check off and provide the specified details on any equipment located at your facility that could be made available to response teams in a major emergency.

Firefighting Materials and Equipment

_____ FIRETRUCKS. type, capabilities:

_____ FOAM AND FOAM EQUIPMENT. type, size, amount:

_____ DRY CHEMICAL EXTINGUISHING AGENTS & EQUIPMENT. type, size, amount, number:

2 1/2" _____ HOSE & NOZZLES. number, size, type:

_____ OTHER FIREFIGHTING MATERIALS & EQUIPMENT. please specify:

NWT 001495

Personnel Protective Devices

_____SELF-CONTAINED BREATHING APPARATUS. type, number:

_____PROTECTIVE CLOTHING. type, number:

_____RESPIRATORS. type, number:

_____OTHER PERSONNEL PROTECTIVE EQUIPMENT. please specify:

Detection and Monitoring Equipment

_____COMBUSTIBLE GAS DETECTORS. type, number:

_____CHLORINE LEAK CONTROL KITS

Pollution Cleanup Equipment

_____SPILL CONTAINMENT BOOM. manufacturer, size, type, amount:

_____SKIMMERS & VACUUM EQUIPMENT. manufacturer, type, number:

_____SPILL TREATMENT CHEMICALS. type, amount: Burning agents, sinking agents, sorbents--hay, others, emulsifiers

_____OTHER POLLUTION CLEANUP EQUIPMENT. please specify:

Transportation and Communications

_____RADIOS. type, frequencies, number:

_____GENERATORS. type, rating:

_____FLOODLIGHTS (portable)

_____BOATS & BARGES. type, size:

_____AIRPLANES & HELICOPTERS. type, number:

_____FIXED WING AIRCRAFT. type, number:

_____TRUCKS, TRACTORS & CRANES. type, number:

_____AMBULANCES

_____OTHER TRANSPORTATION & COMMUNICATION EQUIPMENT. please specify:

NWT 001496

People to contact to request this equipment in a major emergency:

Firefighting Equipment

_____ Name

_____ Phone (day/night)

Personnel Protective

_____

_____

Detection & Monitoring

_____ Name

_____ Phone (day/night)

Pollution Cleanup

_____

_____

Transportation & Communications

_____ Name

_____ Phone (day/night)

Information Source Identification

Who was in charge of compiling the information asked for in this questionnaire?

_____

Name: Paul W. Hutt

Telephone Number: Day (503) 286-3681

Night (503) 644-1571

Address: 12760 S.W. Washington ST Beaverton, Ore

Title or Position: PST Supt.

Do you have any comments to make about the information asked for or not asked for in this questionnaire? Can you make any suggestions on how this questionnaire could be improved for future use in other states by CHRIS personnel? Any such comments and suggestions are welcomed and will be seriously studied and considered.

NWT 001497

Comments: _____

Please return as quickly as possible to:

Captain of the Port
U.S. Coast Guard
6767 N. Basin Avenue
Portland, OR 97217

Attn: CWO Darby
Inspections Dept.

Thank you,

M. R. Warburton

M. R. WARBURTON
LTJG, U. S. Coast Guard
LCP Project Officer

NWT 001498

NOTES TO FACT SHEET/QUESTIONNAIRE

1. If the plant has a 24-hour phone number for emergencies and the respondent feels that this is applicable, it can be used here.

2. These questions are intended to assist Coast Guard personnel in the assessment of the size of the operation and the magnitude of any disaster that might occur. An answer like "1.5 tons per day of various chemicals" is sufficient.

3. "Disregard small amounts and laboratory sample lots" intentionally leaves much to the judgment of the respondent.

   The amount of a chemical that can create a hazard varies greatly from one compound to the next, and from one facility to the next. We can only leave the level of detail up to the respondents.

4. The fact that an intake is on the surface does not necessarily mean that floating discharges can enter since some intakes are screened or protected against this.

5. Pipelines are not only potential sources but are vulnerable to fires or other accidents.

   We are interested in all pipelines that cross the boundaries of the facility or go to the waterfront. This includes natural gas pipelines, product lines, etc.

6. Laboratories that are not set up to do anything except a specific process monitoring test will not be useful in emergency response. Labs with some flexibility and with a trained chemist might be of help in analysis and monitoring discharges.

7. Questions 4 is directed at in-plant response teams. Company-wide groups are covered by question 7.

8. Question 7 is directed at company-wide response teams. In-plant teams are covered by question 4.

9. Only in cases where a specific person and area of expertise are cited should this information be used. Most facilities will claim knowledge in one or more areas but provide no specific details.

10. Piers, docks, wharves, anchorages, and fleeting areas are highly vulnerable to loose barges or floating, burning slicks.

NWT 001499

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

MAILING ADDRESS:
Captain of the Port
U. S. Coast Guard
6767 N. Basin Ave.
Portland, Oregon 97217

5822
4 June 1974

Mr. Paul W. Guth
Koppers Company, Inc.
7540 N. W. St. Helens Road
Portland, Oregon 97229

Dear Mr. Guth:

The operations manual for your oil transfer facility at Portland, Oregon has been reviewed and accepted by this office. In particular, I wish to thank you for the assistance you provided and the cooperative attitude demonstrated in meeting the requirements of 33 CFR 154.110 and 154.310.

The use of the portable (four 55 gallon drum) collection basin, as described in your manual, to meet the criteria of 33 CFR 154.530 is acceptable. It is requested that you forward a drawing of this system for inclusion in your manual.

The section in your manual relating to the training of personnel in the deployment of the containment boom is very vague. It is requested that you make every effort to insure that the personnel are properly trained in deployment procedures. This may be done by periodically deploying the boom.

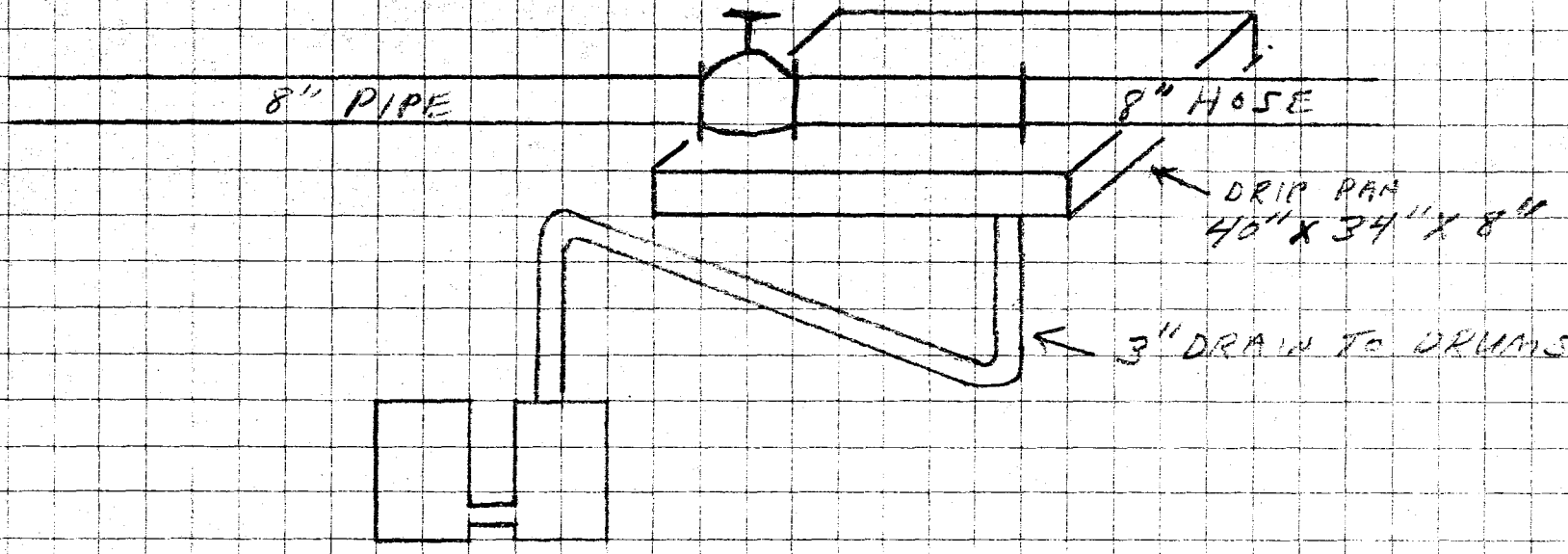
Subsequent amendments and changes to your manual may prove necessary dependent upon future events and operational modifications. Your attention is directed to 33 CFR 154.320 and 154.700 in this regards. Please feel free to contact us if we can be of any further assistance.

Respectfully,

V. E. COX
Commander, U. S. Coast Guard
Captain of the Port
Portland, Oregon

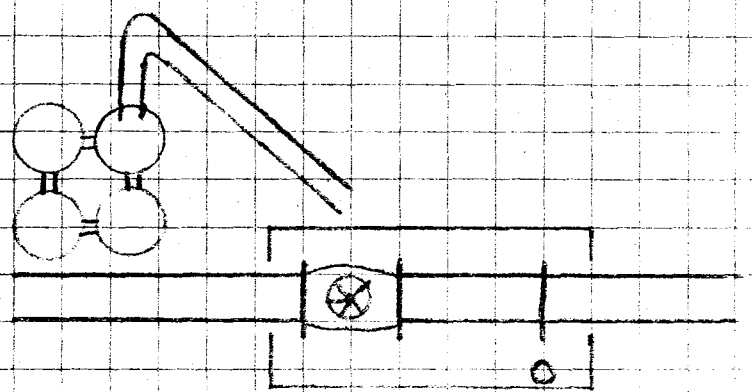
RECEIVED
JUN - 6 1974
KOPPERS CO., INC.
TAR & CHEMICAL DIV.
PORTLAND, OREGON

NWT 001500



4-55 GALLON DRUMS
CONNECTED BY 3" PIPE

SIDE VIEW



TOP VIEW

KOPPERS COMPANY, INC.
7540 N. W. ST. HELENS RD.
PORTLAND, OREGON 97229

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

MAILING ADDRESS:
Captain of the Port
U. S. Coast Guard
6767 N. Basin Avenue
Portland, Oregon 97217

5922
9 November 1973

Mr. P. W. Guth
Kopper Chemical Co.
7540 N. W. St. Helens Road
Portland, Oregon 97219

Dear Mr. Guth:

For the past several months, this office has been reviewing operations manuals submitted under the new oil pollution prevention regulations. With few exceptions, the requirement which is proving to be most difficult for small oil transfer facilites such as yours is section 154.545, Discharge Containment Equipment. One step toward achieving a successful resolution of this problem, we feel, is for all concerned parties to jointly air their situations.

In recognition of the above, we are sponsoring a meeting for all small oil transfer facilities in the Portland/Vancouver/Longview area to be held at our new facility on Swan Island at 1:30 p. m., 26 November 1973. We will attempt, at that time, to thoroughly discuss section 154.545, as well as any other areas of the new pollution prevention regulations which may be of interest to facility personnel present. In addition, we have invited several cleanup contractors from Seattle and Portland and various local tug and barge lines to be represented. They will be available to answer questions concerning costs and availability of equipment.

In order for us to make necessary arrangements, it is requested that you inform us of the number of people from your company who will be present. We are attempting to make this a meaningful, worthwhile session during which some difficult problems may be openly discussed and, hopefully, resolved.

Respectfully,

Ralph A. YATES
Lieutenant (jg) U. S. Coast Guard
Alternate Captain of the Port
Portland, Oregon

RECEIVED
NOV 14 19
KOPPERS CO., INC.
TAR & CHEMICAL DIV.
PORTLAND, OREGON

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

MAILING ADDRESS:
Captain of the Port
U. S. Coast Guard
6767 N. Basin Avenue
Portland, Oregon 97217

COTP NEWSLETTER

No. 015 — 19 October 1973

It is a pleasure for me to be in the Rose City. Since assuming duties as Captain of the Port, Commander, Coast Guard Group Portland and Commanding Officer, Coast Guard Port Safety Station Portland August 1, 1973, I have enjoyed the conversations I have had with those of you with whom I have met and I look forward to meeting more of you in the future. Throughout my career, I have been fortunate to serve in a variety of assignments which included Planning Officer for the Seventeenth Coast Guard District, Juneau, Alaska, Commanding Officer of the buoy tenders WOODRUSH and SASSAFRAS and most recently, of the high endurance cutter WACHUSETT.

As seen by our address, Port Safety Station Portland has been moved to a new address. We are quite proud of our new complex, which is located at the very end of Basin Avenue, and welcome all of you to stop by and pay us a visit. Our new telephone number is 221-2994. As in the past, please feel free to contact us at any time.

Sincerely,

B. A. FORSTERER
Commander, U. S. Coast Guard
Captain of the Port
Portland, Oregon

RECEIVED
...PPERS CO., INC.
...AL & CHEMICAL DIV.
PORTLAND, OREGON

It Could Happen to You

On September 6, 1973 Portland suffered its largest known oil spill in recent history. Approximately 30,000 gallons of black oil were released into the Willamette River from a partially dismantled aircraft carrier moored in North Portland. Clean-up operations were conducted for approximately one month at a staggering, estimated cost of $300,000 to $400,000. A number of deficiencies were brought to light as a result of this incident, the foremost dealing with the adequacy of clean-up capabilities. Clean-up operations clearly indicated that the Portland area is not equipped to handle an oil spill of major proportions, and, if Portland isn't, its certain that outlying areas such as the Tri-Cities, Lower Columbia River area, Coos Bay and Grays Harbor are not as well.

Although some containment and cleanup equipment is now available, the majority of it is owned by two organizations, Swan Island Pollution Control Committee and Clean Rivers Cooperative, and one cleanup contractor, Willamette Tug and Barge Company. The Swan Island Pollution Control Committee, composed of those companies affiliated with the Swan Island Ship Repair Yard, own two oil skimmers for use in removing or "skimming" oil from the surface of the water. Their skimmers were designed for use in the vicinity of the shipyard and were not constructed for the wear, and tear involved with transporting and using them at other areas of the port. In the past, the shipyard has made the skimmers available for use in cleaning up oil spills occurring at other locations, but for this to continue in the future, alterations will probably have to be made.

Clean Rivers Cooperative, an organization presently comprised of the oil companies which operate the local marine oil terminals, was established to provide cooperative assistance to its members in the event of an oil spill. On occasion, the Cooperative has made its containment boom available to non-members for the combating of spills such as the September 6 incident. The problem with this arrangement is that once the cooperative's equipment has been dispatched to a non-member's spill, it is no longer available to members.

Willamette Tug and Barge Company is the most adequately equipped clean-up contractor in the area. However, even they are not yet equpped to handle a major spill. During the 6 September spill, Willamette Tug and Barge had to bring skimming devices from Seattle for use on the spill. In addition, Swan Island Polltion Control Committe oil skimmers, all of the Clean Rivers Cooperative containment boom, all of Willamette Tug and Barge Company's equpment and Coast Guard containment boom were utilized. There was virtually no cleanup equipment available in Portland which could be used in the event of another spill elewhere in the Oregon, Southern Washington area.

This information may seem unimportant to some facility, ship and tug and barge operators, but one very important statistic should be considered; although only three groups account for over 90% of the cleanup equipment in this area, these same three organizations have accounted for only 12% of the total number of oil spill violations on record at Captain of the Port, Portland in 1973.

NWT 001504

Unfortunately, it frequently takes a disaster to bring about positive action. We have just experienced a potentially devastating spill which through good fortune and prompt response was quickly contained and cleaned up. Other Pacific Coast ports have not been as fortunate nor can we expect to be the next time. During a major oil spill cleanup effort, having to wait for clean up and containment equipment to be delivered from distant areas may double or triple your total cleanup cost. Although, hopefully, not every company will experience a major oil spill, if you handle oil in any manner, you are susceptible to an oil spill. Clean up cost can vary anywhere from two to three dollars to several hundred dollars per gallon. It all depends on how prepared you are for a spill.

Other areas have found that the one successful method for major oil spill preparation is cooperation between all industry members. The formation of cooperatives which in turn work closely with local cleanup contractors has been shown to be not only prudent but economical for quick, effective response to a spill saves money - your money. To obtain information about oil spill cooperatives, contact Mr. Bill Mims, Manager, Clean Rivers Cooperative, at 503-285-1025.

In addition, if requested, we can inspect your facility for potential pollution hazards, review your operating procedures from a pollution standpoint, review or help you develop a company water pollution contingency plan and advise you on federal requirements. Just give us a call.

ABOVE ALL, REMEMBER, IT COULD HAPPEN TO YOU.

Empty Cartridge Cases, "Power Loads", and "Drive Pins"

A number of agents have called us recently concerning the shipping requirements for empty cartridge cases, "power loads", and "drive pins". In Newsletter No. 012 of January 1973, we listed the requirements for empty cartridge cases and "power loads." At this time we offer the same information and add a short explanation of another item, "drive pins."

Empty cartridge cases by themselves are not regulated by 46 CFR 146. However, empty cartridge cases, with a primer assembly installed, are classified as Class C explosives under 46 CFR 146.20-300 (see "Primers"). Their proper shipping name is "Empty cartridge cases, primed." Each outside box must be marked with the following: "Empty cartridge cases, primed - handle carefully." No label is required.

"Power Loads" is a term applied to a type of actuating cartridge shipped by Omark Industries, Portland, Oregon. The term, "power loads", is a name given the product by Omark Industries and is not a true shipping name. "Power Loads" are .22 and .25 caliber, rim-fire, blank, smokeless powder-loaded cartridges used to drive power-actuating industrial tools (e.g. driving fasteners into concrete). "Power Loads" are classified as Class C Explosives under 46 CFR 146.20-300. Their proper shipping name is "small-arms ammunition." Each outside package must be plainly marked: "Saml1-arms ammunition." No label is required.

NWT 001505

LIMITED OIL TRANSFER FACILITIES

FACILITY

PORTLAND
PGE
PP & L
KOPPERS
PACIFIC MOLASSES
McCORMICK & BAXTER
PALMCO
ZIDELL 3
PENWALT
AMERICAN SHIP

VANCOUVER
BOISE CASCADE
PAC

CAMAS
CROWN ZELLERBACH

ST. HELENS
BOISE CASCADE

WAUNA
CROWN ZELLERBACH
PGE (Port Westward)

OREGON CITY-WEST LINN
PUBLISHER PAPER
CROWN ZELLERBACH

LAKE OSWEGO
OREGON PORTLAND CEMENT

LONGVIEW
LONGVIEW FIBRE (2)
WEYERHAEUSER

FOREIGN FACILITY

ASARCO
ASBURY
STANDARD
TESORO
WILSON OIL
WILCOX & FLEMER
ARENA
PAC MAR
NORTHWEST MARINE IRON
WILLAMETTE IRON & STEEL

CLEANUP & CARRIERS

CLEAN RIVERS
WILLAMETTE IRON & DARGE
WESTERN
SHAVER
KNAPPTON
PAC
TIDEWATER
PORT OF PORTLAND
PAC MAR
MOPS

11/26/73
1:30 PM

FIXED FACILITY DISCHARGE CONTAINMENT EQUIPMENT GUIDELINES

The following parameters are intended for use as guidelines by fixed facility operations in meeting the requirements of 33 CFR 154.545. These guidelines, for most situations, will be accepted by this office as meeting the minimum necessary criteria as established by 33 CFR 154.545. It is emphasized that these are minimum guidelines and facilities are encouraged to exceed these, when possible, as a prudent anti-pollution measure.

EQUIPMENT

1. Having access through direct ownership, joint ownership, cooperative venture, or contractual agreement to enough containment boom to either:

   a. Equal 1½ times the length of transferring vessel; or
   b. Extend from the point of discharge to an appropriate point on shore.

2. Different situations will warrant different styles of boom; however, logboom will not suffice as meeting the requirements of 33 CFR 154.545.

3. These guidelines are intended to provide only for initial containment measures. Formal arrangements should be established through joint ownership, cooperative venture, or contractual agreement to provide additional containment boom and cleanup equipment as warranted by the quantity of the discharge.

RESPONSE TIME

1. Be capable of responding to a discharge with a response time no greater than 60 minutes.

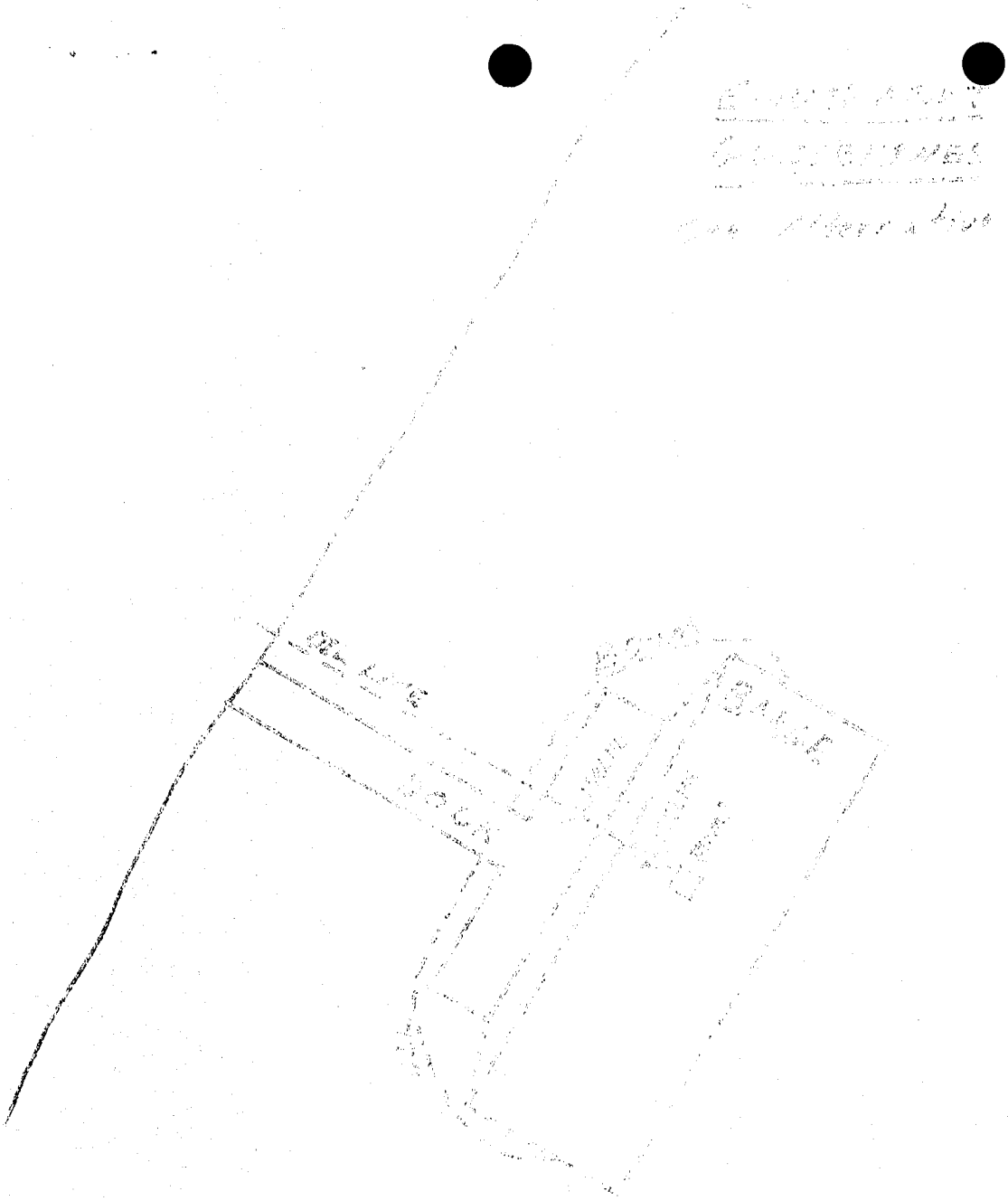
2. Some facilities may require faster response time due to current and tidal conditions. For these situations, increased equipment mobility may be employed to compensate for needed reduction of response time.

3. Response time is defined as the amount of time required for personnel to commence deployment of containment equipment.

MOBILE FACILITY DISCHARGE CONTAINMENT EQUIPMENT GUIDELINES

Guidelines have not been worked up, as yet, for mobile facilities. However, following the 26 November 1973 meeting to be held at COTP Portland, it is hoped that some meaningful input may be provided by involved trucking firms. To date, our proposed direction in this matter is as follows:

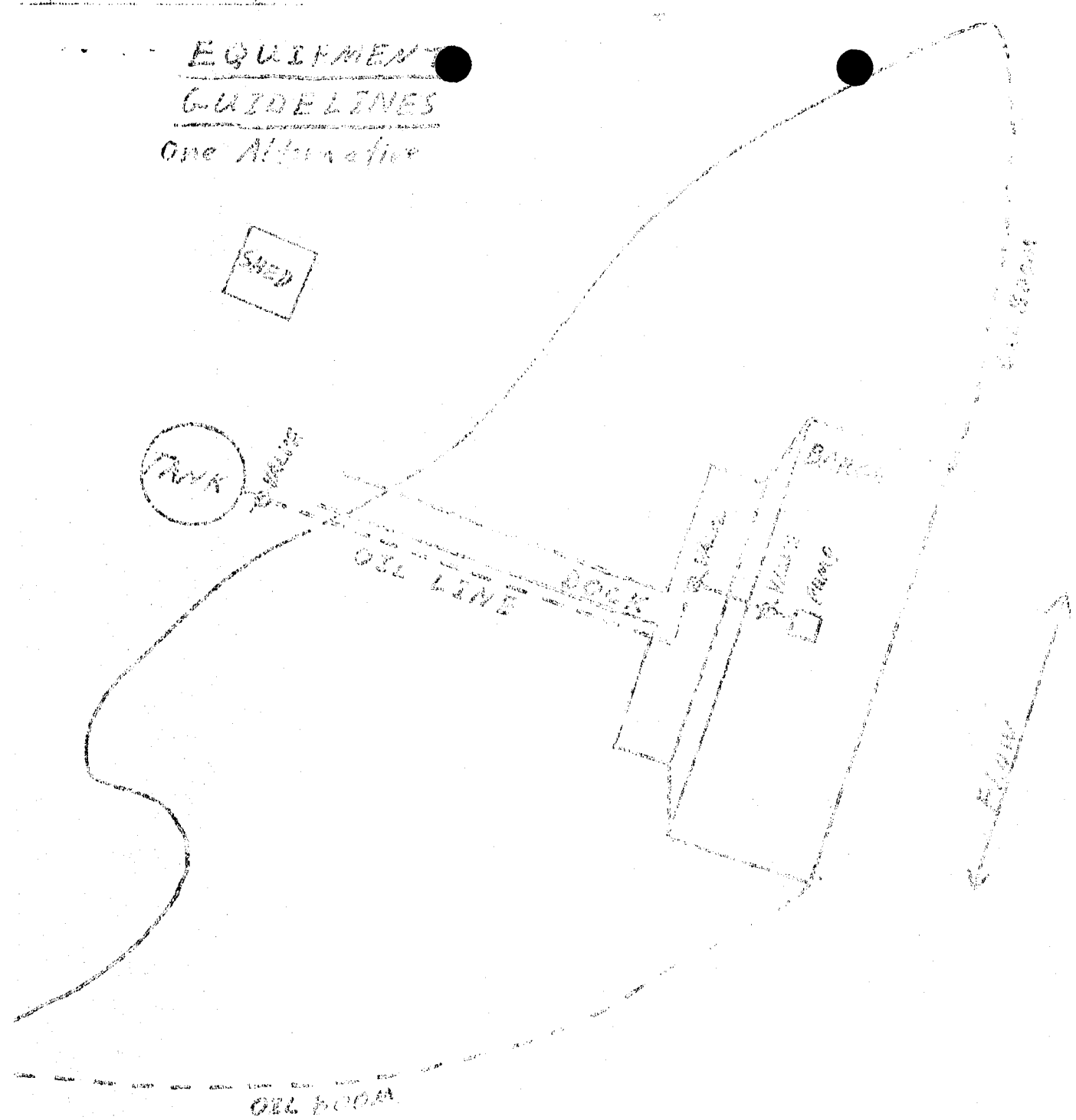
Guidelines will indicate a response time with such time to be no greater than 60 minutes. Response may be "in-house", or through other arrangements (e. g. agreement with port agencies to provide smallboat if trucking company provides boom, agreement with local cleanup contractor). Boom guidelines may be relaxed from those enumerated under Fixed Facility Guidelines.



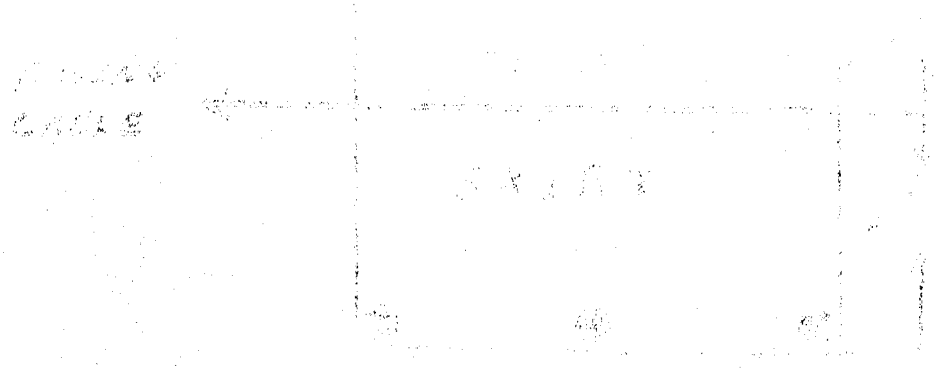
BOOM - 1½ X VESSEL'S LENGTH

EQUIPMENT GUIDELINES

One Alternative



Boom Point of Transfer To Boat



REQUIRED ITEMS FOR SECTION 1[illegible]

N. CONTAINMENT EQUIPMENT

1. QUANTITY
2. TYPE
3. LOCATION
4. DEPLOYMENT
5. RESPONSE TIME
6. TRAINING

P. CONTINGENCY PLAN

1. STOPPAGE OF DISCHARGE
2. NOTIFICATION LIST
3. DEPLOYMENT OF BOOM
4. CONTRACTORS
5. CLEANUP
6. DISPOSAL

Telephone 503-286-3681

KOPPERS
Chemicals
and Coatings

JUNE 15, 1973

CAPTAIN OF THE PORT
U.S. COAST GUARD
2865 NORTH GOING STREET
PORTLAND, OREGON 97217

SUBJECT: NOTICE OF INTENT TO OPERATE A LARGE OIL TRANSFER FACILITY.

KOPPERS CO., IND. INTENDS TO OPERATE AN OIL TRANSFER FACILITY AT 7900 N.W. ST. HELENS RD. ON THE WEST BANK OF THE WILLAMETTE RIVER, 0.4 MILES ABOVE THE ST. JOHNS BRIDGE.

THE TELEPHONE NUMBER OF THE FACILITY IS THE SAME AS THE OPERATORS.

Paul W. Guth

PAUL W. GUTH
SUPERINTENDENT

PWG:ip

NWT 001512

THE FACILITY IS LOCATED AT:
7900 N.W. ST. HELENS RD., LEFT BANK OF THE WILLAMETTE RIVER, 0.4 MILES ABOVE THE ST. JOHNS BRIDGE.

THE AREA IS FLAT.

THE FACILITY WILL OPERATE TWENTY FOUR (24) HOURS PER DAY, SEVEN (7) DAYS PER WEEK.

THE DOCK CAN HANDLE ONLY ONE VESSEL AT A TIME, UP TO 600 FEET IN LENGTH.

THERE ARE NO PRODUCTS HANDLED AT THE FACILITY, WHICH ARE INCOMPATIBLE WITH OIL.

THERE WILL BE A MINIMUM OF TWO MEN ON DUTY DURING TRANSFER OPERATIONS. ONE MAN AT THE DOCK, TO SUPERVISE THE TRANSFER, AND ONE MAN AT THE TANK FARM.

EMERGENCY TELEPHONE NUMBERS:

PLANT SUPERINTENDENT	644-1570
PLANT SUPERVISOR	1-206-694-2045
CHIEF CHEMIST	253-1962
COAST GUARD	285-4564
FIRE DEPT.	232-2111

THE OWNER OR OPERATOR OF ANY VESSEL MOORED AT THIS FACILITY SHALL PROVIDE A TRAINED WATCHMAN FOR THE MAINTENANCE OF SECURITY OF SUCH VESSEL, AS REQUIRED IN SECTION 155.810 OF THE D O T POLLUTION PREVENTION REGULATIONS, WHO SHALL KEEP UNAUTHORIZED PERSONS OFF THE VESSEL AND TAKE WHATEVER ACTION NECESSARY TO PREVENT AND/OR CONTAIN ANY DISCHARGE OF OIL OR OTHER POLLUTANTS.

COMMUNICATIONS BETWEEN THE VESSEL AND SHORE WILL BE VOCAL.

THERE IS A COVERED, THREE SIDED SHED ON THE DOCK, AT THE CONTROL POINT, FOR PERSONNEL SHELTER.

DRIP PANS ARE PROVIDED AT EACH POINT OF POSSIBLE LEAK, I.E. FLANGES, SAMPLE VALVES, DRUMS FOR THE EMPTYING OF DRIP PANS ARE ALSO PROVIDED. DRIP PANS SHALL NOT BE ALLOWED TO GET MORE THAN ONE HALF FULL BEFORE EMPTYING. THEY SHALL BE EMPTIED REGULARLY AND THEY SHALL NEVER BE LEFT WITH OIL STANDING IN THEM.

THERE IS A HAND OPERATED VALVE AT THE CONTROL POINT, WHERE THE HOSE CONNECTS TO THE MAIN TRANSFER LINE, FOR EMERGENCY SHUT-OFF.

DISCHARGE CONTAINMENT EQUIPMENT:
AT PRESENT THERE IS NO EQUIPMENT FOR CONTAINMENT OF SPILLS. A STUDY IS UNDERWAY TO DETERMINE THE TYPE (S) OF EQUIPMENT AND/OR CONTRACT AGREEMENT WITH A FIRM OR COOPERATIVE THAT WILL BEST SUIT THE NEEDS OF THE FACILITY. WE ARE CONSIDERING A POSSIBLE AGREEMENT WITH WILLAMETTE TUG AND BARGE.

THE MAXIMUM ALLOWABLE SYSTEM PRESSURE IS 150 PSI.

TRANSFERRING OIL:

THE DISCHARGE HOSE WILL BE LIFTED FROM THE DOCK WITH A HOIST OR CRANE PROVIDED BY THE VESSEL AND LOWERED ONTO THE VESSEL FOR CONNECTION BY PERSONNEL FROM THE VESSEL. WHEN TRANSFERRING FROM THE VESSEL, ALL VALVES IN THE LINE TO THE SHORE TANK MUST BE OPEN BEFORE NOTIFYING THE PERSON IN CHARGE OF THE TRANSFER ON THE VESSEL, TO BEGIN PUMPING. (THE VALVE AT THE CONTROL POINT WILL BE OPENED LAST, IMMEDIATELY PRIOR TO STARTING THE TRANSFER).

WHEN TRANSFERRING TO THE VESSEL, THE VALVE AT THE CONTROL POINT MUST BE LEFT CLOSED UNTIL THE PERSON IN CHARGE OF TRANSFER ON THE VESSEL GIVES HIS O.K. TO OPEN IT.

UPON COMPLETION OF THE TRANSFER, CLOSE THE VALVE AT THE CONTROL POINT. WHEN THE PERSON IN CHARGE OF TRANSFER, ON THE VESSEL, IS READY, TURN AIR INTO THE HOSE AT THE CONTROL POINT, AND BLOW IT FOR TEN TO FIFTEEN MINUTES. (THE POSITION OF THE HOSE MAY BE CHANGED, IF PRACTICAL, TO ALLOW BETTER DRAINAGE). WHEN BOTH PARTIES ARE SATISFIED THAT THE HOSE IS AS EMPTY AS POSSIBLE, THE VESSEL'S PERSONNEL MAY DISCONNECT THE HOSE.

IN EVENT OF A RUPTURED LINE, FIRE IN THE VICINITY, ELECTRICAL STORM, OR OTHER EMERGENCY, STOP THE TRANSFER UNTIL SUCH TIME AS IT IS SAFE TO RESUME.

CAUTION: DO NOT CLOSE ANY VALVE IN THE TRANSFER LINE WITHOUT FIRST ADVISING THE PERSON IN CHARGE ON THE VESSEL, WHEN TRANSFERRING FROM THE VESSEL.

THE FEDERAL WATER POLLUTION CONTROL ACT AS AMENDED PROHIBITS THE DISCHARGE OF HARMFUL QUANTITIES OF OIL INTO THE WATERS OF THE UNITED STATES. HARMFUL QUANTITY HAS BEEN DEFINED AS ANY AMOUNT OF OIL ON THE WATER OR ADJOINING SHORE WHICH CAUSES A SHEEN OR CAN BE FELT. A VIOLATION OF THIS LAW IS PUNISHABLE BY A CIVIL PENALTY OF UP TO $5000.00. THE LAW ALSO REQUIRES THE PERSON IN CHARGE TO NOTIFY THE COAST GUARD IMMEDIATELY OF ANY OIL SPILL FROM HIS VESSEL OR FACILITY. FAILURE TO NOTIFY THE COAST GUARD IS A CRIMINAL OFFENSE AND IS PUNISABLE BY A MAXIMUM FINE OF $10,000.00 AND/OR ONE YEAR IN PRISON. ALSO, UNDER LAW, IS THE PROVISION THAT WHENEVER OIL IS DISCHARGED INTO U.S. WATERS, THE UNITED STATES HAS THE AUTHORITY TO REMOVE OR ARRANGE FOR THE REMOVAL OF THE OIL. THE OWNER OF THE VESSEL OR FACILITY FROM WHICH THE DISCHARGE OCCURRED MAY REMOVE THE OIL SPILLED. IF HE DOES NOT, THE GOVERNMENT WILL DO SO AT HIS EXPENSE.

THE REFUSE ACT OF 1899 PROHIBITS THE DISCHARGE FROM SHIP OR SHORE OF ANY REFUSE MATTER OF ANY KIND, EXCEPT LIQUID SEWAGE, INTO U.S. WATER. A VIOLATION OF THIS LAW IS A CRIMINAL OFFENSE AND IS PUNISHABLE BY A FINE OF FROM $500.00 TO $2500.00, AND/OR 30 DAYS TO ONE YEAR IMPRISONMENT. THE ARMY CORP OF ENGINEERS MAY ISSUE PERMITS AUTHORIZING CONSTRUCTION OR REPAIR.

DISCHARGE CONTAINMENT EQUIPMENT:

EACH OIL TRANSFER FACILITY MUST HAVE READY ACCESS TO OIL CONTAINMENT MATERIAL AND EQUIPMENT TO CONTAIN OIL DISCHARGED ON THE WATER CONSIDERING--

(1) OIL HANDLING RATES;
(2) OIL CAPACITY SUSCEPTIBLE TO BEING SPILLED;
(3) FREQUENCY OF FACILITY OPERATIONS;

(4) TIDAL AND CURRENT CONDITIONS;
(5) FACILITY AGE, CAPABILITY, ARRANGEMENT AND PAST EXPERIENCE; AND
(6) IF THE EQUIPMENT IS SHARED, THE EXPECTED FREQUENCY OF USE AND PROBABILITY OF AVAILABILITY.

FOR THE PURPOSE OF THIS SECTION, "ACCESS" MAY BE BY DIRECT OWNERSHIP, JOINT OWNERSHIP, COOPERATIVE VENTURE, OR CONTRACTUAL AGREEMENT.

ANY OIL DISCHARGE FROM THE FACILITY WOULD BE FROM A RUPTURED LINE.

AT PRESENT, IT IS PLANNED TO HAVE ANY DISCHARGE REMOVED TO A CITY DUMP.

ADDITIONAL MANPOWER AND EQUIPMENT CAN BE OBTAINED BY PHONING THE FOLLING:

PLANT SUPERINTENDENT	644-1570
PLANT SUPERVISOR	1-206-694-2045
CHIEF CHEMIST	253-1962
COAST GUARD	285-4564
FIRE DEPT.	232-2111
WILLAMETTE TUG & BARGE	285-9111

THE OREGON WATER POLLUTION CONTROL STATUTES AS REVISED PROVIDE THAT IT SHALL BE UNLAWFUL FOR OIL TO ENTER THE WATER OF THE STATE FROM ANY SHIP OR FACILITY, REGARDLESS OF THE CAUSE OF ENTRY OR FAULT OF THE PERSON HAVING CONTROL OF THE OIL, EXCEPT BY PERMIT OR ACT OF WAR OR SABOTAGE OR AN ACT OF GOD, OR NEGLIGENCE ON THE PART OF THE UNITED STATES GOVERNMENT, OR THE STATE OF OREGON, AND ANY PERSON OWNING OR CONTROLLING OIL WHICH ENTERS THE WATER IN VIOLATION OF THIS STATUTE SHALL BE LIABLE FOR DAMAGES TO PERSONS OR PROPERTY CAUSED BY THE OIL AND COLLECTION AND REMOVAL OF THE OIL.

THE CITY OF PORTLAND HARBOR REGULATIONS PROHIBIT THE DISCHARGE OF OIL INTO THE WILLAMETTE RIVER OR ANY TRIBUTARY, SEWER, DRAIN OR DITCH WHICH FLOW INTO THE WILLAMETTE RIVER, WITHIN THE CITY OF PORTLAND.

ANY PERSON WHO ALLOWS ANY OIL TO DISCHARGE INTO ANY FO THE ABOVE SHALL BE RESPONSIBLE FOR IT'S REMOVAL AND DISPOSAL IN A MANNER APPROVED BY THE CITY OF PORTLAND.

PERSONS IN CHARGE: DESIGNATION AND QUALIFICATION.

NO PERSON MAY SERVE, AND THE FACILITY OPERATOR MAY NOT USE THE SERVICES OF A PERSON, AS PERSON IN CHARGE OF FACILITY OIL TRANSFER OPERATIONS UNLESS--

(A) THE FACILITY OPERATOR HAS DESIGNATED THAT PERSON AS A PERSON IN CHARGE AND HAS ADVISED THE CAPTAIN OF THE PORT IN WRITING OF HIS DESIGNATION;

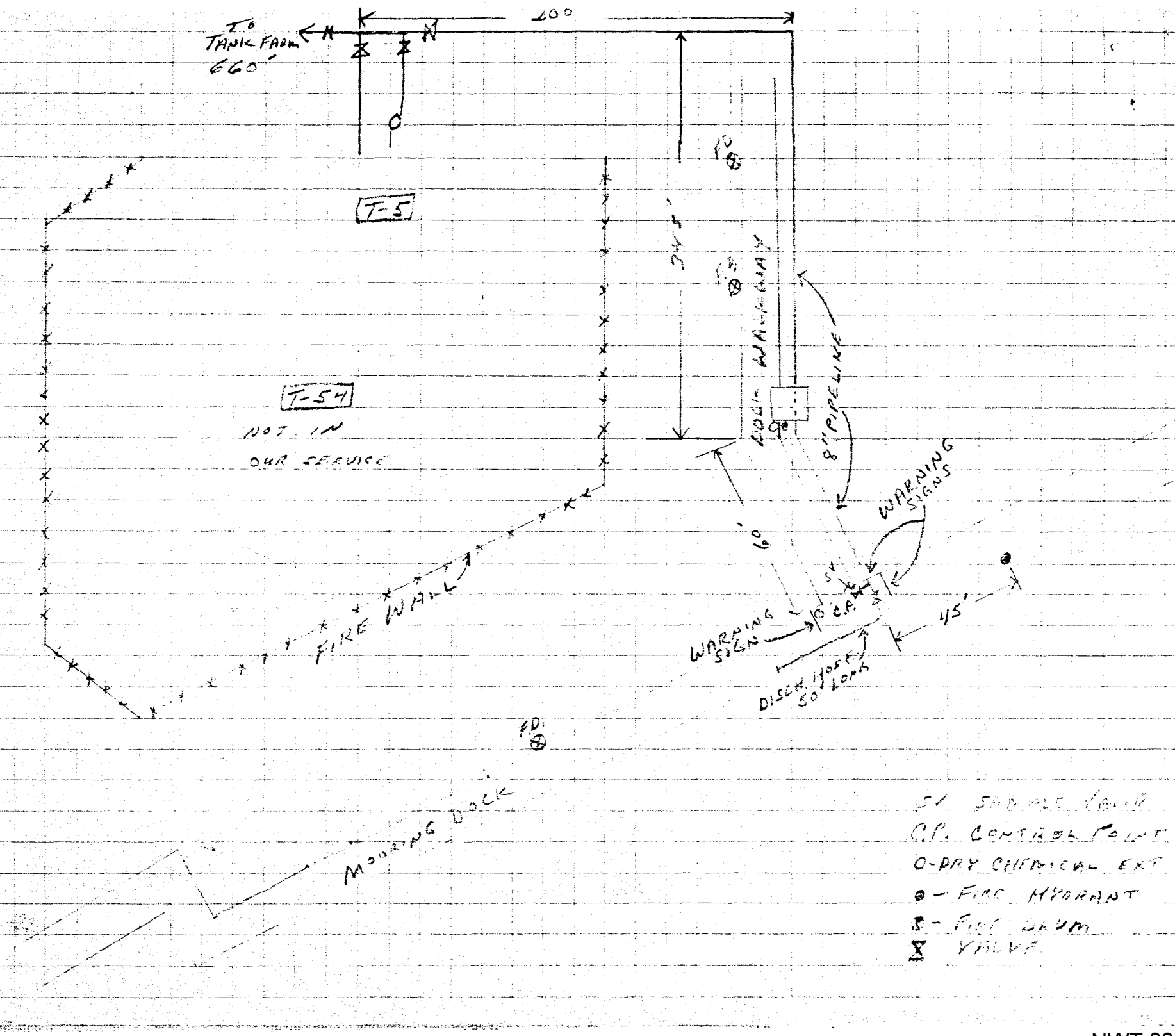
(B) HE HAS HAD AT LEAST 48 HOURS OF EXPERIENCE IN OIL TRANSFER OPERATIONS AT A FACILITY IN OPERATIONS TO WHICH THIS PART APPLIES;

(C) HE HAS ENOUGH EXPERIENCE AT THE FACILITY FOR WHICH QUALIFICATION IS DESIRED TO ENABLE THE FACILITY OPERATOR TO DETERMINE THAT HIS EXPERIENCE IS ADEQUATE AND THAT HE CAN OPERATE THE OIL TRANSFER EQUIPMENT OF THE FACILITY, EXCEPT THAT, FOR NEW FACILITIES, THE CAPTAIN OF THE PORT MAY AUTHORIZE ALTERNATIVE EXPERIENCE REQUIREMENTS; AND

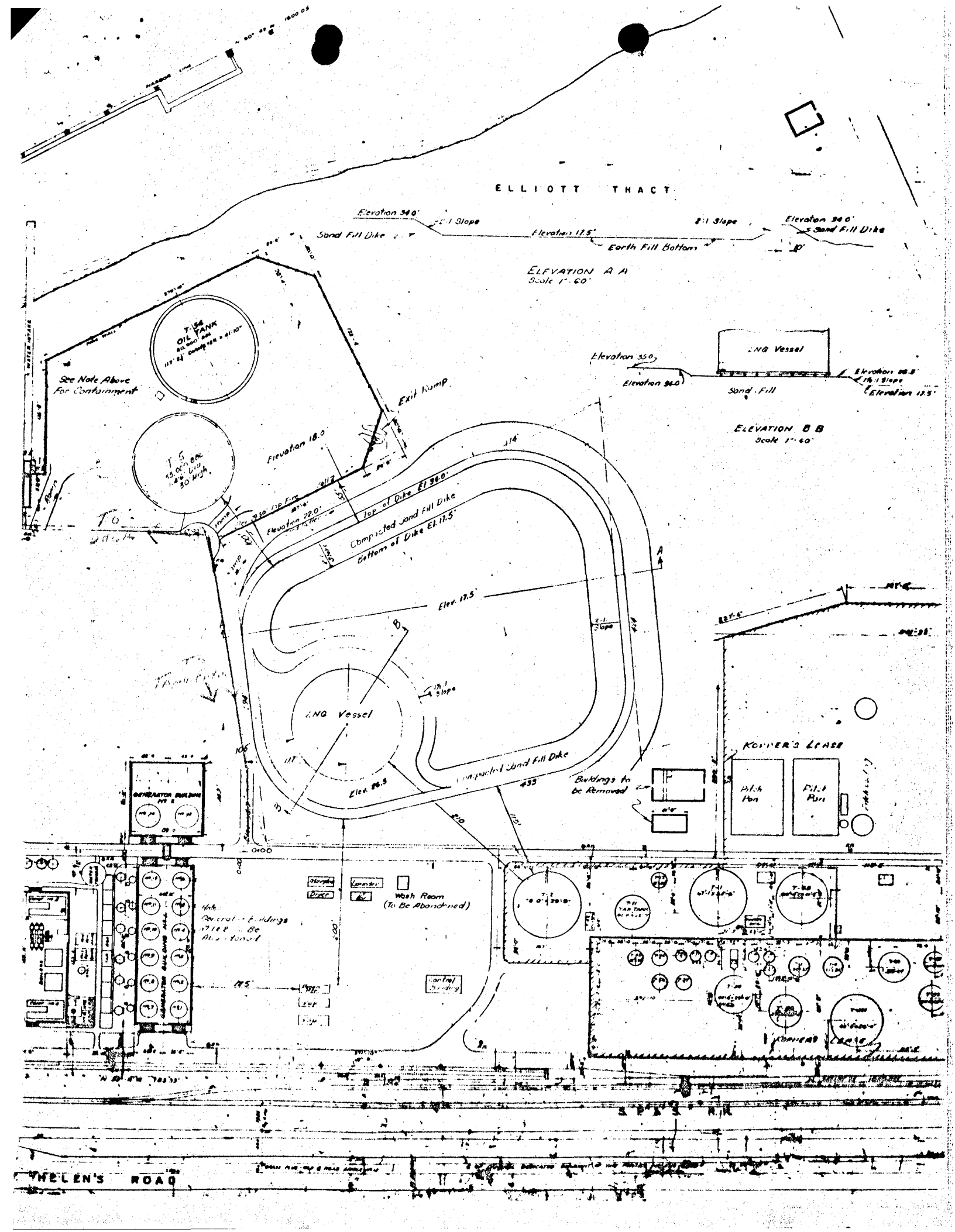
(D) THE FACILITY OPERATOR HAS DETERMINED THAT HE KNOWS--

(1) THE HAZARDS OF EACH PRODUCT TO BE TRANSFERRED;
(2) THE RULES IN THIS PART AND IN PART 156 OF THIS CHAPTER;
(3) THE FACILITY OPERATING PROCEDURES AS DESCRIBED IN THE

OPERATIONS MANUAL;
(4) VESSEL OIL TRANSFER SYSTEMS, IN GENERAL;
(5) VESSEL OIL TRANSFER CONTROL SYSTEMS, IN GENERAL;
(6) EACH FACILITY OIL TRANSFER CONTROL SYSTEM TO BE USED;
(7) LOCAL DISCHARGE REPORTING PROCEDURES; AND
(8) THE FACILITY'S CONTINGENCY PLAN FOR DISCHARGE REPORTING AND CONTAINMENT.



TO TANK FARM 660'
200
T-5
T-54
NOT IN OUR SERVICE
FIRE WALL
MOORING DOCK
FD
345'
DOCK WALKWAY
8" PIPELINE
WARNING SIGNS
60'
45'
WARNING SIGN
C.P.
DISCH. HOSE 50' LONG
SV SAMPLE VALVE
C.P. CONTROL POINT
O-DRY CHEMICAL EXT
● - FIRE HYDRANT
- FIRE DRUM
X VALVE


ELLIOTT TRACT
Elevation 34.0'
2:1 Slope
Sand Fill Dike
Elevation 17.5'
Earth Fill Bottom
ELEVATION A A
Scale 1" = 60'
T-54 OIL TANK
See Note Above For Containment
Exit Ramp
Elevation 18.0'
Elevation 22.0'
Top of Dike El 34.0'
Compacted Sand Fill Dike
Bottom of Dike El. 17.5'
Elev. 17.5'
LNG Vessel
Elev. 26.5
Compacted Sand Fill Dike
Buildings to be Removed
LNG Vessel
Elevation 35.0
Elevation 34.0
Sand Fill
Elevation 17.5'
ELEVATION B B
Scale 1" = 60'
KOPPER'S LEASE
Pitch Pan
Pitch Pan
GENERATOR BUILDING
Wash Room (To Be Abandoned)
Control Building
Note: Generator Buildings
S.P.&S. R.R.
HELEN'S ROAD

NWT 001518

NORTHWEST TANK FARM

RAINWATER COLLECTION AND TREATMENT

JANUARY 23, 1975

RAINWATER COLLECTION AND TREATMENT PROCESS DESCRIPTION

The tank farm will be paved to facilitate the collection and treatment of rainwater, and to prevent flooding by ground seepage when the water table rises.

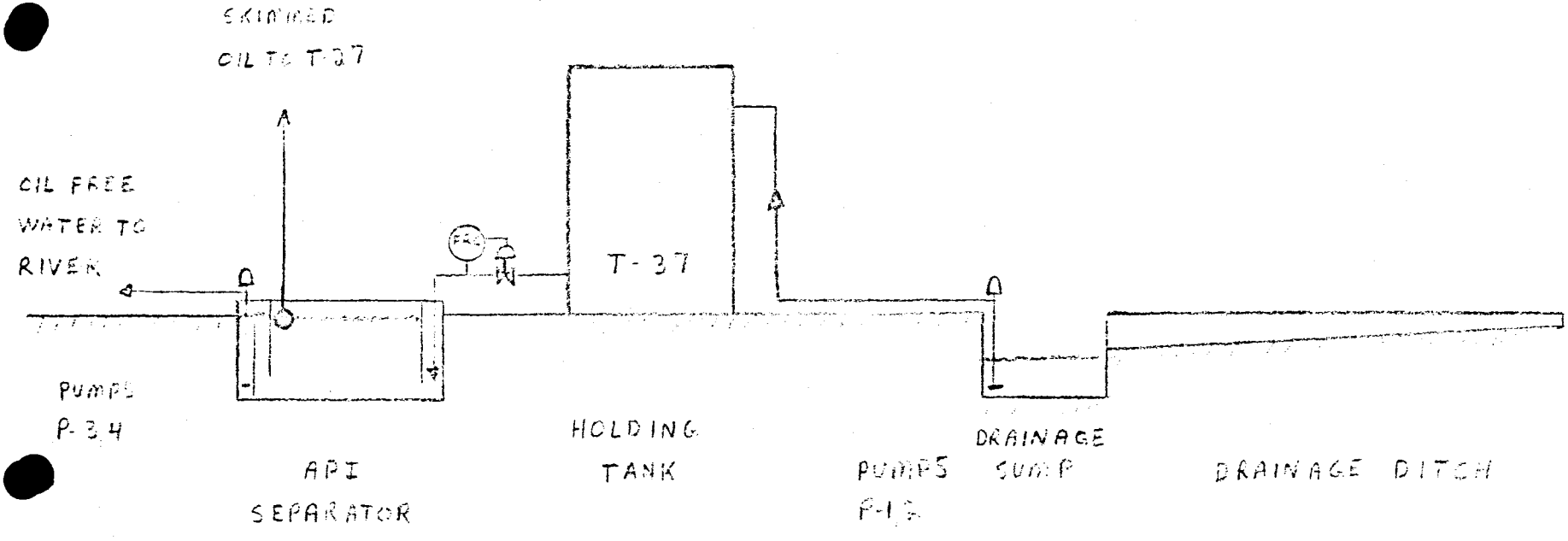
The floor of the tank farm will slope from the center of the farm to a drainage ditch on each side. Rainwater will run off the floor of the tank farm, into the ditches, and then into a drainage sump.

Two float actuated, alternating sump pumps will transfer water from the drainage sump to the holding tank. In case the water level in the drainage sump triggers the high level alarm, both pumps would be activated.

Water in the holding tank will drain into the API separator through a flow-recorder-controller. Any oil present will be skimmed off the surface of the separator and collected in tank T-23 for further processing. Clean water will be pumped out of the separator and into a storm water ditch leading to the river by two float activated, alternating sump pumps.

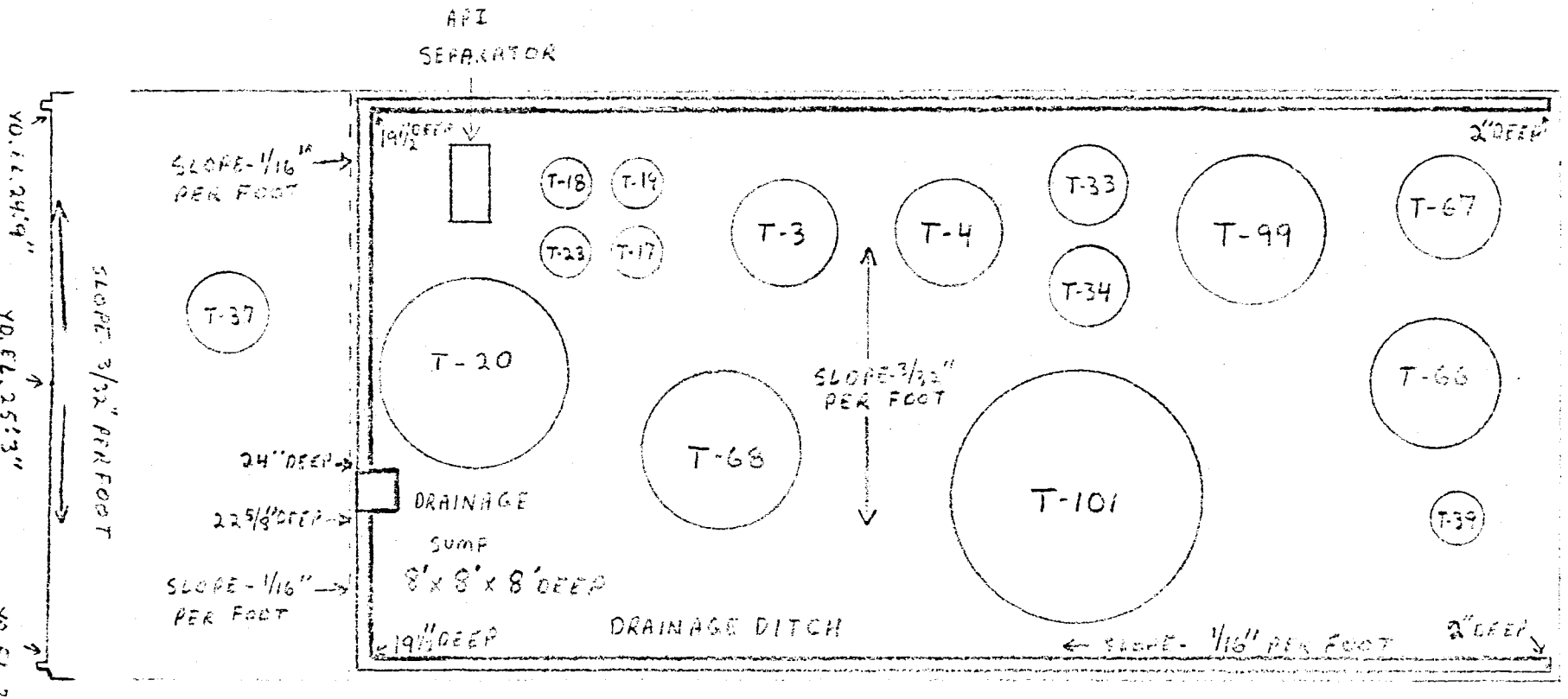
L. Bily
1-24-75

BY _____ DATE _____
CHKD. BY _____ DATE _____
SUBJECT _____
SHEET NO. _____ OF _____
JOB NO. _____



FLOW CONTROL
ON GRAVITY FEED

NWT 001521



NORTHWEST TANK FARM
PAVING

BY _____ DATE _____
CHKD. BY _____ DATE _____
SUBJECT _____
SHEET NO. _____ OF _____
JOB NO. _____

NWT 001522

J.K. Smith - MRC (NW-WR

RE

JAN 05 1988

KEYSTO

NEIL GOLDSCHMIDT
GOVERNOR

Department of Environmental Quality

811 SW SIXTH AVENUE, PORTLAND, OREGON 97204-1334 PHONE (503) 229-5696

JUL 31 1987

KOPPERS COMPANY, INC.
Attn: John Oxford, Terminal Manager
7540 NW St. Helens Road
Portland, OR 97229

Final Date for Submission
of Written Comments: AUG 14 1987

Re: Waste Disposal Permit
File No. 47430
Multnomah County

Your application for a National Pollutant Discharge Elimination System (NPDES) permit has been reviewed by the Department and a proposed NPDES permit has been drafted. You are invited to review the attached copy and submit any comments you may have in writing prior to the date indicated above.

After that date, all comments received will be evaluated by the Department of Environmental Quality and final action on your application will be taken in accordance with the procedures set forth in Oregon Administrative Rules, Chapter 340, Section 14-025. You will be advised of the action taken as soon as possible after the final date for submission of written comments.

If you have any questions, please contact this office.

Sincerely,

Charles K. Ashbaker, Manager
Industrial Waste Section
Water Quality Division

CKA:mjb
Enclosure

cc: Northwest Region, DEQ

AUG 3 1987

DEQ-1

NWT 001523

PRELIMINARY DRAFT

Permit Number:
Expiration Date: 8/31/92
File Number: 47430

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

WASTE DISCHARGE PERMIT
Department of Environmental Quality
811 Southwest Sixth Avenue, Portland, OR

Telephone: (503) 229-5696

Issued pursuant to ORS 468.740 and The Federal Clean Water Act

---

ISSUED TO:

Koppers Company, Inc.
7540 N.W. St. Helens Rd.
Portland, OR 97229

SOURCES COVERED BY THIS PERMIT:

Type of Waste	Outfall Number	Outfall Location
Tank Farm Runoff and Boiler Blowdown	001	R.M. 6.5

PLANT TYPE AND LOCATION:

Creosote Terminal
7540 N.W. St. Helens Rd.
Portland, Oregon

RECEIVING STREAM INFORMATION:

Major Basin: Willamette
Minor Basin: --
Receiving Stream: Willamette River
County: Multnomah
Applicable Standards: OAR 340-41-445

EPA REFERENCE NO: OR-000077-9

Issued in response to Application No. 200077-9 received July 19, 1984.

This permit is issued based on the land use findings in the permit record.

Fred Hansen, Director _____ Date _____

PERMITTED ACTIVITIES

Until this permit expires or is modified or revoked, the permittee is authorized to construct, install, modify or operate a waste water collection, treatment, control and disposal system and discharge to public waters adequately treated waste waters only from the authorized discharge point or points established in Schedule A and only in conformance with all the requirements, limitations, and conditions set forth in the attached schedules as follows:

	Page
Schedule A - Waste Discharge Limitations not to be Exceeded..	2
Schedule B - Minimum Monitoring and Reporting Requirements...	3
Schedule C - Compliance Conditions and Schedules.....	-
Schedule D - Special Conditions.....	4
General Conditions.....	Attached

Each other direct and indirect waste discharge to public waters is prohibited.

This permit does not relieve the permittee from responsibility for compliance with any other applicable federal, state, or local law, rule, standard, ordinance, order, judgment, or decree.

SCHEDULE A

1. Waste Discharge Limitations not to be Exceeded After Permit Issuance Date

Outfall Number 001

	Concentrations Monthly Ave. mg/l	Daily Max. mg/l
Oil & Grease	10	15
Phenols	0.5	0.7

Other Parameters	Limitations
pH	Shall be within the range of 6.0-9.0
Temperature	Shall not exceed 110° F

2. Notwithstanding the effluent limitations established by this permit, no wastes shall be discharged and no activities shall be conducted which will violate Water Quality Standards as adopted in OAR 340-41-445 except in the following defined mixing zone:

The allowable mixing zone is defined as that portion of the Willamette River within 200 feet of the point of discharge.

SCHEDULE B

Minimum Monitoring and Reporting Requirements (unless otherwise approved in writing by the Department)

Outfall Number 001

Item or Parameter	Minimum Frequency	Type of Sample
Flow	Daily	Estimate
Temperature	Daily	Grab
pH	Daily	Grab
Oil & Grease	Weekly	Grab
Phenols*	Monthly	Grab
Polynuclear Aromatic Hydrocarbons (PAH)**	Monthly	Grab

* Test procedures for phenols should conform with Standard Methods No. 510, 16th edition.

** Test procedures for polynuclear aromatic hydrocarbons (PAH) should conform with EPA Method 610.

Reporting Procedures

Monitoring results shall be reported on approved forms. The reporting period is the calendar year. Reports must be submitted to the Department by January 15th of the following year.

SCHEDULE D

Special Conditions

1. Sanitary wastes shall be disposed of to the City of Portland municipal sewage system.

2. An adequate contingency plan for prevention and handling of spills and unplanned discharges shall be in force at all times. A continuing program of employee orientation and education shall be maintained to ensure awareness of the necessity of good inplant control and quick and proper action in the event of a spill or accident.

3. No emulsifying agents or detergents shall be discharged into or otherwise be allowed to enter into the oil-water separator.

4. Thirty days following the issuance of the permit, the permittee shall initiate sampling of polynuclewar aromatic hydrocarbons (PAH) as required in Schedule B. Upon review of the data, the Department may change the phenol limits to PAH of this permit in accordance with procedures in OAR 340-45-055.

NWT 001527

NPDES
GENERAL CONDITIONS

SECTION A. STANDARD CONDITIONS

1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of Oregon Revised Statutes (ORS) 468.720 and is grounds for enforcement action; for permit termination; suspension, or modification; or for denial of a permit renewal application.

2. Penalties for Violations of Permit Conditions

Oregon Law (ORS 468.990) classifies a willful or negligent violation of the terms of a permit or failure to get a permit as a misdemeanor and a person convicted thereof shall be punishable by a fine of not more than $25,000 or by imprisonment for not more than one year, or by both. Each day of violation constitutes a separate offense.

In addition to the criminal penalties specified above, Oregon Law (ORS 468.140) also allows the Director to impose civil penalties up to $10,000 per day for violation of the terms or conditions of a permit.

3. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment or human health resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

4. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and have the permit renewed. The application should be submitted at least 180 days before the expiration date of this permit. The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date.

5. Permit Actions

This permit may be modified, suspended, or terminated for cause including, but not limited to, the following:

a. Violation of any terms or conditions of this permit, rule, or statute;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or

NWT 001528

3. Bypass of Treatment Facilities

a. Definitions

(1) "Bypass" means diversion of waste streams from any portion of the conveyance system or treatment facility.

(2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Prohibition of bypass.

(1) Bypass is prohibited and the Director may take enforcement action against a permittee for bypass, unless:

(a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(b) There were no feasible alternatives to the bypass, such as the use of auxiliary pumping, conveyance, or treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and

(c) The permittee submitted notices and requests as required under paragraph c of this section.

(2) The Director may approve an anticipated bypass, after considering its adverse effects, when the Director determines that it will meet the three conditions listed above in paragraph b(1) of this section.

c. Notice and request for bypass.

(1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

(2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section D, Paragraph D-5 (24-hour notice).

NWT 001529

5. Reporting of Monitoring Results

Monitoring results shall be summarized each month on a Discharge Monitoring Report form approved by the Department. The reports shall be submitted monthly and are to be postmarked by the 14th day of the following month unless specifically approved otherwise in Schedule B of this permit.

6. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Such increased frequency shall also be indicated.

7. Averaging of Measurements

Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean, except for coliform and fecal coliform bacteria which shall be averaged based on a geometric or log mean.

8. Retention of Records

The permittee shall retain records of all monitoring information, including all calibration and maintenance records of all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, or report of application. This period may be extended by request of the Director at any time.

9. Records Contents

Records of monitoring information shall include:

a. The date, exact place, time and methods of sampling or measurements;

b. The individual(s) who performed the sampling or measurements;

c. The date(s) analyses were performed;

d. The individual(s) who performed the analyses;

e. The analytical techniques or methods used; and

f. The results of such analyses.

NWT 001530

9. Falsification of Reports

State law provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than $1,000 per violation, or by imprisonment for not more than six months per violation, or by both.

SECTION E. DEFINITIONS AND ACRONYMS

1. BOD means five-day biochemical oxygen demand.

2. TSS means total suspended solids (non-filterable residue).

3. mg/l means milligrams per liter.

4. kg means kilograms.

5. m^3/d means cubic meters per day.

4. MGD means million gallons per day.

5. Composite sample means a combination of samples collected, generally at equal intervals over a 24-hour period, and apportioned according to the volume of the flow at the time of the sampling.

6. FC means fecal coliform bacteria.

NWT

Permit Number: 100419
Expiration Date: 11/30/92
File Number: 47430
Page 1 of 4 Pages

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

WASTE DISCHARGE PERMIT

Department of Environmental Quality
811 S.W. Sixth Avenue, Portland, Oregon 97204
Telephone: (503) 229-5696

Issued pursuant to ORS 468.740 and The Federal Clean Water Act

ISSUED TO:

Koppers Company, Inc.
7540 N.W. St. Helens Rd.
Portland, OR 97229

SOURCES COVERED BY THIS PERMIT:

Type of Waste	Outfall Number	Outfall Location
Tank Farm Runoff and Boiler Blowdown	001	R.M. 6.5

PLANT TYPE AND LOCATION:

Creosote Terminal
7540 N.W. St. Helens Rd.
Portland, Oregon

RECEIVING STREAM INFORMATION:

Major Basin: Willamette
Minor Basin: --
Receiving Stream: Willamette River
County: Multnomah
Applicable Standards: OAR 340-41-445

EPA REFERENCE NO: OR-000077-9

Issued in response to Application No. 200077-9 received July 19, 1984.

This permit is issued based on the land use findings in the permit record.

Fred Hansen, Director

JAN 08 1988
Date

PERMITTED ACTIVITIES

Until this permit expires or is modified or revoked, the permittee is authorized to construct, install, modify or operate a waste water collection, treatment, control and disposal system and discharge to public waters adequately treated waste waters only from the authorized discharge point or points established in Schedule A and only in conformance with all the requirements, limitations, and conditions set forth in the attached schedules as follows:

	Page
Schedule A - Waste Discharge Limitations not to be Exceeded..	2
Schedule B - Minimum Monitoring and Reporting Requirements...	3
Schedule C - Compliance Conditions and Schedules.....	-
Schedule D - Special Conditions.....	4
General Conditions.....	Attached

Each other direct and indirect waste discharge to public waters is prohibited.

This permit does not relieve the permittee from responsibility for compliance with any other applicable federal, state, or local law, rule, standard, ordinance, order, judgment, or decree.

SCHEDULE A

1. Waste Discharge Limitations not to be Exceeded After Permit Issuance Date

Outfall Number 001

	Concentrations Monthly Ave. mg/1	Daily Max. mg/1
Oil & Grease	10	15
Phenols	0.5	0.7

Other Parameters	Limitations
pH	Shall be within the range of 6.0-9.0
Temperature	Shall not exceed 110° F

2. Notwithstanding the effluent limitations established by this permit, no wastes shall be discharged and no activities shall be conducted which will violate Water Quality Standards as adopted in OAR 340-41-445 except in the following defined mixing zone:

The allowable mixing zone is defined as that portion of the Willamette River within 200 feet of the point of discharge.

N.W. Terminal

SCHEDULE B

Minimum Monitoring and Reporting Requirements (unless otherwise approved in writing by the Department)

Outfall Number 001

Item or Parameter	Minimum Frequency	Type of Sample
Flow	Daily	Estimate
Temperature	Daily	Grab
pH	Daily	Grab
Oil & Grease	Weekly	Grab
Phenols 1	Monthly	Grab
Polynuclear Aromatic Hydrocarbons (PAH) 2	Annual	Grab

Reporting Procedures

Monitoring results shall be reported on approved forms. The reporting period is the calendar year. Reports must be submitted to the Department by January 15th of the following year.

1 Test procedures for phenols should conform with Standard Methods No. 510, 16th edition.

2 Test procedures for polynuclear aromatic hydrocarbons (PAH) should conform with EPA Method 610.

SCHEDULE D

Special Conditions

1. Sanitary wastes shall be disposed of to the City of Portland municipal sewage system.

2. An adequate contingency plan for prevention and handling of spills and unplanned discharges shall be in force at all times. A continuing program of employee orientation and education shall be maintained to ensure awareness of the necessity of good inplant control and quick and proper action in the event of a spill or accident.

3. No emulsifying agents or detergents shall be discharged into or otherwise be allowed to enter into the oil-water separator.

4. Thirty days following the issuance of the permit, the permittee shall initiate sampling of polynuclewar aromatic hydrocarbons (PAH) as required in Schedule B. Upon review of the data, the Department may change the phenol limits to PAH of this permit in accordance with procedures in OAR 340-45-055.

P47430.W (1)

NPDES
GENERAL CONDITIONS

SECTION A. STANDARD CONDITIONS

1. Duty to Comply

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2. Penalties for Violations of Permit Conditions

Oregon Law (ORS 468.990) classifies a willful or negligent violation of the terms of a permit or failure to get a permit as a misdemeanor and a person convicted thereof shall be punishable by a fine of not more than $25,000 or by imprisonment for not more than one year, or by both. Each day of violation constitutes a separate offense.

In addition to the criminal penalties specified above, Oregon Law (ORS 468.140) also allows the Director to impose civil penalties up to $10,000 per day for violation of the terms or conditions of a permit.

3. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment or human health resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

4. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and have the permit renewed. The application should be submitted at least 180 days before the expiration date of this permit. The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date.

5. Permit Actions

This permit may be modified, suspended, or terminated for cause including, but not limited to, the following:

a. Violation of any terms or conditions of this permit, rule, or statute;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or

NWT 001536

c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

The filing of a request by the permittee for a permit modification or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

6. Toxic Pollutants

The permittee shall comply with any applicable effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

7. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any violation of federal, state or local laws or regulations.

SECTION B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

2. Duty to Halt or Reduce Activity

Upon reduction, loss, or failure of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with its permit, control production or all discharges or both until the facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power of the treatment facility fails or is reduced or lost. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

NWT 001537

3. Bypass of Treatment Facilities

a. Definitions

(1) "Bypass" means diversion of waste streams from any portion of the conveyance system or treatment facility.

(2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Prohibition of bypass.

(1) Bypass is prohibited and the Director may take enforcement action against a permittee for bypass, unless:

(a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(b) There were no feasible alternatives to the bypass, such as the use of auxiliary pumping, conveyance, or treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and

(c) The permittee submitted notices and requests as required under paragraph c of this section.

(2) The Director may approve an anticipated bypass, after considering its adverse effects, when the Director determines that it will meet the three conditions listed above in paragraph b(1) of this section.

c. Notice and request for bypass.

(1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

(2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section D, Paragraph D-5 (24-hour notice).

NWT 001538

d. Bypass not exceeding limitations.

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs b and c of this section.

4. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment of control of wastewaters shall be disposed of in such a manner as to prevent any pollutant from such materials from entering public waters, causing nuisance conditions, or creating a public health hazard.

SECTION C. MONITORING AND RECORDS

1. Representative Sampling

Sampling and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this permit and shall be taken, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Director.

2. Flow Measurements

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to insure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to insure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than $\pm$ 10% from true discharge rates throughout the range of expected discharge volumes.

3. Monitoring Procedures

Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.

4. Penalties of Tampering

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

NWT 001539

5. Reporting of Monitoring Results

Monitoring results shall be summarized each month on a Discharge Monitoring Report form approved by the Department. The reports shall be submitted monthly and are to be postmarked by the 14th day of the following month unless specifically approved otherwise in Schedule B of this permit.

6. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Such increased frequency shall also be indicated.

7. Averaging of Measurements

Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean, except for coliform and fecal coliform bacteria which shall be averaged based on a geometric or log mean.

8. Retention of Records

The permittee shall retain records of all monitoring information, including all calibration and maintenance records of all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, or report of application. This period may be extended by request of the Director at any time.

9. Records Contents

Records of monitoring information shall include:

a. The date, exact place, time and methods of sampling or measurements;

b. The individual(s) who performed the sampling or measurements;

c. The date(s) analyses were performed;

d. The individual(s) who performed the analyses;

e. The analytical techniques or methods used; and

f. The results of such analyses.

NWT 001540

10. Inspection and Entry

The permittee shall allow the Director, or an authorized representative upon the presentation of credentials to:

a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, and

d. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by state law, any substances or parameters at any location.

SECTION D. REPORTING REQUIREMENTS

1. Planned Changes

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility which will result in a change in the character of pollutants to be discharged or which will result in a new or increased discharge of pollutants.

2. Anticipated Noncompliance

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

3. Transfers

This permit may be transferred to a new permittee provided the transferee acquires a property interest in the permitted activity and agrees in writing to fully comply with all the terms and conditions of the permit and the rules of the Commission. No permit shall be transferred to a third party without prior written approval from the Director. The permittee shall notify the Department when a transfer of property interest takes place.

4. Compliance Schedule

Reports of compliance or noncompliance with, or any progress reports on interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date. Any reports of noncompliance shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirements.

NWT 001541

5. Twenty-Four Hour Reporting

The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally (by telephone) within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain:

a. A description of the noncompliance and its cause;

b. The period of noncompliance, including exact dates and times;

c. The estimated time noncompliance is expected to continue if it has not been corrected; and

d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

The following shall be included as information which must be reported within 24 hours:

a. Any unanticipated bypass which exceeds any effluent limitation in the permit.

b. Any upset which exceeds any effluent limitation in the permit.

6. Other Noncompliance

The permittee shall report all instances of noncompliance not reported under Section D, Paragraphs D-4 and D-5, at the time monitoring reports are submitted. The reports shall contain the information listed in Paragraph D-5.

7. Duty to Provide Information

The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine compliance with this permit. The permittee shall also furnish to the Department, upon request, copies of records required to be kept by this permit.

Other Information: When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Department, it shall promptly submit such facts or information.

8. Signatory Requirements

All applications, reports or information submitted to the Department shall be signed and certified in accordance with 40 CFR 122.22.

NWT 001542

9. Falsification of Reports

State law provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than $1,000 per violation, or by imprisonment for not more than six months per violation, or by both.

SECTION E. DEFINITIONS AND ACRONYMS

1. BOD means five-day biochemical oxygen demand.

2. TSS means total suspended solids (non-filterable residue).

3. mg/l means milligrams per liter.

4. kg means kilograms.

5. m^3/d means cubic meters per day.

4. MGD means million gallons per day.

5. Composite sample means a combination of samples collected, generally at equal intervals over a 24-hour period, and apportioned according to the volume of the flow at the time of the sampling.

6. FC means fecal coliform bacteria.

NWT 001543

HAHN AND ASSOCIATES, INC.
ENVIRONMENTAL CONSULTANTS

November 1, 2000

Mr. Eric Blischke
Department of Environmental Quality
Voluntary Cleanup and Site Assessment Section
2020 SW 4th Avenue
Portland Oregon 97201

HAI Project No. 2708

SUBJECT: Updated Groundwater Quality Data, Above-Ground Storage Tank Support Piling Monitoring, Koppers Industries, Inc. Lease Area, NW Natural-Gasco Facility, 7900 NW St. Helens Road, Portland, Oregon

Dear Mr. Blischke:

On behalf of NW Natural, enclosed please find an updated summary of groundwater quality data (Tables 1 and 2) as obtained from wells at the Gasco site that monitor groundwater conditions down-gradient from the new above-ground coal tar pitch tank that was constructed by Koppers Industries, Inc. (KII) in 1999 (Figure 1). This data summary has been updated, as you requested in your October 12, 2000 correspondence to Mr. Bob Wyatt of NW Natural, to include groundwater sampling results from monitoring activities that were recently completed at the site on October 5, 2000. With this updated data in hand, it was agreed that the Oregon Department of Environmental Quality (DEQ) would have sufficient information necessary to reach a decision regarding the removal of the moratorium on future tank installations at the KII facility.

In review, 208 support pilings were driven to bedrock in May and June 1999 as part of the installation of the new coal tar pitch tank located on the KII property. Monitoring wells MW-14-110, MW-15-50 and MW-15-66 are being monitored on a quarterly sampling frequency as per a December 14, 1999 assessment plan[1] that has been implemented such that an evaluation of environmental impacts associated with piling construction may be completed. Wells MW-15-50 and MW-15-66 were installed in July 1999 and are located approximately 30 feet to the north, and down-gradient of, the support pilings, while well MW-14-110 is located approximately 250 feet north, and down-gradient of the pilings. Well MW-15-50 is screened from 40 to 50 feet bgs within the upper Alluvial Sand water bearing zone (WBZ), a depth interval that is immediately below the silt unit, while wells MW-15-66 and MW-14-110 are screened at the base of the Alluvial Sand WBZ across depths of 61 to 66 feet bgs and 100 to 110 feet bgs, respectively. The silt unit at this portion of the site acts to prevent the vertical migration of dense non-aqueous phase liquid (DNAPL) from the overlying Surficial Fill WBZ into the underlying Alluvial Sand WBZ.

The primary objective of the monitoring activities has been the acquisition of sufficient data such that the likely source of polynuclear aromatic hydrocarbon (PAH) and aromatic hydrocarbon (particularly benzene) contamination identified at the MW-15-50 well

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[1] Hahn and Associates, Inc. (1999), *Proposed Assessment Plan, Above-Ground Storage Tank Support Pilings, Koppers Lease Area, Northwest Natural Lease Area, Northwest Natural-Gasco Facility, 7900 NW St. Helens Road, Portland, Oregon* (Ede to Blischke), December 14, 1999.

location could be ascertained. Specifically, monitoring activities were designed to determine whether the impacts identified at MW-15-50: (1) pre-date the installation of tank foundation pilings; (2) are the result of limited piling drag-down of shallow contamination into the Alluvial Sand WBZ; or (3) are the result of the pilings acting as an on-going conduit for the continued migration of shallow contamination into the Alluvial Sand WBZ. The preceding determination is necessary in order to evaluate whether tank installation procedures have exacerbated existing contamination at the site, since KII desires to commence construction of a second tank, at a location immediately south of the first tank (Figure 1) in this area during 2001.

As provided within the Assessment Plan (HAI 1999), monitoring activities were completed since July 1999 to allow for the identification and evaluation of concentration trends at the wells such that the type/mechanism of the contaminant source currently identified at the MW-15-50 location could be ascertained. With completion of the October 2000 sampling event, more than one year of groundwater quality data (five quarterly sampling events) are now available (Tables 1 through 3). Descriptions of key observations and trends in contaminant concentrations are provided below, with an interpretation provided thereafter.

Benzene Concentration Trends

- Benzene concentrations at the MW-15-50 well location have decreased from a high of 95,100 parts per billion (ppb) in July 1999 to a low of 1,270 ppb in June 2000, while remaining low through the most recent sampling event in October 2000 (2,700 ppb on October 5, 2000) (Figure 2).

- Benzene concentrations at the MW-15-66 well location have consistently been non-detect since October 1999, with only low to trace levels identified at this well location during the first two sampling events in July and August, 1999 (Figure 3).

- Since installation of the tank support pilings in May and June 1999, decreasing concentrations of benzene have been identified at the well MW-14-110 location (from 45.6 ppb in August 1999 to non-detect in October 2000) (Figure 4).

PAH Concentration Trends

- The four most soluble PAHs (acenaphthene, acenaphthylene, fluorene, and naphthalene; all 2- to 3-ringed PAHs) were identified in groundwater at the MW-15-50 location during the initial July 1999 sampling event, with a combined total concentration of 18,460 ppb, while the less soluble carcinogenic (3- to 5-ring PAHs) were first identified at this location in April 2000 with a combined total concentration of 3.31 ppb. Low levels of 3- to 5-ringed PAHs may have been present prior to April 2000, but they would not have been detected at the concentrations identified in April 2000 due to elevated detection limits resulting from the need to dilute these samples because of the high concentrations of the more soluble PAHs that were encountered.

- Concentrations of the two most soluble PAHs, naphthalene and acenaphthylene, have consistently and dramatically declined through time at the MW-15-50 well location, decreasing from a combined total of 18,210 ppb as measured in July 1999 to only 3.76 ppb as measured in October 2000 (Figure 5).

- The concentrations of the relatively insoluble carcinogenic 3-ringed to 5-ringed PAHs at the MW-15-50 location, identified with a combined total concentration of 3.3 ppb during the April 2000 sampling event, were found to spike upwards during the June 2000 sampling event (to a combined total concentration of 265 ppb), with a subsequent decline as measured during the October 2000 sampling event (total concentration of 75 ppb) (Figure 6).

- With regard to the MW-15-66 location, the most soluble 2- and 3-ringed (non-carcinogenic) PAHs have only sporadically been identified at this location, and then only at very low concentrations (less than 10 ppb) (Figure 7). Although a small spike in 3-ring to 5-ring (carcinogenic) PAHs was noted at this location in June 2000 (12.17 ppb), results of the October 2000 sampling event indicated that concentrations of 3- to 5-ringed PAHs have since declined to their lowest recorded level since October 1999 (1.36 ppb) (Figure 8).

- With regard to the MW-14-110 location, only trace levels of 2 soluble PAHs (acenaphthene and naphthalene) have been identified in groundwater at this location, with no other PAHs having ever been identified. Results from the most recent sampling event, conducted in October 2000, indicate that no PAHs were detected at this location (Figure 9).

Predicted Contaminant Travel Times

As requested in the October 12, 2000 DEQ correspondence, an estimate of the travel time that might be expected with regard to dissolved plume contaminant migration from the source (i.e., pilings) to the observation point (i.e., monitoring wells) is included herein.

Based on site-specific slug test data, as reported within the HAI Phase I RI Investigation Summary Report[2], seepage velocities for groundwater within the Alluvial Sand WBZ have been estimated to range from 0.02 to 0.1 feet per day. Similarly, seepage velocity estimates of the same WBZ using hydraulic conductivity data from slug tests of nearby off-site wells, as reported by Geraghty & Miller, Inc.[3], results in seepage velocity estimates of 0.02 to 0.2 feet per day. Based on the preceding, assuming non-attenuated dissolved phase advective transport only, one would estimate a travel time from the pilings to the MW-15 well pair (approximately 30 feet) to be between 6 months and 4 years.

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[2] Hahn and Associates, Inc. (1998), *Phase I Remedial Investigation Summary Report and Preliminary Analysis of Soil Data, Northwest Natural-Gasco Facility, 7900 NW St. Helens Road, Portland, Oregon,* October 9, 1998.

[3] Geraghty & Miller, Inc. (1991), Hydrogeological Investigation of the Doane Lake Area, Portland, Oregon, February 22, 1991.

Although the above provides an estimate of advective travel time within the Alluvial Sand WBZ, it is important to note that any product drag down into the Alluvial Sand WBZ caused by the pilings would result in contaminant transport via advective transport as well as by diffusion and gravity flow. The gravity flow component, if present, would have an unpredictable impact on overall contaminant travel times, while the diffusion component resulting from a large instantaneous concentration gradient could be significant.

Discussion

The initial peak and subsequent sharp decline of soluble aromatic hydrocarbon and PAH concentrations, as identified at well MW-15-50, is suggestive of a slug of contamination migrating past this well. Further, the initial presence of acenaphthene at a concentration that is more than two-times this constituent's solubility limit, provides some evidence that product may have been present near this location. The steady decline in contaminant concentrations at this location through time indicates that the slug of product was likely of limited extent and not the result of an ongoing release into the Alluvial Sand WBZ. Additionally, the significantly lower levels of contamination at the MW-15-66 well location indicates that there may have been insufficient product mass to overcome the likely permeability contrasts (i.e., silt layers) present within the upper Alluvial Sand WBZ.

Although concentrations of the more soluble PAHs have shown a dramatic decline at well MW-15-50, concentrations of the 3- to 5-ring PAHs are expected to persist, and to fluctuate, due to their greater tendency to partition onto soils through which the product slug has moved. For example, due to their mode of transport, concentrations of 3- to 5-ringed PAHs would be expected to fluctuate significantly as a function of sample turbidity. Based on the greater attenuation potential, the delayed peak in concentration for the least soluble PAH fraction as observed at the MW-15-50 location in June 2000 (Figure 6), does not appear to indicate the occurrence of a significant environmental issue with respect to the pilings.

It is noted that the potential does exist that a component of the contamination observed at the MW-15-50 location may be the result of well construction-related contaminant drag-down. However, due to the method of well construction (completed through a permanently installed steel surface casing installed across the zone of product), it does not appear likely that the significant concentrations identified at the MW-15-50 location (in excess of 95,000 ppb) could solely be attributable to well construction-related drag-down. As observed at existing wells where contaminant drag down is suspected (i.e., wells MW-10-61 and MW-14-110), benzene concentrations have not been identified at concentrations greater than 75 ppb. Based on the preceding, it does not appear likely that the benzene concentrations identified at well MW-15-50 would be the result of well construction-induced drag-down.

As described previously, the difference in the predicted contaminant travel time versus the observed travel time from the tank pilings to the MW-15 well pair location, may be due to several factors. First, the predicted travel time (between 6 months and 4 years) considered advective transport only, while in actuality, gravity flow and chemical diffusion both likely contributed significantly to overall transport. Additionally, it should be understood that the hydraulic conductivity values used for estimating seepage velocity were based on single well slug tests, which by their nature (short term, localized area) should be

considered only qualitative estimates of average hydraulic conductivity that could underestimate the actual average hydraulic conductivity for the Alluvial Sand WBZ.

In summary, under a scenario involving an ongoing source of contamination to the Alluvial Sand WBZ, one would expect stable or increasing concentration trends at the MW-15-50 location, with a strong increasing trend in contaminant concentrations at well MW-15-66. Since overall trends observed to date indicate a decline in concentrations through time at the MW-15-50 location, and non-detect to low concentrations at MW-15-66, it does not appear that piling installation has resulted in creation of an artificial conduit leading to exacerbation of overall site contamination. Instead, contamination identified within the Alluvial Sand WBZ at the MW-15-50 well location location is likely the result of "one-time" contaminant drag-down during the piling installation. The slug of contamination resulting from the piling construction, as observed passing the MW-15-50 location, would not be expected to significantly contribute to the existing site contamination since this slug would attenuate and be masked by an existing plume of significantly greater mass and concentration within the Alluvial Sand WBZ at down-gradient portions of the site.

Recommendations

Based on the findings described herein, it is requested that DEQ remove the moratorium on further tank construction activities at the site.

Assuming that the moratorium is lifted, then in order to monitor for potential exacerbation issues related to new tank construction, it is proposed that a new monitoring well (MW-16), constructed in a similar manner as well MW-15-66, be installed as close to the location of the proposed tank as possible. Figure 1 includes a tentative location for this well. It is recommended that this well be installed as soon as possible, with monitoring to commence prior to piling installation. Such a sequence of events will provide for the collection of valuable "baseline" water quality data. A specific installation plan for this well will be provided to the DEQ for review in the near future.

If there are any comments or questions, please contact the undersigned.

Sincerely,

Robert Ede
Sr. Project Manager

c: Ms. Sandra Hart, NW Natural
Mr. Bob Wyatt, NW Natural
Mr. Amos Kamerer, Koppers Industries, Inc.
Mr. Richard Bach, Stoel Rives, LLP
Mr. Steve Cappellino, Anchor Environmental LLC

Table 1 - Summary of Historical Analytical Results for Groundwater Samples: BTEX, Total PAHs, and Cyanide (November 1999 to Present)
Remedial Investigation
NW Natural - Gasco Facility
Portland, Oregon

Project No. 2708

Well Number	HAI Sample Number	Chain of Custody Number	Sample Date	Analytical Results									
				EPA Method 8020 ug/l (ppb)					EPA Method 8270 S/M ug/l (ppb)		EPA 9010 mg/l (ppm)	EPA 901 mg/l (ppm)
				Benzene	Toluene	Ethyl benzene	Xylenes	Total BTEX	Carcinogenic PAHs	Total PAHs	Total Cyanide	Amenable Cyanide
MW-14-110	981116-MW14-110-09	2708-W037	16-Nov-98	3.2	ND>0.5	ND>0.5	ND>1.5	3.2	ND	ND	0.03	
	990218-MW14-110-005	2708-W042	16-Feb-99	12.7	ND>0.5	0.6	ND>1.5	13.3	ND	0.11	0.04	ND>0.02
	990512-MW14-110-09	2708-W045	12-May-99	22.1	ND>0.5	1.65	2.4	26.4	ND	0.25	0.03	0.03
	990823-MW14-110-06	2708-W049	23-Aug-99	45.6	0.75	1.85	2.09	50.3	ND	0.41	0.05	ND>0.02
	991027-MW14-110-09	2708-W055	27-Oct-99	29.6	0.81	1.45	ND>1.5	30.9	ND	0.26	0.04	ND>0.02
	991027-MW14-110-10	2708-W055	27-Oct-99	29.7	0.57	1.52	ND>1.5	31.8	ND	0.27	0.03	ND>0.02
	000329-MW14-110-109	2708-W060	29-Mar-00	7.56	ND>0.5	0.73	ND>1.5	8.8	ND	0.42	0.03	ND>0.02
	000329-MW14-110-110	2708-W060	29-Mar-00	8.9	0.5	0.83	ND>1.5	10.2	ND	0.42	0.03	ND>0.02
	000615-MW14-110-102	2708-W064	15-Jun-00	4.55	ND>0.5	ND>0.5	ND>1.5	4.9	ND	0.2	ND>0.02	ND>0.02
	001005-MW14-110-06	2708-W066	5-Oct-00	ND>0.5	ND>0.5	ND>0.5	ND>1.5	ND	ND	ND	ND>0.02	
MW-15-50	990728-MW15-50-04	2708-W048	28-Jul-99	93,100.	883.	223.	2,420.	98,603.	ND	18,460.	ND>0.020	ND>0.02
	991029-MW15-50-25	2708-W057	29-Oct-99	8,910.	134.	59.2	500.	9,603.2	ND	782.	0.15	ND>0.02
	000403-MW15-50-125	2708-W062	3-Apr-00	44,800.	620.	222.	2,300.	47,942.	3.31	5,611.	0.07	ND>0.02
	000615-MW15-50-105	2708-W064	15-Jun-00	1,490.	14.3	6.62	42.	1,552.9	488.	475.		ND>0.02
	000615-MW15-50-106	2708-W064	15-Jun-00	1,270.	10.	6.16	28.4	1,313.6	264.	451.		ND>0.02
	001005-MW15-50-14	2708-W066	5-Oct-00	2,700.	5.65	3.63	15.2	2,724.7	74.	129.	ND>0.020	
MW-15-66	990728-MW15-66-03	2708-W048	28-Jul-99	3.61	ND>0.5	ND>0.5	ND>1.5	3.6	0.03	3.	ND>0.020	ND>0.02
	990823-MW15-66-04	2708-W050	23-Aug-99	0.72	ND>0.5	ND>0.5	ND>1.5	0.7				
	991026-MW15-66-07	2708-W054	26-Oct-99	ND>0.5	ND>0.5	ND>0.5	ND>1.5	ND	ND	ND	ND>0.020	ND>0.02
	000328-MW15-66-103	2708-W060	29-Mar-00	ND>0.5	ND>0.5	ND>0.5	ND>1.5	ND	3.91	7.	ND>0.02	ND>0.02
	000615-MW15-66-104	2708-W064	15-Jun-00	ND>0.5	ND>0.5	ND>0.5	ND>1.5	ND	12.17	22.		ND>0.02
	001005-MW15-66-08	2708-W066	5-Oct-00	ND>0.5	ND>0.5	ND>0.5	ND>1.5	ND	1.36	2.	ND>0.020	
EPA Maximum Contaminant Levels (MCLs) for Drinking Water				5	1,000	700	10,000	#	#	#	0.2	#
EPA Region 9 Preliminary Remediation Goals (PRGs) for Tap Water (10/99)				0.41	720	1,500	1,400	#	#	#	#	0.73
DEQ Ambient Water Quality Criteria (AWQC) for Surface Water				40.[3]	424.[3]	1,400.[3]	#	#	0.001.[4]	#	0.0052.[4]	#

Note: BTEX = benzene, toluene, ethylbenzene, and xylenes
DEQ = Oregon Department of Environmental Quality
EPA = U.S. Environmental Protection Agency
mg/l = milligrams/liter
ND = not detected above detection limit indicated
PAHs = polynuclear aromatic hydrocarbons
ppb = parts per billion
ppm = parts per million
ug/l = micrograms per liter
= Reference Level not established
Bold and shaded = Detected above Lowest Identified Reference Level

1 = Sample number prefix 2708-
2 = Reference Level indicated is the lowest guidance value provided in the Ambient Water Quality Criteria (OAR 340-41) based on Fresh Acute, Fresh Chronic (Aquatic Life Protection) and Fish Consumption (Human Health Protection)
3 = Reference Level based on Aquatic Fresh Chronic Criteria of AWQC
4 = Reference Level based on Human Fish Consumption Criteria of AWQC

FROM :KOPPERS INDUSTRIES, INC. 285 3681 1901.08-07 07:50 #410 P.05/09

NWT 001549

Table 2 - Summary of Historical Analytical Results for Groundwater Samples: PAHs by EPA Method 8270 (November 1998 to Present)
Remedial Investigation
NW Natural - Gasco Facility
Portland, Oregon
Project No. 2708

PAHs by EPA Method 8270 (SIM)				Analytical Results ug/l (ppb)																				
				Carcinogenic PAHs									Non-carcinogenic PAHs									Total Carcinogenic PAHs	Total PAHs
Well Number	Sample Number	Chain of Custody Number	Sample Date	Benzo (a) anthracene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Chrysene	Dibenzo (ah) anthracene	Indeno (1,2,3-cd) pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (ghi) perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene		
MW14-110	981105-MW14-110-09	2708-W037	18-Nov-98	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND	ND
	990215-MW14-110-005	2708-W042	16-Feb-99	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	0.11	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND	0.1
	990512-MW14-110-09	2708-W045	12-May-99	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	0.14	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	0.14	ND [a]	ND [a]	ND	0.3
	990823-MW14-110-06	2708-W049	23-Aug-99	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	0.29	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	0.12	ND [a]	ND [a]	ND	0.4
	991027-MW14-110-09	2708-W055	27-Oct-99	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	0.26	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND	0.3
	991027-MW14-110-09	2708-W055	27-Oct-99	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	0.26	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND	0.3
	000329-MW14-110-109	2708-W060	29-Mar-00	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	0.42	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND	0.4
	000329-MW14-110-110	2708-W060	29-Mar-00	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	0.42	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND	0.4
	000615-MW14-110-102	2708-W064	15-Jun-00	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	0.18	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND	0.2
	001005-MW14-110-06	2708-W068	5-Oct-00	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND	ND
MW15-50	990728-MW15-50-04	2708-W048	28-Jul-99	ND [d]	ND [d]	ND [d]	ND [d]	ND [d]	ND [d]	ND [d]	50.	8,510.	ND [d]	ND [d]	ND [d]	83.	6,700 [d]	157.	ND [d]	ND	16,460.
	991029-MW15-50-25	2708-W057	29-Oct-99	ND [d]	ND [d]	ND [d]	ND [d]	ND [d]	ND [d]	ND [d]	ND [d]	20.	ND [d]	ND [d]	ND [d]	ND [d]	710 [d]	28.	ND [d]	ND	782.
	000403-MW15-50-125	2708-W062	3-Apr-00	0.79	0.51	0.48	0.55	0.73	ND [c]	0.24	22.	41.6	2.91	0.25	6.01	23.8	5,680 [d]	25.9	5.18	1.31	5,611.
	000615-MW15-50-103	2708-W064	15-Jun-00	43.8	45.6	36.5	57.1	40.9	8.95	33.5	2.91	0.59	4.11	41.8	66.7	1.66	1.23	25.	60.1	417.66	475.
	000615-MW15-50-105	2708-W064	15-Jun-00	40.	44.1	36.3	53.5	38.3	8.87	32.6	2.56	0.77	4.1	40.2	65.2	1.71	1.23	23.8	57.3	391.67	451.
	001005-MW15-50-14	2708-W068	5-Oct-00	16.7	19.7	6.97	15.4	9.28	2.52	8.21	1.51	0.98	1.47	8.14	15.3	1.06	2.8	8.44	16.7	74.18	129.
MW15-68	990728-MW15-68-03	2708-W049	28-Jul-99	0.15	0.39	ND [a]	0.16	0.15	ND [a]	0.11	0.11	ND [a]	ND [a]	0.14	0.3	ND [a]	0.57	0.17	0.34	0.83	2.5
	991028-MW15-68-07	2708-W054	28-Oct-99	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND	ND
	000329-MW15-68-108	2708-W060	29-Mar-00	0.57	0.69	0.6	0.77	0.67	0.19	0.63	ND [a]	ND [a]	0.18	0.65	0.98	ND [a]	ND [a]	0.33	0.98	3.91	6.9
	000615-MW15-50-104	2708-W064	15-Jun-00	1.93	1.96	1.67	2.84	1.91	0.57	1.85	0.14	ND [a]	0.39	2.04	3.32	ND [a]	ND [a]	1.07	2.93	12.17	22.8
	001005-MW15-68-08	2708-W068	5-Oct-00	0.23	0.4	0.17	0.32	0.24	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	ND [a]	0.41	ND [a]	ND [a]	0.14	0.43	1.36	2.3
EPA Maximum Contaminant Levels (MCLs) for Drinking Water				#	#	#	#	2	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#
EPA Region 9 Preliminary Remedial Goals (PRGs) for Tap Water (10/99)				0.092	0.092	0.92	0.0092	9.2	0.0092	0.092	370 [3]	#	1,800	#	1,500	240	82	#	180	#	#
DEQ Ambient Water Quality Criteria (AWQC) for Surface Water				#	#	#	#	#	#	#	520 [3]	#	#	#	54	#	620 [3]	#	#	0.031 [4]	#

Note:
# = Reference Level not established
EPA = U.S. Environmental Protection Agency
ND = not detected above detection limit indicated
ODEQ = Oregon Department of Environmental Quality
PAHs = polynuclear aromatic hydrocarbons
ppb = parts per billion
ug/l = micrograms per liter
Bold and shaded = Detected above lowest identified Reference Level
a = detection limit is 0.1 ug/l (ppb)
b = detection limit is 1. ug/l (ppb)
c = detection limit is 2. ug/l (ppb)
d = detection limit is 10. ug/l (ppb)
e = detection limit is 20. ug/l (ppb)

1 = Sample number prefix 2708-
2 = Reference Level indicated is the lowest guidance value provided in the Ambient Water Quality Criteria (OAR 340-41) based on Fresh Acute, Fresh Chronic (Aquatic Life Protection) and Fish Consumption Only (Human Health Protection)
3 = Reference Level based on Aquatic Fresh Chronic Criteria of AWQC
4 = Reference Level based on Human Fish Consumption Criteria of AWQC

Updated: 10/27/00 RER
File Name: t 2708 (TW Results, KH AST.wks

FROM: KOPPERS INDUSTRIES, INC. 2065 3681 1901-08-07 07:51 #410 P.07/09

NWT 001550

Table 3 - Summary of Historical Analytical Results for Groundwater Samples - November 1998 to Present
Priority Pollutant Metals by EPA Methods 6010, 200.7 and/or 7000 Series

Remedial Investigation
NW Natural - Gasco Facility
Portland, Oregon

Project No. 2709

Priority Pollutant Metals by EPA Methods 6010, 7000, and 200 Series				Analytical Results (mg/l (ppm))																									
Well Number	Lab Sample Number	Chain of Custody Number	Sample Date	Antimony	Arsenic	Dissolved Arsenic	Beryllium	Cadmium	Dissolved Cadmium	Chromium	Dissolved Chromium	Copper	Dissolved Copper	Lead	Dissolved Lead	Mercury	Nickel	Dissolved Nickel	Selenium	Silver	Thallium	Zinc	Dissolved Zinc
MW-14-110	981118-MW14-110-06	2708-W037	18-Nov-98		0.012					ND [a]		ND [a]		ND [a]			ND [a]					ND [a]	
	990218-MW14-110-005	2708-W042	18-Feb-99		0.013					ND [a]		ND [a]		ND [a]			ND [a]					0.05	
	990512-MW14-110-09	2708-W045	12-May-99		0.012					ND [a]		ND [a]		ND [a]			ND [a]					ND [a]	
	990823-MW14-110-08	2708-W049	23-Aug-99		0.016					ND [a]		ND [a]		ND [a]			ND [a]					ND [a]	
	991027-MW14-110-09	2708-W055	27-Oct-99		0.01					ND [a]		ND [a]		ND [a]			ND [a]					ND [a]	
	991027-MW14-110-10	2708-W055	27-Oct-99		0.09					ND [a]		ND [a]		ND [a]			ND [a]					0.065	
	000329-MW14-110-108	2708-W060	29-Mar-00		0.012					ND [a]		ND [a]		ND [a]			ND [a]					0.011	
	000329-MW14-110-118	2708-W060	29-Mar-00		0.012					ND [a]		ND [a]		ND [a]			ND [a]					ND [a]	
	000615-MW14-110-102	2708-W064	15-Jun-00		0.034					ND [a]		ND [a]		ND [a]			ND [a]					ND [a]	
	001005-MW14-110-06	2708-W066	5-Oct-00		0.041					ND [a]		ND [a]		ND [a]			ND [a]					ND [a]	
MW-15-50	981029-MW15-50-25	2708-W057	29-Oct-98		0.011					ND [a]		ND [a]		ND [a]			ND [a]					0.01	
	000403-MW15-50-125	2708-W062	3-Apr-00		ND [a]					ND [a]		ND [a]		ND [a]			ND [a]					0.02	
	000615-MW15-50-105	2708-W064	15-Jun-00		ND [a]				0.006			ND [a]		ND [a]			0.0064					0.0058	
	000615-MW15-50-108	2708-W064	15-Jun-00		ND [a]				ND [a]			ND [a]		ND [a]			ND [a]					0.0048	
	001005-MW15-50-08	2708-W066	5-Oct-00		0.0054				0.0076			0.0061		ND [a]			0.0121					0.0303	
MW-15-68	981029-MW15-68-07	2708-W054	29-Oct-98		ND [a]					ND [a]		ND [a]		ND [a]			ND [a]					ND [a]	
	000329-MW15-68-108	2708-W060	29-Mar-00		ND [a]					ND [a]		ND [a]		ND [a]			ND [a]					ND [a]	
	000615-MW15-68-104	2708-W064	15-Jun-00		0.006					ND [a]		ND [a]		ND [a]			ND [a]					0.021	
	001005-MW15-68-03	2708-W066	5-Oct-00		ND [a]					ND [a]		ND [a]		ND [a]			ND [a]					ND [a]	
EPA Maximum Contaminant Levels (MCLs) for Drinking Water [1]				0.006	0.05	0.05	0.004	0.005	0.005	0.1	0.1	1	1	0.015	0.015	0.002	0.1	0.1	0.05	0.1	0.002	5	5
EPA Region 9 Preliminary Remediation Goals (PRGs) for Tap Water (1998)				0.015	0.000045	0.000045	0.073	0.018	0.018	0.11	0.11	1.4 [b]	1.4 [b]	0 [c]	0 [c]	0.0039	0.73	0.73	0.18	0.18	0 [c]	11 [b]	11 [b]
ODEQ Ambient Water Quality Criteria (AWQC) for Surface Water [2] [3] [4]				1.6 [b]	0.000017 [d]	0.000017 [d]	0.00017 [d]	0.0091 [d]	0.0011 [d]	0.019 [d]	0.011 [d]	0.012 [d]	0.012 [d]	0.0032 [d]	0.0032 [d]	0.000012 [d]	0.61 [d]	0.1	0.0051 [d]	0.00012 [d]	0.047 [d]	610 [d]	0.19 [d]

Note: EPA = U.S. Environmental Protection Agency
mg/l = milligrams/liter
ND = not detected above detection limit indicated
ODEQ = Oregon Department of Environmental Quality
ppm = parts per million

a = detection limit is 0.0002 mg/l (ppm)
b = detection limit is 0.002 mg/l (ppm)
c = detection limit is 0.005 mg/l (ppm)
d = detection limit is 0.01 mg/l (ppm)
e = detection limit is 0.05 mg/l (ppm)

g = Reference Levels not established
Bold and shaded = Detected above lowest identified Reference Level

1 = Sample number prefix: 2708-
2 = Reference Level indicated is the lowest guidance value provided in the Ambient Water Quality Criteria (OAR 340-41) based on Fresh Acute, Fresh Chronic (Aquatic Life Protection) and Fish Consumption Only (Human Health Protection)
3 = Reference Level based on Aquatic Fresh Chronic Criteria of AWQC
4 = Reference Level based on Human Fish Consumption Criteria of AWQC
5 = Due to mislabeling in the field or due to laboratory misidentification, the laboratory report transposed results for MW4-35 and MW4-37 in August 1997. Tables attribute data to the correct well.

NWT 001551

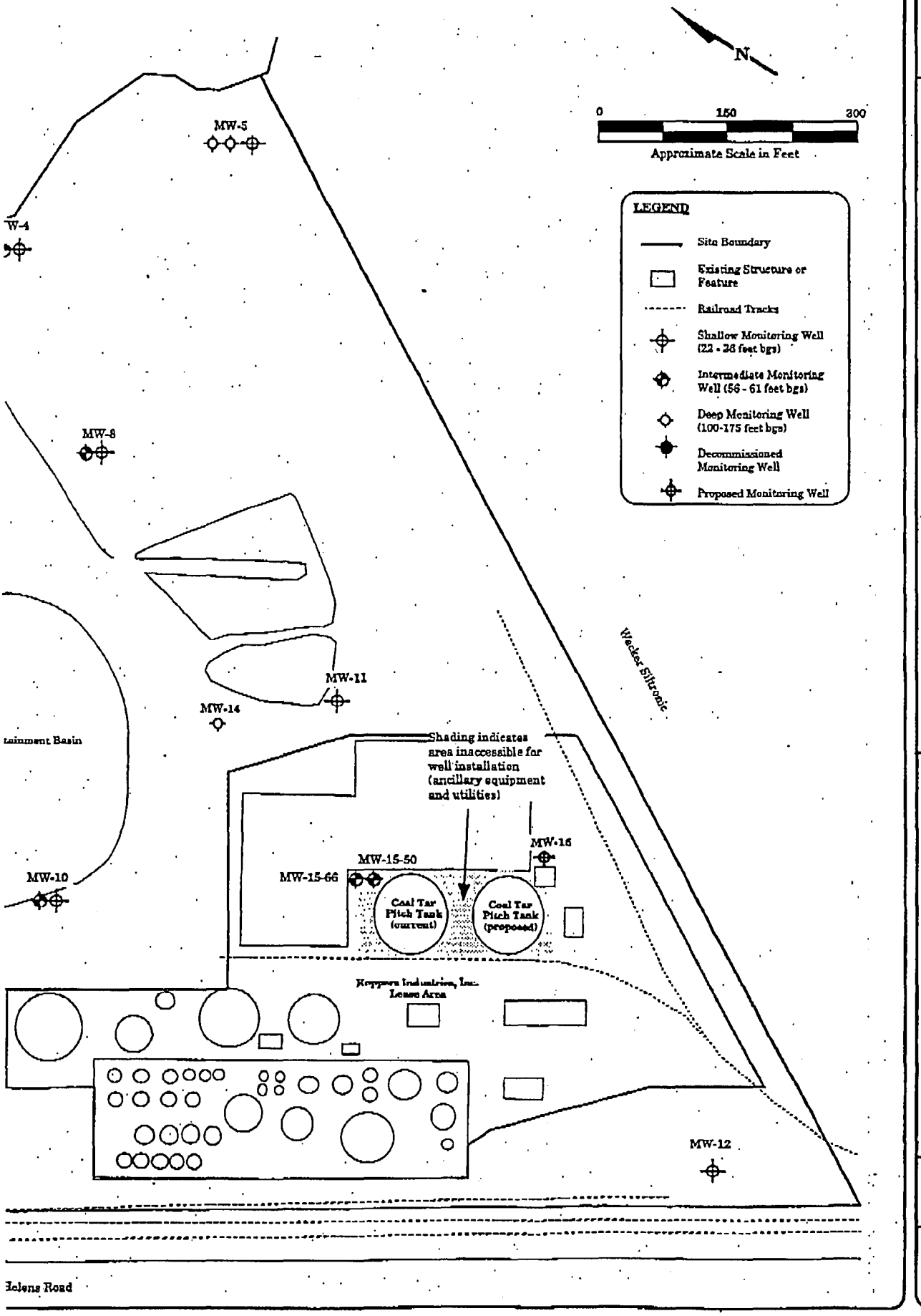


Figure 1

Site Map

Remedial Investigation
Northwest Natural - Gasco Facility
7900 NW St. Helens Road
Portland, Oregon

HAHN & ASSOCIATES, INC.
ENVIRONMENTAL MANAGEMENT
434 NW SIXTH AVENUE, SUITE 203
PORTLAND, OREGON 97209
503/796-0717

October 2000

Project No. 2708

RAINWATER COLLECTION AND TREATMENT PROCESS DESCRIPTION

The tank farm will be paved to facilitate the collection and treatment of rainwater, and to prevent flooding by ground seepage when the water table rises.

The floor of the tank farm will slope from the center of the farm to a drainage ditch on each side. Rainwater will run off the floor of the tank farm, into the ditches, and then into a drainage sump.

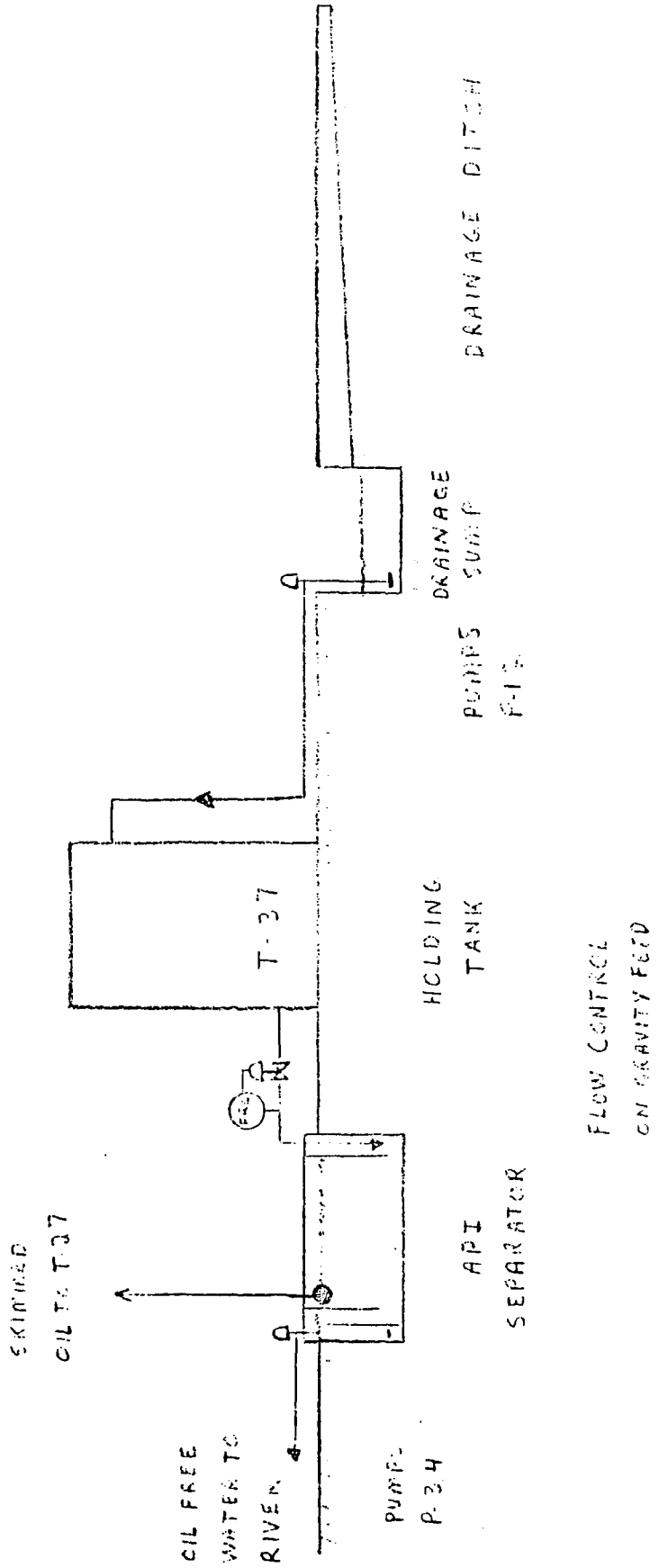
Two float actuated, alternating sump pumps will transfer water from the drainage sump to the holding tank. In case the water level in the drainage sump triggers the high level alarm, both pumps would be activated.

Water in the holding tank will drain into the API separator through a flow-recorder-controller. Any oil present will be skimmed off the surface of the separator and collected in tank T-23 for further processing. Clean water will be pumped out of the separator and into a storm water ditch leading to the river by two float activated, alternating sump pumps.

L. Bily
1-24-75

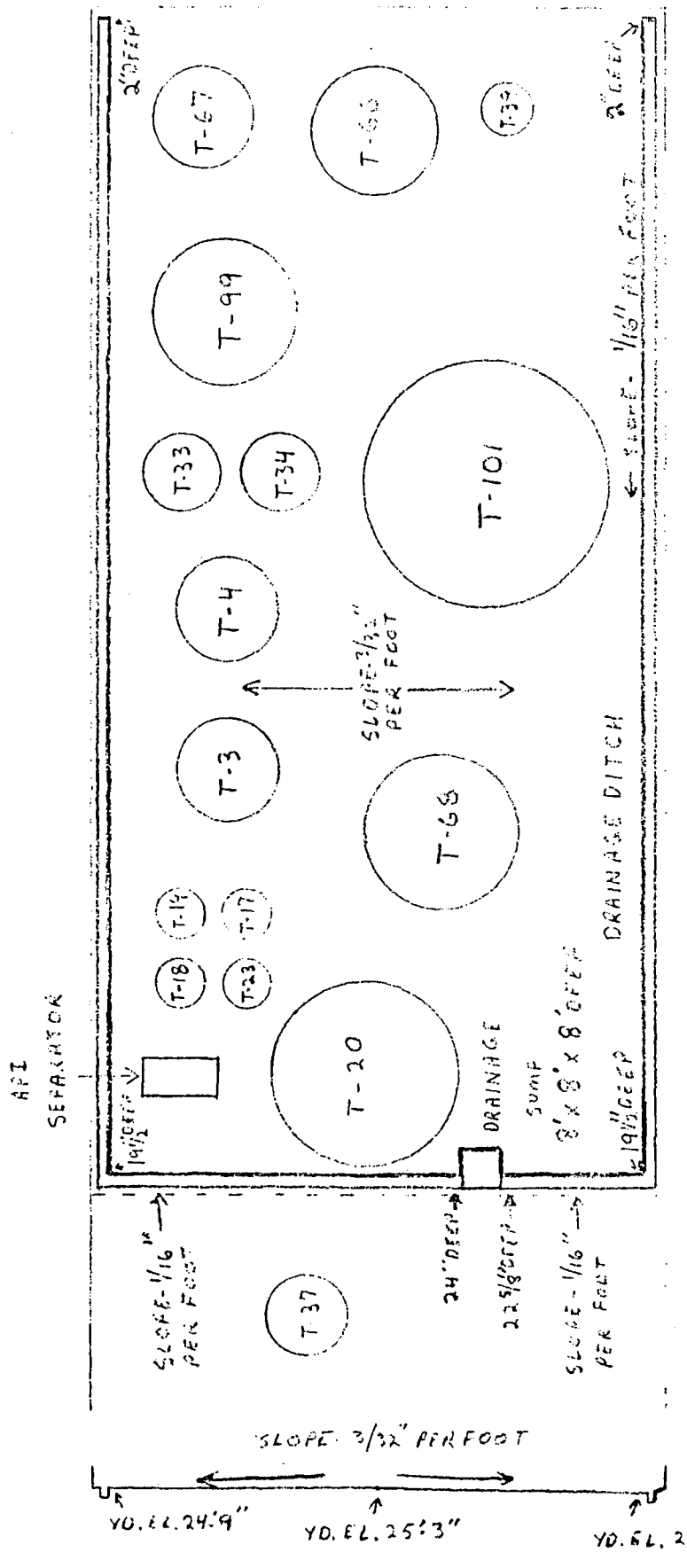
BY _____ DATE _____ SUBJECT _____ SHEET NO. _____ OF _____

CHKD. BY _____ DATE _____ JOB NO. _____



BY _____ DATE _____ SUBJECT _____ SHEET NO. _____ OF _____

CHKD. BY _____ DATE _____ JOB NO. _____



To: P. W. Guth
J. Little
P. L. Bost
D. L. O'Dell
C. H. Teller, Sr.
J. R. LaValla
J. M. Anderson

From: Organic Materials Div.
Engineering Department

Date: February 11, 1976

Subject: Air & Water Pollution Abatement
Northwest Tank Farm

Attached are a preliminary set of specifications (prepared by Jack Towne) for equipment to abate air and water pollution in the Northwest tank farm area. I would like your comments on the general process by February 20, 1976.

We are required by N.P.D.E.S. Permit #2180-J to submit detailed engineering plans for providing pollution control in the tank farm area by July 1, 1976 and to have operating facilities by July 1, 1977. The level of pollution does not warrant installation of our own waste treatment facilities. The reasonable course of action is to enter into an agreement with the City of Portland to accept our contaminated run-off for treatment at the city sewage plant along with any process water. When the N.P.D.E.S. Permit was issued, the D.E.Q. tried to force us to discharge to the city sewers, but the city refused to accept our waste, citing an E.P.A. order prohibiting them from taking any more storm sewers into their collection system. However, I believe the city might take a portion of the most contaminated run-off if we can convince them we will do a good job of segregating and controlling the discharge. We must act now to get city approval in order to meet the deadline in the N.P.D.E.S. Permit. If we fail to get city approval, we will have to devise alternate treatment methods prior to June 1, 1976.

We are also under the gun on our air permit at Northwest. We have an interim permit which expires on July 1, 1977. The Department of Environment Quality has given us some strong hints that they will not extend or renew this permit unless we install a fume system in the tank farm. Some economies can result from combining a much needed spill collection system with the fume system. Furthermore, management should be aware of the total costs of pollution control at Northwest when considering the storm water proposal. Therefore, we wish to submit the combined package for approval at one time. We will forward a cost estimate for the facilities as soon as it is completed.

R. L. Shannon

RLS:jfc

Attachments

NORTHWEST TANK FARM

PROJECT NO. 2026

RAINWATER COLLECTION AND TREATMENT

TANK OVERFLOW COLLECTION SYSTEM

TANK VAPOR COLLECTION SYSTEM

Vapor and Tank Overflow Collection Systems

Process Description

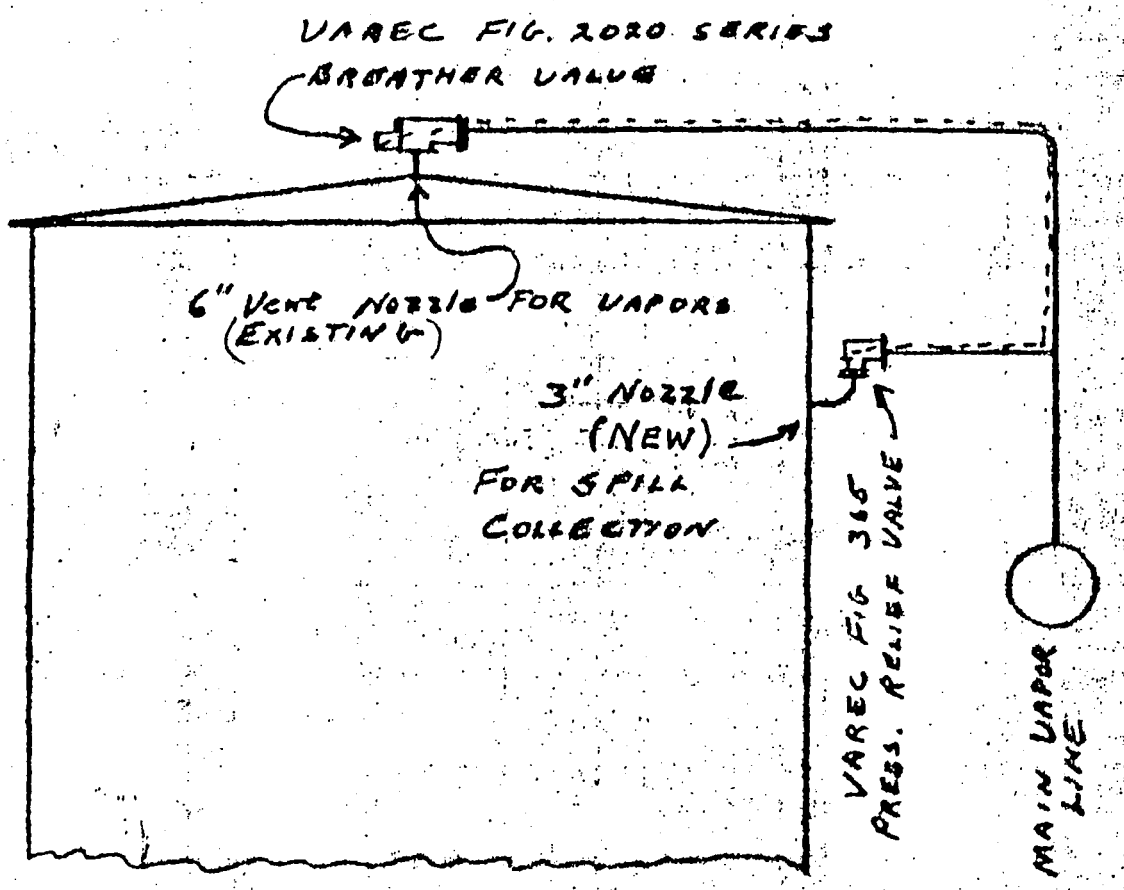
The vapor and tank overflow collection systems are to be combined into one system. Vapors are to be pulled off all tanks through Varec Figure 2020 Series Breather Valves (or equal). This valve provides for both pressure and vacuum relief. Piping off each breather valve will be connected to a central header starting at T-39, turning centrally through the tank farm and going into the side of T-23.

Tank T-23 will be used as an oil tank for the system. An eductor and liquid-air separator will be installed on top of the tank. A pump will be installed to pump oil from the tank through the nozzle of the eductor. Fumes will be pulled from the side of T-23 through the eductor. Liquid will run back into the tank and clean air will be exhausted from the side of the liquid-air separator through a short stack.

A high level alarm will be installed on T-23. In addition an overflow will be installed that will drain into the API Separator.

Spill collection piping will be provided on all tanks of 100,000 gallons or less. A nozzle will be located about two feet below the top of the tank. The nozzle will come out of the tank with a 90° flanged ell facing up. A Varec Figure 365 (or equal) pressure relief valve will be installed on this flange and piped into the fume piping (see sketch). Thus, any tank accidentally overfilled will overflow into the vapor system and into T-23. The pressure relief valve will prevent a backflash into the tank in case of fire and seal the spill line to insure proper operation of vapor system through the breather valve.

BY JPT DATE ____ SUBJECT North West Tank Farm SHEET NO. 1 OF ____
CHKD. BY ____ DATE ____ Typ. Vapor & Spill JOB NO. 3026
Collection



dashed line represents Steam Tracing

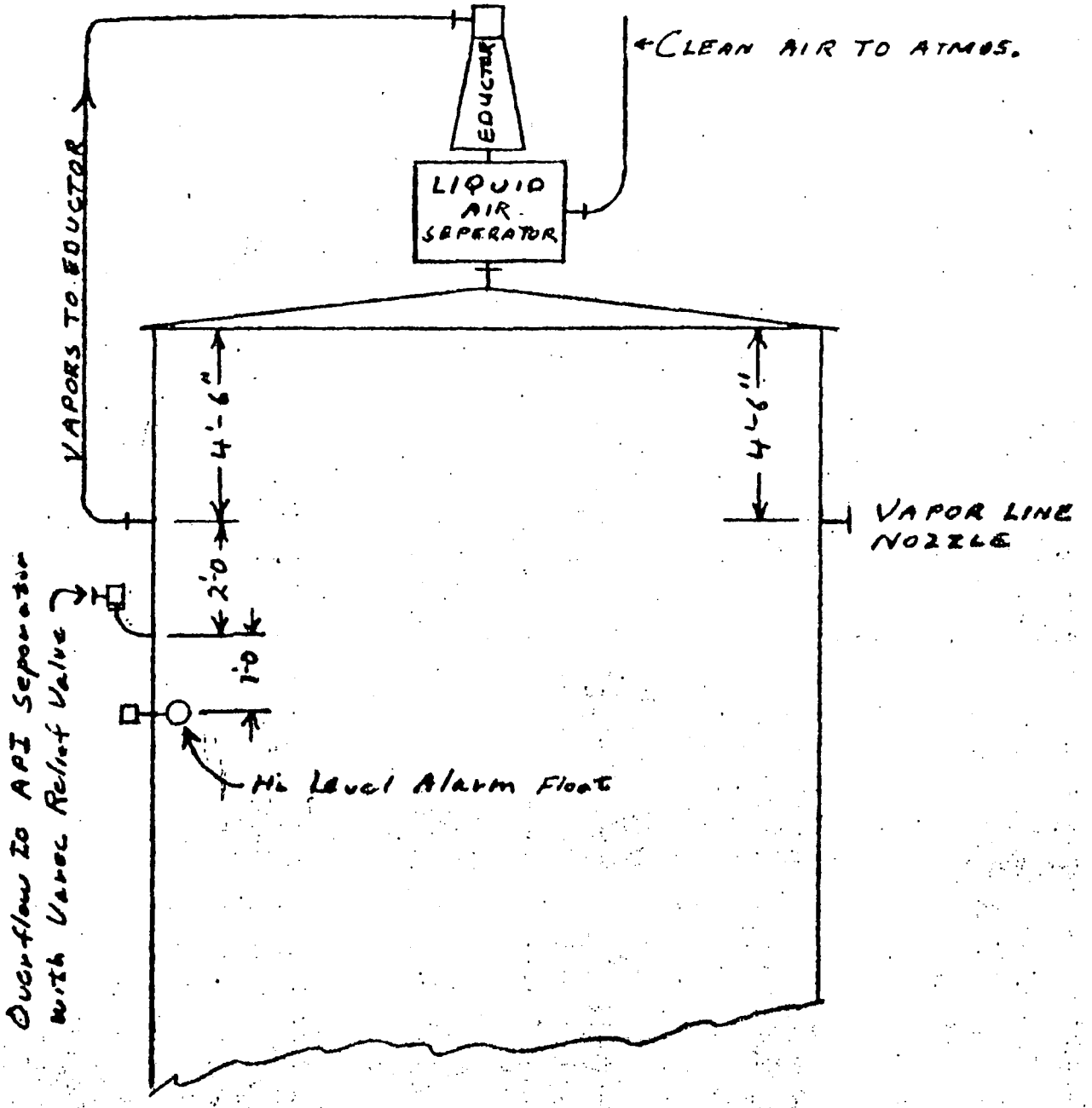
Typ. For Tanks T-3, T-4, T-17, T-18, T-19, T-33, T-34, T-39, T-6 and T-23.

Tanks T-20, T-66, T-66, T-99, & T-101 would have 3" spill nozzle and press. relief valve omitted.

BY JCT DATE ..... SUBJECT North West Terminal Farm SHEET NO. 2 OF 2

CHKD. BY ..... DATE ..... Tank T-23 JOB NO. 2026

Fume System Oil Tank



Vapor System
Breather Valves

Purpose:	Provide vacuum relief protection and backflash protection in case of fire.
Quantity:	14 each
Type:	Varec Figure 2020 Series or Equal.
Size:	6" x 8"

Spill Collection
Pressure Relief Valves

Purpose:	Provide backflash protection in case of fire, keep tank sealed for proper operation of fume system and still allow spillage to be collected and drained to fume tank in case of accidental overfilling of tank.
Quantity:	10 each
Type:	Varec Figure 365 Series or Equal.
Size:	3" x 4"

Vapor System
Eductor

Purpose:	Pull vapors of tanks resulting from pumping into, steaming into or general heating of tanks.
Quantity:	One
Type:	Korertrol Type 7014 Scrubber-Separator System or equal.
Size:	12", fabricated with standard nozzle. Pressure on nozzle to be 60 psi to produce a flow of 970 cfm at 2" wc draft.

Vapor System
Eductor Pump

Purpose:	Pump oil through nozzle in eductor to produce vacuum for pulling fumes through fume system.
Quantity:	One
Type:	Horizontal
Size:	60 gpm, discharge pressure = ~80 psi

Materials for Fume and Spill Control Piping
(Preliminary)

12" Suction Piping - Main Header Including Piping on T-23

12" pipe - 315 ft.
90° ell - 3 ea.
45° ell - 5 ea.
flanges - 12 ea. (estimate)

Materials Required from Tanks to Main Header

vapor line - 8 inches, spill line - 4 inches

Tank	8" pipe	8"-90	8" Fig.	4" Pipe	4" Fig.	6x8 B.V.	3x4 R
T-39	26 ft.	1	3	17 ft.	3	1	1
T-67	30 ft.	1	3	8	3	1	1
T-66	37 ft.	1	3	0	0	1	0
T-99	30 ft.	1	3	0	0	1	0
T-33	39 ft.	2	2	3	3	1	1
T-34	21 ft.	1	3	3	3	1	1
T-101	57 ft.	1	3	0	0	1	0
T-4	33 ft.	1	3	10	3	1	1
T-3	33 ft.	1	3	10	3	1	1
T-68	40 ft.	1	3	0	0	1	0
T-17	20 ft.	2	3	3	3	1	1
T-18	7 ft.	0	1	3	3	1	1
T-19	28 ft.	1	2	3	3	1	1
T-20	46 ft.	1	3	0	0	1	0
Total		15	38		27	14	9

Note
1) BU-Varec Figure 2020 Series Breather Valve 6" x 8".
2) RU-Varec Figure 365 Relief Valve 3" x 4".
3) Materials for steam tracing and insulation not included.

Rain Water Collection

Process Description

The entire floor area of the lower tank farm (approximately 30,000 ft.^{2}) is to be covered with four inches of wire reinforced concrete. Potentially contaminated and uncontaminated runoff will be separated by general sloping of the grade and trenching under pipelines. All runoff from tank T-20 will be considered contaminated due to seeping rivets. Runoff will be about 24% contaminated, 76% uncontaminated. The unused portion of the tank farm will be diked off.

Two sumps are to be provided for collecting runoff, one each for contaminated and uncontaminated water. Two float actuated pumps will be installed in each sump. One pump will be turned on at a medium level and the second pump will come on when the sump reaches a high level.

Water from the contaminated sump will be pumped to Tanks T-29 and T-36. From these tanks a controlled flow will go to the API Separator and then to the sewer. The uncontaminated water will be pumped directly to the river.

Rainwater Collection and Treatment

Ten Year Rainfall History

Duration Hours	Depth In.	Volume $Ft.^2$	Rate $Ft.^3/Hr.$	Rate GPM	Rate Gal./Hr.	Cum. Gallons
0.5	0.8	2,650	5,300	661	39,649	19,822
1	1.0	3,313	3,313	413	24,781	24,781
2	1.5	4,970	2,485	310	18,523	37,176
3	2.0	6,626	2,209	275	16,523	49,562
6	3.0	9,939	1,657	207	12,394	74,344
12	4.0	13,252	1,104	138	8,258	99,125
24	6.0	19,878	828	103	6,193	148,687

Total Tank Farm Area - approximately 40,000 $ft.^2$

Runoff in contaminated area - approximately 9,600 $ft.^3$ or 24%

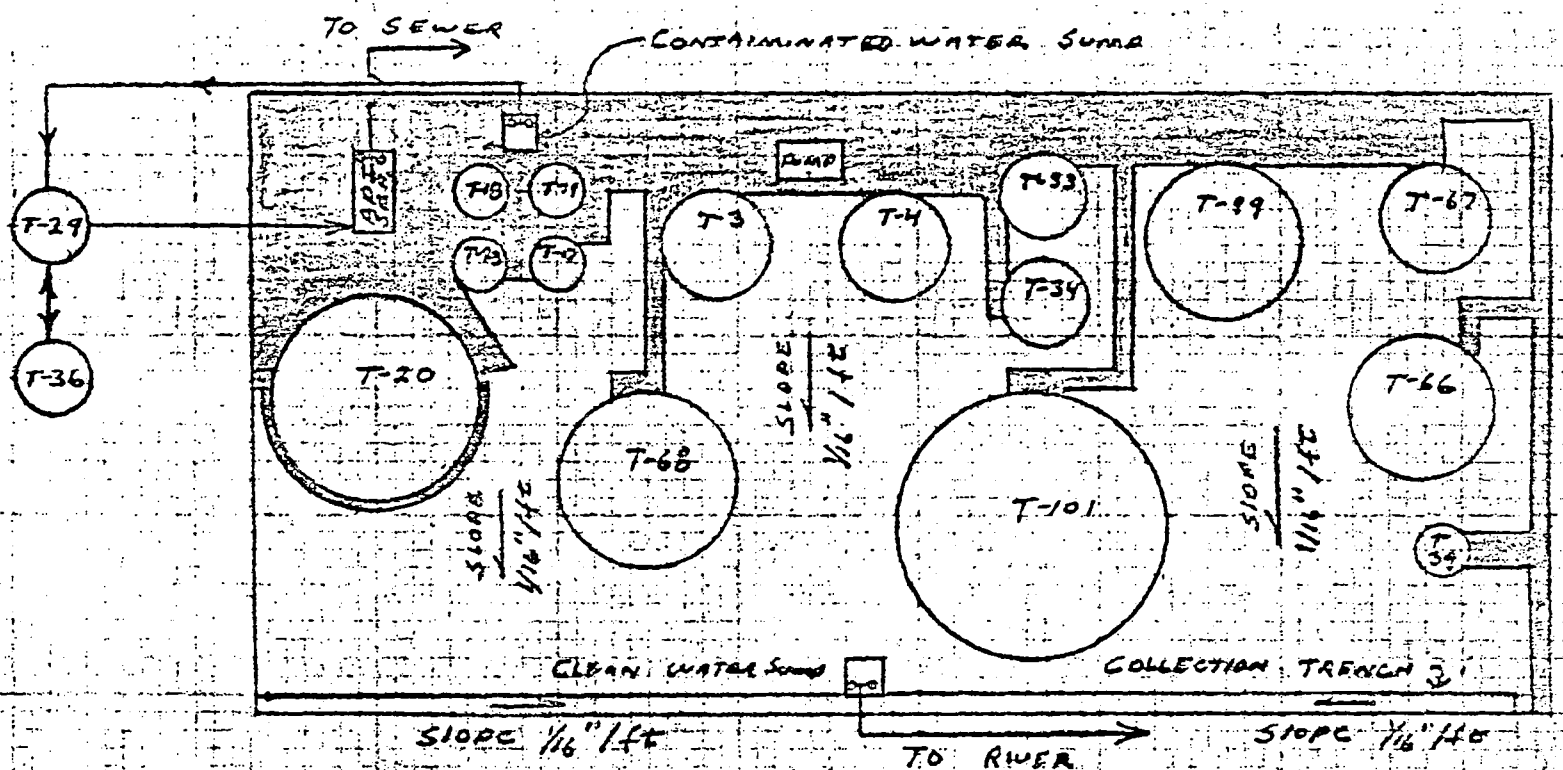
Runoff in uncontaminated area - approximately 30,400 or 76%

Maximum 1/2 hour collection rate - contaminated - 160 gpm

Maximum 24 hour collection rate - contaminated - 25 gpm

Maximum 1/2 hour average collection rate - uncontaminated - 502 gpm

Maximum 24 hour average collection rate - uncontaminated - 78 gpm



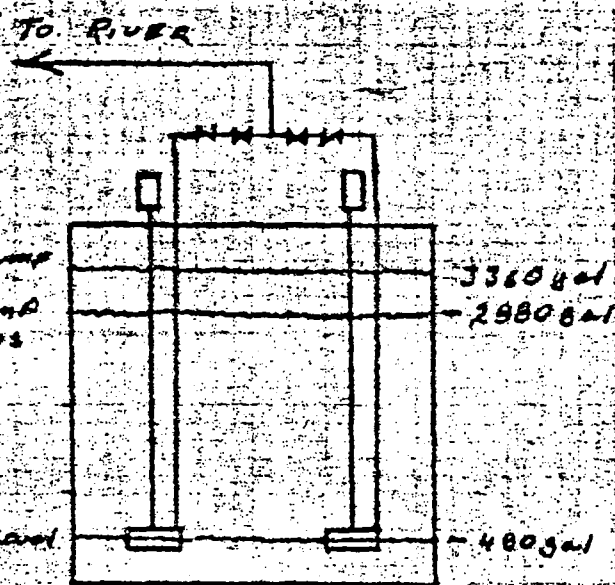
SHADED AREA IS POTENTIALLY CONTAMINATED. COLLECTION DITCHES TO BE APPROX. 3 ft WIDE, 6" DEEP, and have a 1/16" / ft SLOPE.

CLEAN AREA TO SLOPE TOWARD SIDE 1/16" / ft AS SHOWN INTO A COLLECTION TRENCH WHICH SLOPES TO THE CLEAN SUMP.

TOTAL AREA - 40,000 ft², APPROX 2% CONTAMINATED.

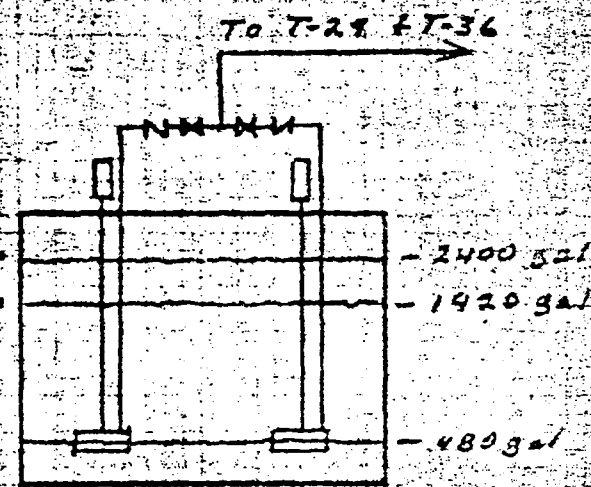
SUBJECT ..... SHEET NO. ..... OF .....
BY ..... DATE ..... CHKD. BY ..... DATE ..... JOB NO. 2826
RAINWATER COLLECTION

NORTHWEST TANK FARM
RAINWATER COLLECTION SUMPS
PROJ 2026 JCT



CLEAN WATER SUMP
8ft SQ. x 6' DEEP

Pump Capacity
1 Pump - 175 gpm
2 Pumps - 320 gpm



CONTAMINATED WATER SUMP
8ft SQ. x 6' DEEP.

Pump Capacity
1 Pump - 60 gpm
2 Pumps - 110 gpm

CENTRIFUGAL PUMP SPECIFICATION SHEET

JOB NO. 2026
ITEM NO. P-1, P-2
SPEC. NO.
REV. NO. DATE
QUOTE NO.
REFERENCE

GENERAL

FOR Clean Rain Water
PLANT Northwest Plant — NO. REQUIRED 2
LOCATION Portland, Oregon — MOTOR DRIVE X
SERVICE Cool Water — TURBINE DRIVE
NO. OPERATING Two (see below)

OPERATING CONDITIONS

LIQUID PUMPED Water @ 60°F, P.T.
CAPACITY, G.P.M.; NORMAL see bottom note DESIGN
@ P.T.: SP. GR. VISC. CPS; VAP. PR. P.S.I.A.
@ 60°F: SP. GR. VISC. CPS; VAP. PR. P.S.I.A.
*AVAILABLE NPSH FT. (LIQUID)
REQUIRED NPSH FT. (LIQUID)
METHOD OF PRIMING Flooded Suction

DISCH. PRESSURE P.S.I.G.
SUCT. PRESSURE P.S.I.G.
DIFF. PRESSURE P.S.I.
DIFF. HEAD see below FT.
SOLIDS: WT.% LARGEST SIZE
CORR. MATERIAL? EROSIVE MATERIAL?
LOCATION ALTITUDE S.L.

PUMP SPECS.

MANUFACTURER — NO. OF STAGES
SIZE & TYPE 175 gpm vert. sump pump — PERFORMANCE CURVE
R.P.M. EFFICIENCY — IMPELLER DIAM.: BID MIN MAX.
BHP.: @ DESIGN MAX. BHP. REQ'D — RECOMMENDED DRIVER HP.
CIRCULAR NO. DIMENSION PRINT — SECTION DWG.

MATERIALS OF CONSTRUCTION

CASING & NOZZLE	C.I.
IMPELLER	C.I.
CASING RING	Stellite
IMPELLER RINGS	Stellite
SHAFT	
SHAFT SLEEVE	
PACKING GLAND	
PACKING	
SEAL CAGE	
BASE PLATE	

CONSTRUCTION FEATURES

CASE: SPLIT: HORIZ. VERT. X
SUPPORT: C/L FOOT BRACKET
IMPELLER: OPEN CLOSED SEMI-ENC.
STUFF. BOX: JACKET: WATER STEAM
MECH. SEAL? X ; INTERNAL EXTERNAL
SINGLE X ; DOUBLE ; BALANCED ; UNBAL.
BEARINGS: WATER JACKETED: YES NO
LUBRICATION: OIL GREASE
FLEXIBLE COUPLING: MAKE TYPE
COUPLING GUARD: YES NO
SHAFT SEAL LUBRICATION
ROTATION VIEWED FROM FREE END
STEAMING OUT
CONNECTIONS: SUCTION DISCHARGED

DRIVER DATA

MOTOR

MAKE ; HP
TYPE TEFC ; R.P.M.
PHASE 3 CYCLE 60 VOLTS 460
FRAME

TURBINE

MAKE ; HP
TYPE ; R.P.M.
WATER RATE @ DESIGN LOAD LB./HR./BHP.
STEAM INLET P.S.I.G.@ °F
STEAM EXHAUST P.S.I.G.@ °F

WT.

NET WEIGHT — PUMP, BASE, CPLG. LB. ; MOTOR LB.
SHIPPING WEIGHT — PUMP, BASE, CPLG. LB.

SPECIAL INSTRUCTIONS OR FEATURES:

Pumps are to operate separately or in parallel single pump capacity to be approximately 175 gpm with total head of 1 approximately 40'. Parallel capacity to be approximately 320 gpm with total head to be about 88 ft.
Impeller is to be located seven feet below the top of the sump.

ALL INFORMATION HEREON IS THE PROPERTY OF KOPPERS COMPANY INC. ENGINEERING AND CONSTRUCTION DIVISION AND IS CONFIDENTIAL AND MUST NOT BE MADE PUBLIC OR COPIED UNLESS AUTHORIZED BY IT AND IS SUBJECT TO RETURN UPON DEMAND

NWT 001570

CENTRIFUGAL PUMP SPECIFICATION SHEET

JOB NO.	2026
ITEM NO.	P-2 & P-3
SPEC. NO.	
REV. NO.	DATE
QUOTE NO.	
REFERENCE	

GENERAL

FOR	Contaminated Rain Water		
PLANT	Northwest Plant	NO. REQUIRED	2
LOCATION	Portland, Oregon	MOTOR DRIVE	X
SERVICE	Cool Water	TURBINE DRIVE	
NO. OPERATING	Two (see below)		

OPERATING CONDITIONS

LIQUID PUMPED	Water @ 60 °F.P.T.	DISCH. PRESSURE	P.S.I.G.
CAPACITY, G.P.M.: NORMAL	(see below) DESIGN	SUCT. PRESSURE	P.S.I.G.
@P.T.: SP. GR.	VISC. CPS; VAP. PR. P.S.I.A.	DIFF. PRESSURE	P.S.I.
@60°F; SP. GR.	VISC. CPS; VAP. PR. P.S.I.A.	DIFF. HEAD	(see below) FT.
*AVAILABLE NPSH	FT. (LIQUID)	SOLIDS: WT.%	LARGEST SIZE
REQUIRED NPSH	FT. (LIQUID)	CORR. MATERIAL?	EROSIVE MATERIAL?
METHOD OF PRIMING:	Flooded Suction	LOCATION	ALTITUDE

PUMP SPECS.

MANUFACTURER		NO. OF STAGES	
SIZE & TYPE	60 gpm vert. sump pump	PERFORMANCE CURVE	
R.P.M.	EFFICIENCY	IMPELLER DIAM.: BID	MIN MAX.
BHP.: @ DESIGN	MAX. BHP. REQ'D	RECOMMENDED DRIVER HP.	
CIRCULAR NO.	DIMENSION PRINT	SECTION DWG.	

MATERIALS OF CONSTRUCTION

CASING & NOZZLE	C.I.
IMPELLER	C.I.
CASING RING	Stellite
IMPELLER RINGS	Stellite
SHAFT	
SHAFT SLEEVE	
PACKING GLAND	
PACKING	
SEAL CAGE	
BASE PLATE	

CONSTRUCTION FEATURES

CASE: SPLIT: HORIZ.		VERT.	X
SUPPORT: C/L	FOOT	BRACKET	
IMPELLER: OPEN	CLOSED	SEMI-ENC.	
STUFF. BOX: JACKET: WATER		STEAM	
MECH. SEAL?	X ; INTERNAL	EXTERNAL	
SINGLE X	; DOUBLE	; BALANCED	; UNBAL.
BEARINGS: WATER JACKETED: YES		NO	
LUBRICATION: OIL		GREASE	
FLEXIBLE COUPLING: MAKE		TYPE	
COUPLING GUARD: YES		NO	
SHAFT SEAL LUBRICATION			
ROTATION VIEWED FROM FREE END			
STEAMING OUT			
CONNECTIONS: SUCTION		DISCHARGED	

DRIVER DATA

MOTOR

MAKE	; HP		
TYPE	TEFC	; R.P.M.	
PHASE	3 CYCLE 60	VOLTS	460
FRAME			

TURBINE

MAKE	; HP		
TYPE	; R.P.M.		
WATER RATE @ DESIGN LOAD		LB./HR./BHP.	
STEAM INLET	P.S.I.G.@	°F	
STEAM EXHAUST	P.S.I.G.@	°F	

WT.

NET WEIGHT	PUMP, BASE, CPLG.	LB.	SHIPPING WEIGHT	PUMP, BASE, CPLG.	LB.
	MOTOR	LB.			

SPECIAL INSTRUCTIONS OR FEATURES:

Pumps are to operate separately or in parallel. Single pump capacity to be approximately 60 gpm at total head of 40 ft. Parallel capacity of both pumps to be about 110 gpm at 60 ft. total head. Impeller to be located 5 ft. below top of sump.

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NWT 001571

Rainwater Collection
Contaminated Water Sump

Purpose:	Collect potentially contaminated water from tank farm.
Quantity:	One
Size:	8 ft. wide x 8 ft. long x 6 ft. deep.
Capacity:	Low level (one ft.) - 480 gallons First pumping level (four ft.) - 1920 gallons High level (five ft.) - 2400 gallons

Rainwater Collection
Surge Tanks

Purpose:	Collect surges in rainfall runoff and smooth out flow to API Separator and sewer.
Quantity:	Two - Tanks T-29 & T-36.
Type:	Existing 18 ft. diameter x 24 ft. high vertical storage tanks.
Capacity:	40,000 gallons each

Water to drain from these tanks at a maximum rate of 30 gpm, into the API Separator.

Rainwater Collection
API Separator

Purpose:	Separate oil from rainwater.
Quantity:	One existing.
Size:	24' L x 9' W x 9' D.

(Ref. Portland Gas & Coke Co. Dwg. File I Sheet 1551)

Head Calculations

Eq. Length Fittings:

	2"	2½"	3"	4"
Gate Valve	1¼	1½	1-3/4	2¼
Check Valve	37	45	60	75
Tee	12	14	16	20
90° Ell	3¼	3½	5	7

Contaminated Piping (2½" pipe picked)

Δ 2 = 30 ft.

Pipe = 150 ft.

Fittings - 7-90° Ell
1-gate valve
1-check valve
1-T

	60 gpm	110 gpm
Total Head:	2"-58'	117'
	2½"-40'	61'
	3"-34'	44'
Velocity:	2"-6.1 f/s	11.23 ft./s
	2½"-3.9 f/s	7.18 f/s
	3"-2.7 f/s	5 f/s

Piping Materials for Rainwater Handling System

2½" pipe	150 ft.
2½" gate valve	2 each
2½" check valve	2 each
2½" tee	1 each
2½" 90° ell	7 each
4" pipe	650 ft.
4" gate valve	2 each
4" check valve	2 each
4" tee	1 each
4" 90° ell	4 each

Copies to: Mr. P. W. Guth
Mr. J. M. Anderson
Mr. D. L. O'Dell
Mr. R. L. Shannon
Mr. R. S. Dietrick
Mr. T. E. Robbins

September 26, 1973

EFFLUENT SERVICES GROUP
ENVIRONMENTAL HEALTH & SAFETY SECTION
MONROEVILLE RESEARCH CENTER

TRIP REPORT

TO: Northwest Plant
Organic Materials Division
Portland, Oregon

DATE: September 14, 1973

PERSONNEL: Paul W. Guth - Northwest Plant
C. W. Fisher - Research Department

PURPOSE: To review effluent handling at the plant.

The functioning of the Federal and State control agencies was reviewed as regards permits for effluent handling and discharges. In Oregon the Federal people have manpower in each state regional office and the two control agencies are working very close together. Thus only one permit system will be in effect and at present there does not appear to be any conflict of interests. To date none of the control agencies have requested permits or sampled outfalls from Koppers plant.

The city has the interceptor sewer line installed through the plant and a tie-in point was provided in road between office building and the tank area. The contractor was realining the grade of this 4' sewer in the plant area. Thus, it is expected that tie-in of effluent waters to this sewer system could come shortly.

It is understood that the plant will be required to tie in all process and sanitary waters to the city's sewer system. The necessary pipe tie-ins may best be indicated by the engineers of the Division in Pittsburgh. It is recommended that sampling points and manholes together with easy addition of recording flow meters be provided when the plant ties its discharges into the sewer. The city has indicated they will accept water meter readings with subtraction allowed by meter reading for the indirect cooling water discharged to the storm drain.

NWT 001577

Once the plant is connected to the city sewers, oils in the process effluent water may require additional treatment and more careful monitoring so as to meet the expected oil limitation of 100 mg/L. The boiler blow-down, process waters, etc., should go to the city sewer system.

Once through cooling water is being monitored for phenols and these always are less than 1 mg/L. As discussed at the plant, a quick easy test for phenols is CHEMTRICS, INC., NITRO, W. VA. 25143, Phenols Test Kit, Model KP. Kits come with 60 test units, P-10 are furnished unless otherwise requested; the P-10 is good for 1 to 10 mg/L of phenol. Type P-1 tubes are good for 0 to 1 mg/L. The complete kit costs $34.50 with 60 tubes, color standards, pH paper, etc. Refill tubes of 60 units cost $24.50. These are quite accurate and give a phenol value in less than two minutes.

Some of the new permits being issued by EPA require that contaminated storm water be collected and treated before discharge. It is thus recommended that plans be made at this time to collect certain limited yard run-off which may pick up oils or phenols and treat these waste waters. Thus, if treatment of these waters is required it can be collected and transferred to the municipal sewer system.

The plant had cleared off the irrigation area of oil deposits on the surface and the fields are in good shape to continue receiving process effluent waters. It was also interesting to note that the ground between the plant and the river has been filled in and elevation brought to about same yard level as at Koppers plant.

C. W. Fisher

CWF:mw

NW R

VICTOR ATIYEH
GOVERNOR

Department of Environmental Quality

522 S.W. FIFTH AVENUE, BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5696

May 30, 1984

Dept. of Environmental Quality
RECEIVED
MAY 31
NORTHWEST REGION

KOPPERS COMPANY, INC.
Attention: Paul W. Guth, Plant Superintendent
7540 NW St. Helens Road
Portland, OR 97229

Re: Permit 3077-J
File No. 47430
(Creosote Terminal)

Gentlemen:

Our records indicate that your present waste water disposal permit will expire on November 30, 1984.

The enclosed application form must be completed, signed by your responsible official and returned to the Department of Environmental Quality as soon as possible for permit renewal.

A filing fee of $50 and a processing fee of $150 are required to accompany this application. No action can be taken on the application until the fees are paid.

If you request a significant increase in effluent discharge or disposal limitations, the processing fee will be $250.

If you have any questions regarding the renewal application or the associated fees, please contact this office. An invoice for the amount of the fees will be sent to you upon request. Copies of the permit fee regulations are attached.

Sincerely,

for Charles K. Ashbaker
Supervisor
Source Control Section
Water Quality Division

CKA:mjb
Enclosures (2)

cc: Northwest Region, DEQ

STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY INTEROFFICE MEMO

TO: Greg Baesler, NWR DATE: March 4, 1985

FROM: Larry Patterson, WQ

SUBJECT: WQ-Koppers Company - Tmt. Co.

This is in response to your memo regarding appropriate effluent limitations for specific polynuclear aromatic hydrocarbons commonly found in creosote substances.

As you know, creosote is a mixture of many different chemical substances. Since there is no one test for creosote, our laboratory staff have selected eleven of the major substances in creosote for analysis. There is very little water quality information available on the individual substances beyond the following:

Substance	Acute Toxicity		Chronic Toxicity
Fluoranthene	Bluegill	LC_{50} = 3.98 mg/l	Not Available
	Daphnia Magna	LC_{50} = 325.0 mg/l	Not Available
Acenaphthene	Bluegill	LC_{50} = 1.70 mg/l	Not Available
	Daphnia Magna	LC_{50} = 41.20 mg/l	Not Available
Naphthalene	Daphnia Magna	LC_{50} = 8.57 mg/l	Not Available
	Rainbow Trout	LC_{50} = 2.30 mg/l	Not Available
	Gambusia	LC_{50} = 150.0 mg/l	Not Available
	Fathead Minnow	LC_{50} = 4.9 mg/l	0.620 mg/l

In general, polynuclear aromatic hydrocarbon creosote substances are fairly insoluble in water and are denser than water. Although these substances may react differently in a creosote mixture, the individual substances are generally a solid at ambient temperatures. PAH's adsorb strongly to suspended particulates and biota. Those PAH's that do dissolve in the water column will probably undergo destruction by photolysis at a rapid rate. Those PAH's adsorbed to sediment will probably undergo biodegradation although the rate of this process could be quite slow.

At this point, we do not have sufficient information to establish limitations for PAH's for the Kopper's NPDES Permit. Based on the physical characteristics of these substances, sedimentation is an appropriate

method of control. Kopper's storm runoff should flow through a facility where both settling and skimming can be provided. Settled materials should be periodically removed to reduce the potential for redissolving some of the substances.

The existing permit limits for oil/grease and phenols are appropriate. PAH limitations should not be established at this time. However, monthly monitoring for PAH substances should be required. The definition of PAH must also be included in the permit and a test procedure should be referenced. The permit currently requires monitoring for phenols. We should specify that phenols or phenolics be analyzed by Standard Methods #510, 4-aminoantipyrene complexing with chloroform extraction.

LDP:t
WT756

Koppers Company, Inc., Organ aterials Group
7540 N.W. St. Helens Road, Portlan OR 97229
Telephone 503-286-3681

Dept. of Environmental Quality
RECEIVED
NOV 1 1984
NORTHWEST REGION

KOPPERS

November 2, 1984

Department of Environmental Quality
Northwest Region
P.O. Box 1760
Portland, Oregon 97207

Dear Sirs:

Please note that the average of our oil and grease results from our samples show that we have exceeded the parameters of our permit. Attached, you will find copies of the laboratory reports showing that the two samples taken on October 23, 1984 and October 24, 1984, respectively, were indeed high. As you can also see, copies of two other samples taken during the month were within the parameters of our permit.

I have found no leak in our system that would put creosote oil into the effluent water. I have sampled water coming from the hillside above our plant down on to St. Helens Road and into our facility. The oil seems to be of an organic nature and quite possibly could be coming from septic tank systems from the homes above our facility. This oil is in the process of being analyzed and results will be forthcoming. May I point out at this time that if the oil was coming from our system the phenol count would also be extremely high. As you can see from the laboratory reports, this is not the case.

To insure that Koppers Company remains within the parameters of the permit that you have issued, we are now piping our system into a series of empty tanks. We will then pump the ground water into these tanks and hold that water until the laboratory assures us that we are in compliance with state regulations. Once we have received that assurance, we will then pump these tanks through our outfall #001 to the Willamette River. I feel that these steps will eliminate a repeat of this type of incident in the future.

At this time, please let me assure you that this incident was immediately reported to D.E.Q. by me personally. The man I spoke to at D.E.Q., Mr. Leo Boton, advised me at that time that even though we had exceeded the limit of our permit, that the nature was not that serious. He agreed with the steps I am taking to avoid this problem atain and asked that I advise D.E.Q. when the piping system is complete.

Thank you,

John A. Oxford

John A. Oxford
Plant Manager

KOPPERS COMPANY, INC.

PORTLAND, OREGON

Tank No.	Gallons (M)	Contents
1	660	Tar
2	1065	Tar
3	99	Creosote
4	99	Creosote
11	254	Tar
17	20	Creosote
18	20	Creosote
19	20	Creosote
20	317	Creosote
23	20	Creosote
33	45	Creosote
34	45	Creosote
65	880	Tar
66	240	Creosote
67	102	Creosote
68	248	Creosote
90	209	Creosote
101	47750	Creosote

5,093,000

Prediction of Potential Spills

2B. The water flow leaving the plant and entering the Willamette River at approx. 3/4 of a mile from the plant. The water flows South of the plant and then East into the river.

The river at closest point to the plant is 1800 ft., but the water from the plant does not enter here.

of Oregon

DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMO

To: Files

Date: July 14, 1975

From: Douglas D. Fraley

Subject: Koppers Chemical

On July 10, 1975, Larry Patterson and I made an inspection of Koppers Company on St. Helens Road. The purpose of the inspection was to check on completion of intermediate controls for elimination of oil contaminated waters. This inspection revealed the following:

1. The three-stage filter has been installed at the outfall of the drain leaving their property. The filter material being used is Ecelsior.

2. The material at track #3 has been removed and fresh material put back in. This will be covered with gravel.

3. The loading spouts are being capped to prevent spillage when not in use.

4. The unloading line has been revamped to minimize chance of spillage. All flex hoses have been capped when not in use.

5. The material at track #5 has been removed and fresh soil put back in, then covered with gravel.

Conclusion:

They have done a good job of cleaning up around their plant. I believe that this will help eliminate the oil discharge from the plant. The filter should be observed during the wet weather when the water flow is high.

DDF:gcd
cc: Portland Regional Office, DEQ
U. S. Coast Guard
Water Quality Control, DEQ

DEQ 4

NWT 001584

Organic Materials Division, Koppers Company, Inc.
7540 N.W. St. Helens Road, Portland, Ore. 97229
Telephone 503-286-3681

KOPPERS
Chemicals
and Coatings

MAY 28, 1975

DEPT. OF ENVIRONMENTAL QUALITY
1234 S.W. MORRISON STREET
PORTLAND, OREGON 97205
ATTN: DOUGLAS D. FRALEY

GENTLEMEN:

THIS IS THE PROGRAM FOR OUR TIMELY ELIMINATION OF MATERIAL WHICH COULD CAUSE THE WATERS TO BE CONTAMINATED.

WE WILL PUT IN A THREE STAGE FILTER SYSTEM AT THE OUTFALL OF THE WATER LEAVING OUR PLANT.

AT TRACK #3 WE WILL PICK UP THE SOILED GROUND AND REPLACE WITH FRESH MATERIAL. BETWEEN THE TRACK WE WILL LET THE BALLAST SHOW..THE WALLED-IN CEMENT AREA BY TRACK #3 WILL ALSO HAVE THE SOILED GROUND REMOVED AND THEN BE REPLACED WITH FRESH MATERIAL.

THE LOADING SPOUTS WILL HAVE CONTAINERS TO CATCH ANY DRIPPINGS. THERE WILL BE PORTABLE CATCH BASINS BENEATH THE TANK CARS TO CATCH ANY DRIPPINGS ALSO.

THE UNLOADING LINE WILL BE REVAMPED TO MINIMIZE ANY CHANCE OF SPILLAGE. THE FLEX HOSES WILL CONTAIN CAPS FOR THE HOSES WHEN THEY ARE NOT IN USE.

TRACK #5 WILL HAVE THE SOILED MATERIAL REMOVED BETWEEN AND ON EITHER SIDE OF THE TRACK. SOME PORTIONS WILL BE FILLED IN BETWEEN THE TRACKS BECAUSE OF VEHICLE TRAFFIC OVER THE TRACKS.

THE AREA AROUND #42 TANK WILL THEN BE CLEANED OF SOILED GROUND AND THIS REPLACED WITH FRESH MATERIAL.

THE TAR PUMPS AREA WILL BE CLEANED AND HAVE DRIP PANS FOR ANY LEAKAGE.

RESPECTFULLY,

Paul W. Guth

PAUL W. GUTH

PLANT MANAGER

NWT 001585

TEO
TMB
LDP

DEPARTMENT OF ENVIRONMENTAL QUALITY

1234 S.W. MORRISON STREET • PORTLAND, OREGON • 97205 • (503) ~~229-5~~ 238-8471

ROBERT W. STRAUB
GOVERNOR

KESSLER R. CANNON
Director

April 29, 1975

Koppers
Organic Materials Division
Koppers Company, Inc.
7540 N. W. St. Helens Road
Portland, Oregon 97229

Attention: Mr. Paul W. Guth

Re: Meeting of April 24, 1975

Gentlemen:

This letter is in reference to our meeting of April 24, 1975, concerning the oil contaminated waters which are being discharged from your property.

Te reemphasize our conversation, you are responsible for any problems which occur as a result of the oil on your property, as well as any cleanup costs.

Specifically, oily waste has been deposited on your property such that it is entering or likely to enter public waters, which is in violation of Oregon Revised Statutes 468.785, a copy of which you received at our meeting.

Therefore, it is requested that you submit a program for a timely elimination of this problem to the Department within thirty (30) days of receipt of this letter.

Your immediate attention to this matter is appreciated.

Respectfully,

KESSLER R. CANNON
Director

Douglas D. Fraley
Douglas D. Fraley
Division Engineer

DDF/bw

cc: Water Quality
Portland Region
U. S. Coast Guard

Recycled Paper

DEQ-1

NWT 001586

THE CITY OF
PORTLAND
OREGON

DEPARTMENT OF
PUBLIC WORKS

CONNIE McCREADY
COMMISSIONER

OFFICE OF
PUBLIC WORKS
ADMINISTRATOR

400 S.W. SIXTH AVE.
PORTLAND, OR. 97204

To C. 4, PDC
Copy to REG.

OFFICE OF DEPUTY DIRECTORS
RECEIVED
MAR 28 1975
DEPT. OF ENVIROMENTAL QUALITY

March 27, 1975

Department of Environmental Quality
1234 SW Morrison Street
Portland, Oregon 97205

Attn: E. J. Weathersbee, Director, Technical Services

WQ- Re: Koppers Co. - 7540 NW St. Helens Road, Portland

Gentlemen:

We are in receipt of your letter dated March 19, 1975 inviting comments regarding NPDES permit application OR-000077-9 for the above referenced discharger.

Your draft requires the permittee to submit plans to the department by May 1, 1975, for connecting all wastewaters to the City of Portland's sewerage system by November 1, 1975. We will be pleased to accept the permittee's effluent subject to meeting Portland's sewer regulations. Accordingly, we request the opportunity to review concurrently with your department, all plans prepared by the permittee regarding proposed drainage and pretreatment facilities.

Please contact Harry Edmonds of our Industrial Wastewater staff (telephone 248-4678) if you have any comments or questions regarding this matter.

Very truly yours,

L. D. Brownson

L. D. BROWNSON, P. E.
Principal Engineer

HGE:al

cc: Dick Nichols - DEQ

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
APR 2 1975
WATER QUALITY CONTROL

Pittsburgh, Pa. 15219, Telephone 412-391-3300

7.23
COP

WQ -

Certified Mail
Return Receipt Requested

KOPPERS

March 27, 1975

Department of Environmental Quality
Northwest Region
1010 N.E. Couch Street
Portland, Oregon 97232

Attn: Mr. Richard J. Nichols
Engineer-Technical Services

Re: Appl. No. OR-000077-9
File No. 47430

Gentlemen:

We are in receipt of the draft NPDES permit for the Koppers Company plant located at 7540 N.W. St. Helens Road, and wish to make several comments on it.

Since the proposed permit specifies that the discharge limitations will be achieved by connecting all wastewaters to the City of Portland sewage system, the City must agree to accept this effluent before the permit can be issued in the final form. The compliance program to be prepared by Koppers must have a firm basis on which to proceed.

The compliance schedule should be revised so that final plans for connection to the sewage system are due 60 days after the City accepts this connection principle. Engineering cannot begin on the connection facilities until the City provides a firm design basis by agreeing to accept the effluent. Discharge to the municipal system would be 9 months after the connection plan is approved by the City. This period of time is required due to the delivery time for pumps and other equipment of approximately 34 weeks.

Thank you for this opportunity to comment.

Very truly yours,

P. W. Guth
Superintendent

NORTHWEST TANK FARM

RAINWATER COLLECTION AND TREATMENT

JANUARY 23, 1975

RAINWATER COLLECTION AND TREATMENT PROCESS DESCRIPTION

The tank farm will be paved to facilitate the collection and treatment of rainwater, and to prevent flooding by ground seepage when the water table rises.

The floor of the tank farm will slope from the center of the farm to a drainage ditch on each side. Rainwater will run off the floor of the tank farm, into the ditches, and then into a drainage sump.

Two float actuated, alternating sump pumps will transfer water from the drainage sump to the holding tank. In case the water level in the drainage sump triggers the high level alarm, both pumps would be activated.

Water in the holding tank will drain into the API separator through a flow-recorder-controller. Any oil present will be skimmed off the surface of the separator and collected in tank T-23 for further processing. Clean water will be pumped out of the separator and into a storm water ditch leading to the river by two float activated, alternating sump pumps.

1. TANK FARM STORM RUNOFF

L. Bily
1-24-75

BY ..... DATE.....
CHKD BY..... DATE.....

SUBJECT.....

SHEET NO ..... OF .....
JOB NO.....

BY ..... DATE .....
CHKD. BY ..... DATE .....

SUBJECT .....

SHEET NO ..... OF .....
JOB NO. .....

Organic Materials Division, Koppers Company, Inc.
Pittsburgh, Pa. 15219, Telephone -391-3300

F/A
W. G
Mill. Co.

Certified Mail
Return Receipt Requested

KOPPERS

October 30, 1974

Mr. Richard J. Nichols
Engineer - Technical Services
Department of Environmental Quality
1010 N.E. Couch Street
Portland, Oregon 97232

Re: Appl. No. 071-OYA-2-000189

Dear Sir:

On March 7, 1974, a letter was sent to Mr. Charles K. Ashbaker of your office advising that production at this location had been temporarily suspended, and that effluent sampling at that time would not be representative. On September 24, 1974, you visited the plant to review plant operations and the effluent permit application. As of this date, production has not resumed, and plans are still indefinite as to when it will resume.

The major portion of the effluent from this location is ground water which collects in the tank farm area. The floor of the tank farm, which is below grade, will be paved to reduce the volume of ground water which infiltrates this area. This water will be pretreated in the API separator and then discharged, together with boiler house effluent, to the sanitary sewer which has recently been extended through the plant property.

These plans will be reviewed with the sewer authority to obtain their approval.

Very truly yours,

Paul W. Guth
Plant Superintendent

FORM APPROVED
OMB NO. 49-R 0408

DEPARTMENT OF THE ARMY, CORPS OF ENGINEERS

JUN 29 1971

APPLICATION FOR PERMIT TO DISCHARGE OR WORK IN NAVIGABLE WATERS AND THEIR TRIBUTARIES

OR-000077-9
File # 47430 000189

SECTION I. GENERAL INFORMATION

1. State	Application Number (to be assigned by Corps of Engineers)			
O R	071 (Div.)	02A (Dist.)	2 (Type)	------ (Sequence No.)

2. Name of applicant and title of signing official
Koppers Company, Inc.
R. E. Spatz - Vice President & Asst. General Manager - Organic Matls. Div.

3. Mailing address of applicant
Koppers Company, Inc.
1201 Koppers Building
Pittsburgh, Pennsylvania 15219

4. Name, address, telephone number and title of applicant's authorized agent for permit application coordination and correspondence.
Paul W. Guth, Plant Superintendent
7540 N.W. St. Helena Road
Portland, Oregon 97229
503-286-3681

NOTE TO APPLICANT: Refer to the pamphlet entitled "Permits for Work and Structures in and for Discharges or Deposits into Navigable Waters" before attempting to complete this form.

Required Information

a. All information contained in this application will, upon request, be made available to the public for inspection and copying. A separate sheet entitled "Confidential Answers" must be used to set out information which is considered by the applicant to constitute trade secrets or commercial or financial information of a confidential nature. The information must clearly indicate the item number to which it applies. Confidential treatment can be considered only for that information for which a specific written request of confidentiality has been made on the attached sheet. However, in no event will identification of the contents and frequency of a discharge be recognized as confidential or privileged information.

b. The applicant shall furnish such supplementary information as is required by the District Engineer in order to evaluate fully an application.

c. If additional space is needed for a complete response to any item on this form, attach a sheet entitled "Additional Information." Indicate on that sheet the item numbers to which answers apply.

d. Drawings required by items 20 and 21 should be attached to this application. Other papers which must be attached to this application include, if applicable, copies of a water quality certification or a written communication which describes water quality impact (see Item 22 and Item 10 of Section II below), the additional information sheet(s) in "c" above, and the confidential information sheet described in "a" above.

Fees

If any discharge or deposit is involved, an application fee of $100 must be submitted with this application. An additional $50 is required for each additional point of discharge or deposit.

Signature

a. If a discharge is involved, an application submitted by a corporation must be signed by the principal executive officer of that corporation or by an official of the rank of corporate vice president or above who reports directly to such principal executive officer and who has been designated by the principal executive officer to make such applications on behalf of the corporation. In the case of a partnership or a sole proprietorship, the application must be signed by a general partner or the proprietor. Other signature requirements are discussed in the pamphlet.

b. If no discharge is involved, an application may be signed by the applicant or his authorized agent.

Application is hereby made for a permit or permits to authorize the activities described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete, and accurate.

R. E. Spatz
Signature of Applicant

18 U.S.C. Section 1001 provides that:

Whoever, in any matter within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals or covers up by any trick, scheme, or device a material fact, or makes any false, fictitious or fraudulent statements or representations, or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than $10,000 or imprisoned not more than five years, or both.

FOR CORPS OF ENGINEERS USE ONLY

Acronym name of applicant

Are discharge structures
Major? ☐ Minor? ☐ N/A? ☐

Date received, form not complete — — — — — —
Date received, form complete but without certificate — — — — — —
Date received, form complete — — — — — —
Date of Cert./Ltr. — — — — — —
(day mo yr)

Date sent to EPA, form not complete — — — — — —
Date sent to EPA, NOAA, D/I, AEC, FPC in complete form — — — — — —
(day mo yr)

NWT 001594

5. Date: 6 (mo) 29 (day) 71 (yr)

(Office use only) 0 -0YA-2-000189

6. Check type of application: a. Original [X] b. Revision [ ]

7. Number of original application: JUN 21 1972

8. Name of facility where discharge or construction will occur.

Koppers Company, Inc.
Northwest Plant

9. Full mailing address of facility named in item 8 above.

Koppers Company, Inc.
7540 N. W. St. Helena Road
Portland, Oregon 97229

10. Names and mailing addresses of all adjoining property owners whose property also adjoins the waterway.

Northwest Natural Gas Co.
7900 N. W. St. Helena Road
Portland, Oregon 97229

Rivergate Rock Products
7881 N. W. St. Helena Road
Portland, Oregon 97229

11. Check to indicate the nature of the proposed activity:
a. Dredging [ ] b. Construction [ ] c. Construction with Discharge [ ] b. Discharge only [X]

12. If activity is temporary in nature, estimate its duration in months.

If application is for a discharge:

13. List intake sources

Source	Estimated Volume in Million Gallons Per day or Fraction Thereof
Municipal or private water supply system	.054
Surface water body	
Ground water	
Other	

14. Describe water usage within the plant

Type	Estimated Volume in Million Gallons Per day or Fraction Thereof
Cooling water	.014
Boiler Feed water	.040
Process water	
Sanitary system*	.001
Other	

15. List volume of discharges or losses other than into navigable waters.

Type	Estimated Volume in Million Gallons Per day or Fraction Thereof
Municipal waste treatment system	
Surface containment	.002
Underground disposal	
Waste Acceptance firms	
Evaporation	.018
Consumption	

* Indicate number employees served per day: 12

NWT 001595

If structures exist, or dredging, filling or o... nstruction will occur, the precise location of the activity must be desc... .

(Office use only) 000189

JUN 29 1971

a. Name the corporate boundaries within which the structures exist or the activity will occur.

16. State: Oregon 17. County: Multnomak 18. City or Town: Portland

b. Name of waterway at the location of the activity

19. Willamette River

20. Maps and sketches which show the location and character of each structure or activity, including any and all outfall devices, dispersive devices, and non-structural points of discharge, must be attached to this application.

21. For construction or work in navigable waters for which a separate permit is sought under 33 U.S.C. 403, the character of each structure must be fully shown on detailed plans to be submitted with this application. Note on the drawings those structures for which separate discharge information (Section II of this form) has been submitted.

22. List all approvals or denials granted by Federal, interstate, State or local agencies for any structures, construction, discharges or deposits described in this application.

Type of document	Id. No.	Date	Issuing Agency
Letter	1 W 3-0	1-11-66	Oregon State Sanitary Authority

23. Check if facility existed or was lawfully under construction prior to April 3, 1970. [X]

24. If dredging or filling will occur:

State the type of materials involved, their volume in cubic yards, and the proposed method of measurement.

Not Applicable

25. Describe the proposed method of instrumentation which will be used to measure the volume of any solids which may be deposited and to determine its effect upon the waterway.

Not Applicable

26. State rates and periods of deposition described in Item 25.

Not Applicable

NWT 001596

1165

September 1, 1976

Mr. Paul W. Guth
Plant Superintendent
Koppers Company, Inc.
7540 N. W. St. Helens Road
Portland, Oregon 97229

Re: PERMIT ACTION
WQ - Koppers Company, Inc.
Multnomah County

Dear Mr. Guth:

This is in response to your letter of June 28, 1976, in which you stated that Koppers Company, Inc. is presently operating with the 1977 effluent limitations as set forth in Condition S5 of your National Pollutant Discharge Elimination System (NPDES) Waste Discharge Permit No. 2180-J.

On the basis of your plant's demonstrated ability to comply with the projected waste discharge limitations, the requirement for submittal of engineering plans as detailed in Condition S1 is hereby waived. This change is made on the condition that wastewater discharged from your plant continues to consistently meet criteria stated in Special Condition 5.

If you have any questions or if we can be of further assistance, please feel free to contact this office at 229-5348.

Sincerely,

Original Signed By
Loren Kramer

SEP 1 1976

LOREN KRAMER
Director

SMW/jms

cc: Environmental Protection Agency, Oregon Operations
Water Quality Division - DEQ

Koppers

EFFLUENT TREATMENT FACILITIES

NORTHWEST BAR PLANT

RETURNED 1/27/86

[illegible]

[illegible]

Process Wastes

Dehydration water and [illegible] oil from the [illegible] are collected in tanks # [illegible] and # 18 respectively. Oil-free water is drained from these tanks to the existing adjacent sump, along with water from the [illegible] floor drains and the laboratory sink drains. An existing sump pump transfers the water to an 18 ft. diameter X [illegible] ft. high surge tank.

The surge tank is located next to a drain field which has been divided into three sections. Each section has a central ditch which feeds furrows plowed at right angles. Water is admitted to one end of the ditch through an 8" pipe line with a quick opening valve. When the valve is opened, the ditch fills and overflows into the furrows flooding the section.

The water then percolates through the soil and the BOD contributing compounds are consumed by soil bacteria. BOD reduction will exceed 90% the year round and will be well over 95% during the warm months.

Sanitary Wastes

Sanitary wastes are treated in two 1,000 gallon septic tanks. One tank, an existing one, handles the effluent from the main washroom. This area will contain 2 toilets, 1 urinal, 1 Bradley sink, 1 service sink, and 3 shower heads. The other septic tank handles waste from the office (2 toilets, 2 lavatories) and boiler house (1 toilet, 1 lavatory). Both septic tanks overflow into dry wells but could be piped into a city sewer which such a sewer is run adjacent to the plant.

Uncontaminated Wastes

Indirect cooling will drain into an existing ditch leading to the river. City water will be used for cooling.

KOPPERS COMP. Y, INC.
TAR PRODUCTS DIV. ON
PITTSBURGH, PA.

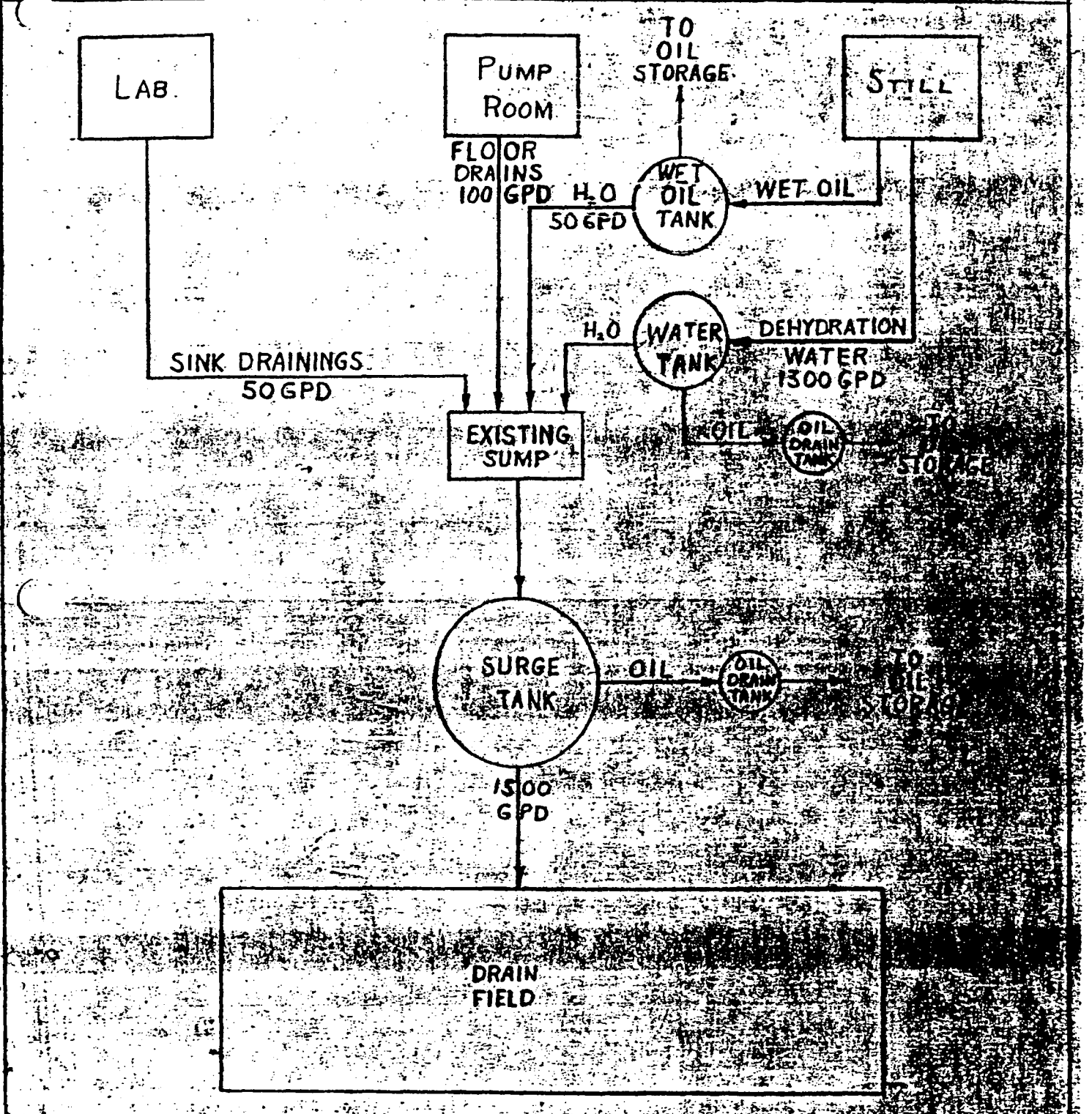
THIS DRAWING AND ALL INFORMATION THEREON IS THE PROPERTY OF KOPPERS COMPANY, INC. TAR PRODUCTS DIVISION AND IS CONFIDENTIAL AND MUST NOT BE MADE PUBLIC OR COPIED UNLESS AUTHORIZED BY IT AND IS SUBJECT TO RETURN UPON DEMAND.

ETCH SHEET

NAME DATE

DRAWN R. L. SHANNON 1-27-66

CHECKED



REV.	DESCRIPTION	CHKD. BY DATE

CONT: 300-1 NORTHWEST TAR PLANT

TITLE BLOCK FLOW DIAGRAM - PROCESS WASTE DISPOSAL

F-2663-0

[illegible]

[illegible]

	Quantity		
Item 1 Tank T-23	1		Description - Dehydration Water Tank
		Purpose:	Collect dehydration water from the batch still.
		Service:	Intermittent
		Type:	Vertical, cylindrical
		Capacity:	20,000 gallons
		Size:	12' [illegible] x 24 ft. high
		Remarks:	Use existing tank from Portland Gas Works. Install oil drains
Item 2	1		Pumping Sump
		Purpose:	Collect water from the dehydration water tank, laboratory, floor drains and pump room.
		Service:	Continuous
		Type:	Open concrete pit
		Capacity:	520 gallons
		Size:	21'-10" long x 9'-4" wide x 11'-2" deep
		Remarks:	Existing
Item 3 Pumps P 401 P 402	1		Sump Pump
		Purpose:	Transfer water from the pumping sump to the effluent surge tank
		Service:	Intermittent
		Type:	Centrifugal
		Capacity:	30 gpm @ 100 ft., sp. gr. 1.0
		Construction:	All iron
		Remarks:	Existing Pacific Model SLO

Revised 1/27/66

		Purpose:	Drive transfer pumps
		Service:	Intermittent
		Type:	Squirrel cage induction motor
		Size:	3 HP, 220/440 volt, 3 phase, 60 cycle.
		Remarks:	Existing
Item 5	2		Motor Starters
		Purpose:	Provide Across-the-line starting & electrical disconnect for pump motors.
		Service:	Intermittent
		Type:	Rowan 780 KRF-1 oil immersed, explosion-proof
		Size:	Frame 50
		Remarks:	Existing
Item 6	1		Effluent Surge Tank
		Purpose:	Collect one month's contaminated water ahead of effluent treatment facility.
		Service:	Continuous
		Type:	Vertical cylindrical
		Capacity:	44,000 gallons
		Size:	18"dia. x 24' high
		Nozzles:	Inlet 2 - 4" Vent 1 - 6" Gauge 1 - 6" Relief 6 1-1/2" Outlet 2 8" Manways 2 - 20"
		Remarks:	Design to API 650 - Use existing tank from Portland Gas Works. Add nozzles necessary.

Vessels V-401 V-402		Type:	[illegible]
		Service:	Intermittent
		Type:	Vertical, cylindrical, open top
		Capacity:	[illegible] gal.
		Size:	[illegible] dia. x 3 high
		Construction:	[illegible] carbon steel plate
Item 8 Pumps P-403 P-404			Transfer Pumps
		Purpose:	Transfer oil from the drain tanks to [illegible] storage
		Service:	Intermittent
		Type:	Rotary
		Capacity:	30 gpm. @ 50 psig., [illegible]
		Construction:	All [illegible]
Item 9	2		Pump Motors
		Purpose:	Drive transfer pump
		Service:	Intermittent
		Type:	Squirrel cage induction motor
		Size:	3 H.P. 220/440 volts, 3 phase, 60 cycles
		Construction:	Class [illegible], Group D, vapor tight
Item 10	2		Motor Starters
		Purpose:	Provide across-the-line starting and electrical disconnect for the pump motor
		Service:	Intermittent
		Type:	[illegible] 720-KIP-1, oil [illegible], [illegible]-proof
		Size:	[illegible]

[illegible]

NWT 001603

Item 11		Drain Field
	Purpose:	Provide irrigation area for soil percolation treatment of effluent
	Service:	Continuous
	Size:	3/4 acre, divided into 3 equal sections
	Loading:	1500 gpd
	Remarks:	Provide water earth dikes and plow distribution ditches and furrows.
Item 12		Well Points
	Purpose:	Provide sample points for effluent leaving the percolation area (drain field)
	Service:	Intermittent
	Type:	1-6" dia. x 8' deep hole with pipe case 1-6" dia. x 15' deep hole with pipe case Cases to be porous for bottom 2 feet.

Revised 1/27/66

NWT 001604

January 20, 1966

Effluent Water Handling for Northwest Tar Plant at Portland, Oregon

I. Source of Tar Plant Process Waste Water

As described in the specifications for "Northwest Tar Plant Effluent Facilities," the process waste waters are largely a distillate overhead product from the distillation of tar. The water layer will be decanted to tank T-23 Dehydration Water Tank and this water will then be pumped to Tank T-28 Effluent Surge Tank - 44,000 gallon capacity.

II. Volume and Quality of Process Waste Water

Information obtained from other tar processing plants which are similar in operation to the proposed plant in Portland, Oregon, is used as a basis for estimating the volumes and characteristics of the effluent waters: These values are estimated to be:

		Low	High
Volumes - Gallons/day		1,200	1,800
Characteristics -			
pH		9.3	9.5
COD,	ppm	40,000	53,000
	#/day	400	795
BOD,	ppm	35,000	45,000
	#/day	350	675
Phenol,	ppm	12,000	15,000
	#/day	120	225
Sulfides,	ppm	2,500	5,000
	#/day	25	75

The volumes of these waste waters are kept at a minimum, however, they do have high pollution properties. By keeping the volume of waste water to a minimum, the pounds per day of pollutants are also kept to a minimum.

III. Process Waste Water Treatment

The Effluent Services Group of the Koppers Research Department at Monroeville has studied several treatment methods for handling these process waste waters. The most promising method being soil irrigation or soil percolation. The waste waters are also biodegradable using extended aeration.

A. Soil Irrigation and/or Soil Percolation

Based on extensive field tests, irrigating of plant process waste waters from other Koppers operations which had waters of high oxygen demand values and phenols, a high degree of reduction in oxygen demand values (over 95%) and near complete removal of phenols were obtained by this method of treatment. One of these field tests was operated in a plant near Pittsburgh, Pa. This test was operated for a full year, irrigating throughout the winter

NWT 001605

January 20, 1966

Effluent Water Handling for Northwest Tar Plant at Portland, Oregon

months. Runoff during thawing periods indicated a high percentage reduction in organics. With this background, tests were started in the laboratory and in 55-gallon drums set up outdoors to determine efficiency of soil percolation using tar plant process effluent waters.

1. Indoor Tests

Test units were set up indoors using glass soil percolation test units (Fisher Cat. No. 13-391) which had 2-1/2" of glass wool and gravel in the base. The diameter of the units above the gravel was 3" and with 15" depth of soils and sand the diameter at the top was 7". These units were started first with 53 ml of 1% phenol on weekdays and after about 3 weeks, the feed waters were switched to tar plant effluent. This rate of application is equivalent to 1500 gallons per 0.5 acre per day. At about this same time, distilled water equivalent to 1" of rain was added once a week to simulate outdoor conditions, also no water soaked through the unit up to this time. Results of these tests can be summarized as follows:

Feed Material

pH	9.3
COD, ppm	53,000
BOD, ppm	43,000
Phenols, ppm	14,500
Sulfides, ppm	2,700

Effluent Characteristics

Date, 1965	Unit 1(33% Garden Soil, 67% Sand)		Unit 2 (Coarse Plant Fill)	
	Phenols, ppm	Other Tests	Phenols, ppm	Other Tests
Sept. 1	Unit started on 1% phenol			
Sept. 15			Unit started on 1% phenol	
Sept. 28	Feeds switched to tar plant waste waters			
Oct. 4	.35		385	
Oct. 11	5.4		438	
Oct. 15	32		350	
Oct. 22	Started adding nutrients with the "rain water" each week			
Oct. 25	8.1		38	
Nov. 1	4.7		.4	
Nov. 8	6.9		0.1	
Nov. 15	2.7		2.4	
Nov. 17		pH 7.4 COD, ppm 116 BOD, ppm 34 Sulfides, ppm <0.1		pH 7.7 COD, ppm 470 BOD, ppm 195 Sulfides, ppm <0.1

NWT 001606

January 20, 1966

Effluent Water Handling for Northwest Tar Plant at Portland, Oregon

Date, 1965	Phenols, ppm	Other Tests	Phenols, ppm	Other Tests
Nov. 22	16		3.2	
Nov. 26	<0.1		-	
Dec. 6	65		291	
Dec. 13	<0.2		59	
Dec. 20	<0.1		<0.1	
Dec. 27	37		6	
Jan. 19, 1966	10.5	COD, ppm 370	5.5	COD, ppm 345

Test percolation columns have also been operated for two months using dirt from the proposed Portland irrigation area; results to date indicate effluent from the units had phenols reduced to 5 to 95 ppm and COD is reduced to 300 to 1000 ppm.

2. Outdoor Tests

Three 55-gallon steel drums with open tops were set up outdoors at Monroeville. These units were filled with 7" gravel and 24" soil (1 part), and sand (2 parts). A connection from bottom of drum permitted collection of waters passing through this soil. Process effluent waters were then added at rates equivalent to 15,000, 7,500 and 1,500 gallons/day/0.5 acre. After about one week on the high rate unit, phenols were being removed by less than 50%, and on second unit,after two weeks of operation, phenol removal was less than 50%. These two units were then discontinued. At the lower rate of application, results were as follows:

Feed Material

pH	9.5
COD, ppm	5,600
Phenols, ppm	14,600
Sulfides, ppm	4,500

	Effluent Characteristics			Outdoor Conditions for past week		
				Air Temp., °F		Precipitation
Date 1965	Phenols, ppm	COD, ppm	Sulfides, ppm	High	Low	H_2O
Oct. 18	Feed to unit started					
Oct. 25	0.1	24	<0.1	71	26	1.0
Nov. 2	0.1	29	<0.1	55	18	0.1
Nov. 8	0.1	27	<0.1	58	38	0.6
Nov. 15	0.2	128	<0.1	52	23	0.3
Nov. 19	135	980	<0.1	45	29	1.0
Dec. 1	480	1800	<0.1	46	20	-
Dec. 13	1000	4250	<0.1	40	18	-
Dec. 22	1250	-	<0.1	46	15	Snow

NWT 001607

January 20, 1966

Effluent Water Handling for Northwest Tar Plant at Portland, Oregon

The steel drums started rusting badly the first of December and considerable iron was being carried through with the water, thus some of the COD value could be due to ferrous iron present. The units were discontinued before Christmas because of rusting of the drums. Several times in November and December, the effluent applied to soil surface would freeze and a thaw was required to percolate water through the unit.

Thus with greater depths of soil to percolate through or run over at the plant site, this method of waste water handling is expected to provide a high degree of removal for phenols and organic matter from the effluent waters.

B. Extended Aeration Process Effluent Treatment

Continuous flow type laboratory models of extended aeration activated sludge units have been operating on the process effluent waters diluted with about three parts of tap water. Units have been operated for over six weeks using fixed feeds with reductions of: phenol-100% (<0.1 ppm); sulfide-100% (<0.1 ppm); COD-82-96%; and BOD-95-99%. Several feed rates and other operating conditions were tested and these units were upset with loss of biological activity when feed conditions were varied rapidly. However, with fairly uniform operations, high organic reductions were shown. This method of operation would be Koppers Company's choice after soil percolation and irrigation, or being able to divert the effluent waters to a city sewer system.

IV. Sanitary Waste

Sanitary waste water will be provided with two septic tanks and dry wells or drain fields as outlined in the attached specifications.

V. Conclusions

It is believed that the process waste waters from the proposed tar plant can best be treated by use of soil percolation and irrigation as detailed in attached specifications "Effluent Treatment Facilities - Northwest Tar Plant." This is based on laboratory tests both indoors and outdoors using a tar plant process effluent water similar to that expected at Portland and on larger scale field testing of other Koppers plants' effluent waters. It is recommended that this method of process waste water treatment be installed at the Portland Plant.

Sanitary waste would be handled initially by septic tanks with dry wells or drain fields.

C. W. Fisher

CWF:rtm

NWT 001608

STATE OF OREGON

INTEROFFICE MEMO

JAG
EQB

TO: Gary Calaba

DATE: August 27, 1984

FROM: CHGray, NWR CHG

SUBJECT: HW - Koppers Co., Inc. - Multnomah County

The above company has been investigated previously under the abandoned hazardous waste disposal site inventory in 1982. We took one set of samples from the five groundwater monitoring wells in 1982 for phenols. The wells surround an area which up until ten years ago received waste coat tar distillates (see attached diagram).

There was a benzene plant at this location which operated in the 1940's? The current company, Koppers, receives coal tar via rail cars and makes customized creosote blends for sale to wood treaters.

I'm not satisfied at this point to walk away from this facility. We need to do some more groundwater sampling and soil sampling. I will collect those samples this fall and provide a follow-up to this assessment. I intend to sample for a larger number of parameters than previously done in 1982.

CHG/mb
Attachment

81-125-1387

ecology and environment, inc.
101 YESLER WAY, SEATTLE, WASHINGTON, 98104, TEL. 206/624-9537
International Specialists in the Environment

MEMORANDUM

DATE: October 28, 1987

TO: John Osborn, FIT-RPO, USEPA, Region X

THRU: for David Buecker, FIT-OM, E&E, Seattle DMT

FROM: Lazar Gorelik, FIT-SM, E&E, Seattle L.G.

SUBJ: Preliminary Assessment Report for
Koppers Site
Portland, Oregon

REF: TDD F10-8709-09

CC: Deborah Flood, HWD-SM, USEPA, Region X
Jeffrey Villnow, FIT-PM, E&E, Seattle
Thomas Tobin, E&E, Seattle

1. Introduction and Purpose of the Preliminary Assessment:

Pursuant to U.S. Environmental Protection Agency (EPA) Contract No. 68-01-7347 and Technical Directive Document (TDD) F10-8709-09, Ecology and Environment, Inc. (E&E) conducted a Preliminary Assessment (PA) of Koppers Site in Portland, Oregon. The PA represents the second of a three-step investigative process which begins with Site Discovery and concludes, if necessary, with a Site Inspection. The investigative process, in general, is intended to identify, compare, and rank the potential hazards associated with a particular site relative to other sites across the nation for the purpose of identifying priority sites requiring remedial responses. It does not include extensive or complete site characterization, contaminant fate determination, or quantitative risk assessment.

The Koppers Site PA was conducted to identify potential public health and/or environmental hazards related to the site and, if present, evaluate the need for additional investigative action. The PA is based on data derived from available files and literature pertaining to the site (1-8). Information developed during the PA is summarized in Appendix A on EPA Form 2070-12.

2. Information Obtained During the Preliminary Assessment:

- Site Location and Description - The Koppers Site is located at 7900 N.W. St. Helens Road in the northwest industrial area of the City of Portland, Oregon (Figures 1 and 2). The facility occupies the southwest corner (8 acres) of a former gasification plant that was

recycled paper

operated by Portland Gas and Coke Company from 1913 to 1956 when Northwest Natural Gas Company began distributing natural gas. Northwest Natural Gas currently owns the property and leases it to Koppers Company (1).

- Physical Environment - Several large facilities, including the Rhone-Poulenc Chemical Plant which previously generated dioxin containing wastes, are in the vicinity of the Koppers Site (5, 6). The Wacker-Siltronic Company purchased land from Northwest Natural Gas and constructed a facility near the Koppers Site in the late 1970s (3, 4). Sediments containing coal tar residues were found during the construction of the facility. Between the Siltronic and Koppers sites lies the Northern Doane Lake site. Investigation of this area by Northwest Natural Gas and Wacker-Siltronic resulted in the Oregon Department of Environmental Quality (DEQ) identifying the Koppers Site as a source of suspected contamination (4).

  The Willamette River is approximately 1,800 feet from the Koppers Site. The depth to ground water at the site is probably within five to twenty feet. The Portland area has a mild climate, wet winters and warm dry summers. Total annual precipitation is about 40 inches and the average annual evaporation is about 26 inches. Drinking water in this area is supplied by the City of Portland from the Bullrun Reservoir (7).

- Site History / Potential Problem(s) at Site - In 1965, Koppers Company of Pittsburgh signed a long term lease agreement with Northwest Natural Gas Company to construct a new coal tar distillation plant on the property (1, 2). In 1966, the new $1 million plant started processing coke oven tar, which is produced by the carbonization of coal in ovens.

  The plant consisted of tar processing and pitch cooling facilities, a tank farm, a boiler building, an office building, a machine shop, and an extensive piping system for transferring raw materials and finished products from or to transportation facilities or storage tanks (Figure 2) (1). Coal tar was brought by boat to the Willamette River docks at the plant site.

  In the period between 1966 and 1973, the plant produced chemical oil, creosote, and pitch by distillation of coal tar (8, 9). Preheated coal tar was pumped from storage tanks to a large batch still. Heat was supplied by circulating tar from the still through a gas fired heater. Distillation was carried out under relatively high temperatures and vacuum until the still contents reached a

specific softening point. Oil from the tar was separated in a fractionating column and after condensation was pumped to storage. The pitch was pumped to a cooling tank from which it was loaded into tank cars or sent to cooling pans (50 x 80 feet). The solidified pitch was then dug out and loaded into trucks or hopper cars.

Air pollution problems from the following sources were associated with these operations: vents on the heated storage tanks, seals on pumps handling the hot process steam, an oil seal on the condensing system for the fractionating column, spills, and fumes from pitch cooling tanks (10). An air pollution control system used at the plant (9, 11) consisted of a scrubbing tower in which fumes were contacted and condensed by relatively cool circulating oil. Separation of the water condensate (wastewater) from the circulating oil was accomplished in a water tank and a water dehydration tank.

In 1973, the production facilities at the plant were shut down due to a lack of raw materials (8). In 1974, Koppers received permission to operate the plant on a temporary basis for manufacturing experimental batches of electrode pitch, a new product consisting of both coal and petroleum residuals (12). An Air Contaminant Discharge Permit (No. 26-2930) issued by DEQ in 1975 suggests that the electrode pitch production was probably terminated in 1977 (13). Since this time, the facility has been used only for bulk transfer operations of creosote coal tar and coal tar pitch.

In 1987, Koppers proposed to expand the facility (14). The new facility will be used to mix chromic acid, arsenic acid, and dry copper oxide with water. Vapors and particulates from the mixing process will be controlled by a water powered eductor followed by a packed tower scrubber. Wastewater from the tower will be recycled for dilution of the raw materials.

o Waste Types, Quantities, and Characteristics - Available data suggests that solid wastes disposed of at the site in the past probably consist of wastes produced by the former gasification plant and wastes produced by the Koppers plant. Oregon DEQ has identified abandoned coal tar disposal pits at the site (4). The origin, composition, and volume of the wastes are unknown.

An EPA hazardous waste inventory document from 1979 (15) indicates that wastes from roofing pitch and electrobinding operations were disposed at the site in an area measuring approximately 100 x 20 feet (15). The wastes consisted of phenols and oil and grease, and were probably generated by the Koppers plant. This document also indicates that Koppers Company did not ship wastes from the site and that the company generated over 200 cubic yards of wastes per year.

In the past, the Koppers plant generated approximately 1,500 gallons per day (gpd) of industrial wastewaters from the following sources: the laboratory, pump room, wet oil, wet oil tank and water dehydration tank (11). In 1966, the company proposed that after oil removal the wastewaters be discharged into a drain field, providing over 90% BOD reduction for compounds consumed by soil bacteria. It is unclear, however, whether Koppers applied this treatment method at the site. The company probably started to discharge industrial wastewaters to the City of Portland sewer system in 1975 (16).

The plant effluent consisting of wastewater runoff from the tank farm and boiler blowdown was discharged to the Willamette River in accordance with NPDES permits. In 1975, the company paved the surface in the tank farm area to reduce infiltration of surface water and installed a rainwater collection and treatment system, which included an oil water separator for oil removal (17). The effluent from the separator was discharged into a storm water ditch leading to the river.

The early NPDES permits specify the following daily maximum parameters for the plant effluent: flow (68,000 gpd), oil and grease (20 mg/l), pH (6-9), and temperature (110°F). The NPDES permit of 1975 also includes phenols (0.7 mg/l). In 1985, DEQ required settling and skimming for Kopper's runoff to reduce the content of polynuclear aromatic hydrocarbons (PAHs) and also required monthly monitoring for PAHs in the effluent (18). However, the NPDES discharge monitoring report of 1987 specified the following parameters: flow (3,000 - 10,000 gpd), temperature (72 - 100°F), pH (6 - 9), oil and grease (10 - 15 mg/l), and phenols (0.5 - 0.7 mg/l).

o Pollutants, Mobilization, Pathways, and Risks - In the past, products recovered by distillation of coal tar at the plant included: chemical oil, creosote, and pitch. Coal tar is a complex mixture of many chemicals. It is a viscous liquid heavier than water. A typical composition of coal tar by distillation may be given as: about 5% tar chemicals (tar acids); 30% distillation oils (creosote and other distillates); and 60% to 65% residuals (road tars, crude and refined tars, pitches and pitch coke) (19).

Chemical oil produced by the plant consisted mainly of phenols and naphthalene (9). The product was shipped for further processing for recovery of naphthalene, phenol, xylenol, pyridine, picoline, and various solvent oils. Creosote, a well known wood preservative, is primarily composed of PAHs. It is an oily liquid slightly heavier than water. Pitches have a variety of uses. Hard pitches produced by the plant were used in electrodes as binding materials.

A majority of the chemical constituents of these products are characterized by chemical stability, low water solubility, low vapor pressure, and high affinity to soil (19). As a result, they exhibit low mobility in the environment, distributing preferentially to soil. Subsurface contamination by the liquid products may have a long term adverse affect on both the soil and ground water because of a high content of organic compounds and their low solubility.

A limited set of analytical results of ground water samples from on-site monitoring wells, old wastes from one on-site pond, and river sediment samples near the site suggest that soil and ground water contamination by coal tar constituents have occurred at the site (20). The transport of contaminants from the site is likely to be directed toward the river through surface water runoff and ground water flow.

However, the information gathered suggests that the Koppers Site has a low potential to cause human health problems because residual contaminants are unlikely to influence either the local drinking water source or air quality. In contrast, it appears that potential transport of toxic tar constituents from the site may affect water quality in the river and its aquatic population. This is primarily due to the close proximity of the site to the river. This potential environmental impact cannot be accurately assessed because of incomplete data on the extent and magnitude of the contamination.

3. Priority Assessment:

No further action is appropriate under the pre-remedial program. However, the site should continue to be assessed as part of the Doane Lake investigation.

4. Follow-up Recommendations:

Activities at the Koppers Site have been monitored by DEQ since the construction of the coal tar processing plant, which occupies a portion of the old gasification plant. Tar contamination has been found in the area of the old gas plant in a study conducted by Northwest Gas Company and Wacker-Siltronic Company.

Information gathered during the PA suggests that soil and ground water contamination by tar constituents has occurred at the site as a result of past operational and waste disposal practices. Coal tar was produced at the site in the period 1913-1953. The Koppers plant processed coal tar into chemical oil, creosote, and electrode pitches probably in the period 1966-1973. Experimental batches of an electrode pitch consisting of coal and petroleum residuals were produced probably in the period 1973-1977.

The EPA site file indicates that in the past the plant generated approximately 200 cubic yards per year of wastes which were disposed on the Koppers Site. The process sources of waste generation are unknown. Limited data is available on the waste composition. In the past, the tank farm area probably resulted in subsurface contamination by various coal tar products. It is possible that before 1975 industrial wastewaters from the plant were disposed beneath the site.

It appears that the site has a low potential to cause human health problems since residual contaminants at the site are unlikely to influence the local drinking water source or air quality. However, the site has potential to cause environmental damage through surface and subsurface migration of various toxic pollutants to the river. Due to the lack of a target population, no further action is recommended under CERCLA. It is, however, recommended that a study at the Koppers Site be conducted by a state or local agency to evaluate the extent and magnitude of contamination in the area leased by Koppers Company.

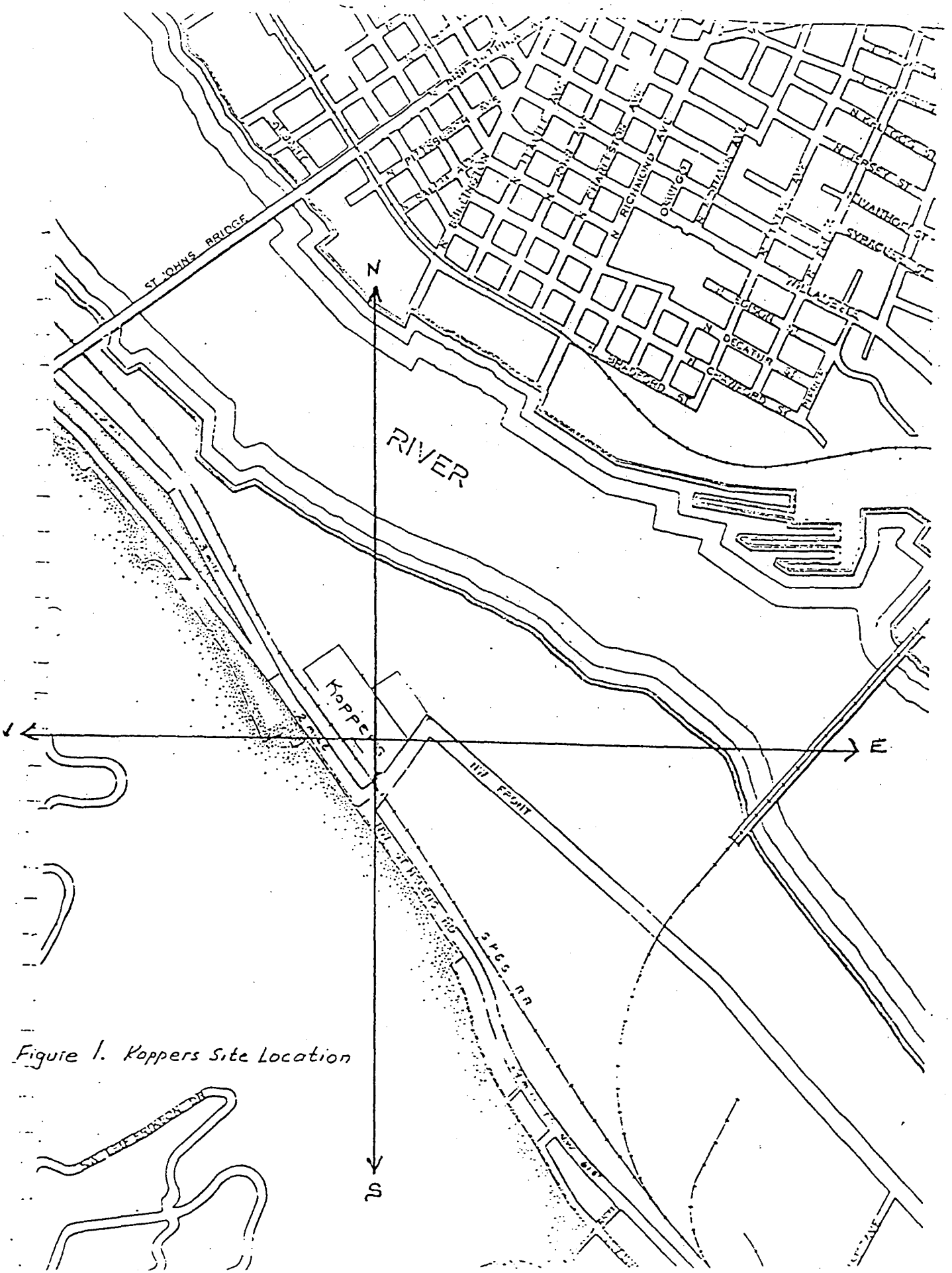


Figure 1. Koppers Site Location

NWT 001616

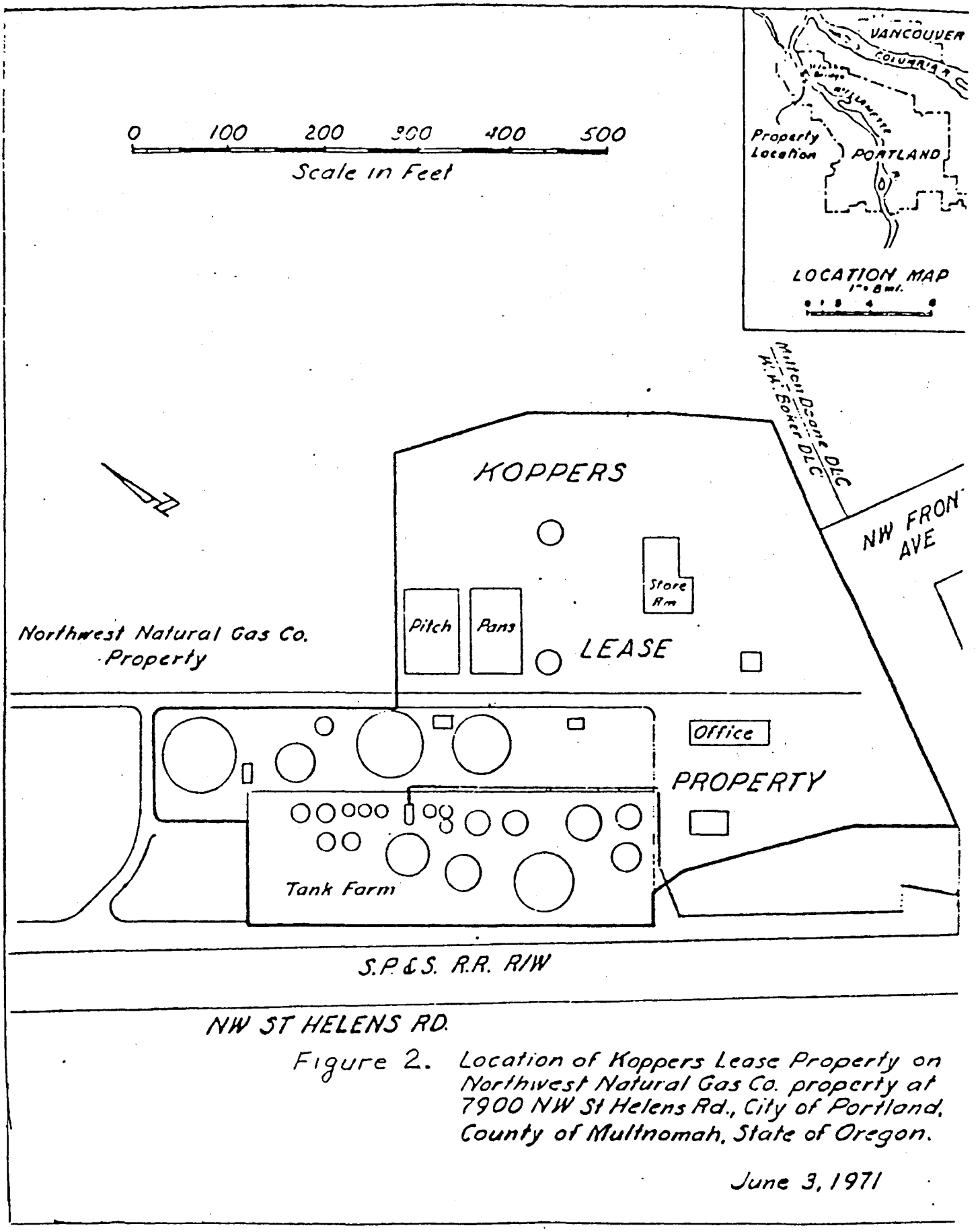


Figure 2. Location of Koppers Lease Property on Northwest Natural Gas Co. property at 7900 NW St Helens Rd., City of Portland, County of Multnomah, State of Oregon.

June 3, 1971

REFERENCES

1. The Oregon Journal, August 25, 1965. The Casco Plant in New Use. ODEQ Site Files.

2. The Oregonian, August 11, 1966. Koppers' Portland Plant Starts Initial Production. ODEQ Site Files.

3. Memo from Dennis Adamczyk to A. Goodman, December 19, 1986. ODEQ Site Files.

4. Dennis Adamczyk, December 26, 1986. Northern Doane Lake - Koppers Company Hazardous Waste Site. ODEQ Site Files.

5. L. Gorelik, 1985. Tier 2 Dioxin Screening, Phone-Poulene Chemical Plant, Portland, Oregon. Ecology and Environment, TDD R10-8405-09.

6. W. Ritthaler and L. Gorelik, 1986. Alkali Lake Disposal Site, Alkali Lake, Oregon, National Dioxin Study. Ecology and Environment, TDD R10-8410-12.

7. Personal Communication, September 15, 1987. Oregon Water Department.

8. AQ-Koppers-Multnomah County, September 25, 1974. ODEQ Site Files.

9. Memo from D. Roach to R. Hatchard, February 11, 1966. ODEQ Site Files.

10. Memo from T. Bispham to W. Hanson, October 14, 1970. ODEQ Site Files.

11. Effluent Treatment Facilities, January 27, 1966. ODEQ Site Files.

12. Memo from L. Shannon to R. Bispham, December 11, 1974, ODEQ Site files.

13. Memo from L. Patterson to Koppers Company, Inc., January 19, 1977. ODEQ Site Files.

14. ODEQ Memo from A. Broad, August 17, 1987. ODEQ Site Files.

15. Inventory - Possible Source of Hazardous Waste, August 21, 1979. EPA Region X, Site Files.

16. Application No. OR-000077-9, date unknown. ODEQ Site Files.

17. Northwest Tank Farm, Rainwater Collection and Treatment System, January 23, 1975. ODEQ Site Files.

18. Memo from L. Patterson to G. Bausler, March 4, 1985. ODEQ Site Files.

19. Handbook on Manufactured Gas Plant Sites, 1984. Environmental Research and Technology, Inc., Pittsburg PA and Koppers Company, Inc. Prepared for Utility Solid Waste Activity Group Superfund Committee, Washington, D.C., Under EPA Project No. P-D125.

REFERENCES (cont.)

20. Memo from C.H. Gray to G. Calaba, August 27, 1984, ODEQ Site Files.

21. Analytical Results of Samples from the Koppers Site, July 19, 1982. ODEQ Site Files.

APPENDIX A

EPA FORM 2070-12

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 State	02 Site Number
OR	D027734359

II. SITE NAME AND LOCATION

01 Site Name (Legal, common, or descriptive name of site)	02 Street, Route No., or Specific Location Identifier				
Koppers Co., Inc.	7540 N.W. St. Helens Road				
03 City	**04 State**	**05 Zip Code**	**06 County**	**07 County Code**	**08 C D 0**
Portland	OR	97229	Multnomah	051	

09 Coordinates Latitude	Longitude
45° 34' 40.0"	122° 45' 31.0"

10 Directions to Site (Starting from nearest public road)

III. RESPONSIBLE PARTIES

01 Owner (if known)	02 Street (Business, mailing, residential)		
Northwest Natural Gas	220 N.W. Second Avenue		
03 City	**04 State**	**05 Zip Code**	**06 Telephone Number**
Portland	OR	97209	(303) 226-4211
07 Operator (if known and different from owner)	**08 Street (Business, mailing, residential)**		
Koppers Co., Inc.	Environmental Resources		
09 City	**10 State**	**11 Zip Code**	**12 Telephone Number**
Pittsburgh	PA	15219	(412) 227-2000

13 Type of Ownership (Check one)
[X] A. Private [ ] B. Federal _____ (agency name) [ ] C. State [ ] C. County [ ] E. Municipal
[ ] F. Other _____ (specify) [ ] G. Unknown

14 Owner/Operator Notification on File (Check all that apply)
[X] A. RCRA 3001 Date Received: 11 /19 /1980 (Month Day Year) [X] B. Uncontrolled Waste Site (CERCLA 103c) 07 /19 /1982 (Month Day Year) [ ] C. None
The company was investigated under abandoned HW site inventory.

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 On-Site Inspection
[X] Yes Date 07 /19 /1982 (Month Day Year) [ ] No
[ ] A. EPA [ ] B. EPA Contractor [X] C. State [ ] D. Other Contractor
[ ] E. Local Health Official [ ] F. Other _____ (specify)
Contractor Names(s): _____

02 Site Status (Check one)	03 Years of Operation		
[X] A. Active [ ] B. Inactive [ ] C. Unknown	1966 (Beginning Year)	Present (Ending Year)	[ ] Unknown

04 Description of Substances Possibly Present, Known, or Alleged
Coal gas plant from 1913-1956. Coal tar distillation into oil, creosote, and electrode pitch from 1966 to 1973. Electrode pitches production from coal tar and petroleum residues from 1973 to 1977. Transfer and storage of coal tar products from 1977.

05 Description of Potential Hazard to Environment and/or Population
Solid wastes and industrial wastewater from processing coal tar. Large quantities of solid wastes were disposed the Koppers site. Solid wastes are complex mixtures of phenols and PAHs. Subsurface contamination by coal tar constituents.

V. PRIORITY ASSESSMENT

01 Priority for Inspection (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part Description of Hazardous Conditions and Incidents)
[ ] A. High (Inspection required promptly) [ ] B. Medium (Inspection required) [ ] C. Low (Inspect on time available basis) [X] D. None (No further action needed, complete current disposition fo

VI. INFORMATION AVAILABLE FROM

01 Contact	02 Of (Agency/Organization)		03 Telephone
Deborah Flood	USEPA, Region X, Superfund		(206) 442-272
04 Person Responsible for Assessment	**05 Agency**	**06 Organization**	**07 Telephone No.**	**08 Date**
Lazar Gorelik	EPA/FIT	E&E	(206)624-9537	09 /23 /8 (Month Day Y)

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION	
01 State	02 Site Numb
OR	D02773435

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 Physical States (Check all that apply)

- [ ] A. Solid
- [ ] B. Powder, Fines
- [x] C. Sludge
- [ ] D. Other _____ (Specify)
- [ ] E. Slurry
- [ ] F. Liquid
- [ ] G. Gas

02 Waste Quantity at Site (Measure of waste quantities must be independent)

Tons _____

Cubic Yards > 200 cy/yr

No. of Drums _____

03 Waste Characteristics (Check all that apply)

- [ ] A. Toxic
- [ ] B. Corrosive
- [ ] C. Radioactive
- [ ] D. Persistent
- [ ] E. Soluble
- [ ] F. Infectious
- [ ] G. Flammable
- [ ] H. Ignitable
- [ ] I. Highly Volati
- [ ] J. Explos
- [ ] K. Reacti
- [ ] L. Incomp ible
- [ ] M. Not Applic

III. WASTE TYPE

Category	Substance Name	01 Gross Amount	02 Unit of Measure	03 Comments
SLU	Sludge			
OLW	Oily Waste	> 200	cubic yards	Oily waste containing coal tar compounds were generated in the past by Koppers Co., Inc. Waste is in fill on the property leased by Koppers Co., Inc.
SOL	Solvents			
PSD	Pesticides			
OCC	Other Organic Chemicals			
IOC	Inorganic Chemicals			
ACD	Acids			
BAS	Bases			
MES	Heavy Metals			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 Category	02 Substance Name	03 CAS Number	04 Storage/Disposal Method	05 Concentration	06 Measure Concentrat
OLW	Complex mixtures; PAHs and other compounds of coal tar	N/A	On-site	Unknown	N/A
		N/A	Disposed	Uknown	N/A

V. FEEDSTOCKS (See Appendix for CAS Numbers)

Category	01 Feedstock Name	02 CAS Number	Category	01 Feedstock Name	02 CAS Numb
FDS	Coal Tar	N/A	FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Adamczyk, 01/26/86, ODEQ Files; Adamczyk, 12/05/86, ODEQ Files; Adamczyk, 01/19/86, ODEQ Files; T. Berkmeir, 08/21/79, EPA Region X Files; Memo from C. H. Gray to G. Calala, 08/27/84, ODEQ Files; The Oregonian, 08/11/66, ODEQ Files; Memo from Koppers, 02/22/84, ODEQ Files; Memo from B. Smith to Koppers Co., 02/06/1984, EPA Region X ODEQ Files.

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 State	02 Site Numb
OR	D02773435

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. Ground Water Contamination
03 Population Potentially Affected: 0
02 [X] Observed (Date: 07/19/82) [ ] Potential [ ] Alle
04 Narrative Description

Elevated levels of phenols were detected in the ground beneath the site. Other coal tar constituents are probab present in the water.

01 [X] B. Surface Water Contamination
03 Population Potentially Affected:
02 [ ] Observed (Date:) [X] Potential [ ] Alle
04 Narrative Description

Potential for migration of contaminants from the site to the Willamette River.

01 [X] C. Contamination of Air
03 Population Potentially Affected:
02 [X] Observed (Date: 07/28/1970) [ ] Potential [ ] Alle
04 Narrative Description

In the past, the chemical plant had a number of problems with air contamination.

01 [ ] D. Fire/Explosive Conditions
03 Population Potentially Affected:
02 [ ] Observed (Date:) [ ] Potential [ ] Alle
04 Narrative Description

None reported, observed, or suspected.

01 [ ] E. Direct Contact
03 Population Potentially Affected:
02 [ ] Observed (Date:) [ ] Potential [ ] Alle
04 Narrative Description

Facility is fenced and access is restricted.

01 [X] F. Contamination of Soil
03 Area Potentially Affected (Acres) Unknown
02 [ ] Observed (Date:) [X] Potential [ ] Alle
04 Narrative Description

Soil contamination is likely to occur at the site as a result of past operational and waste disposal practices. Areas of concern are: waste pit, tank farm, and drain field.

01 [ ] G. Drinking Water Contamination
03 Population Potentially Affected:
02 [ ] Observed (Date:) [ ] Potential [ ] Alle
04 Narrative Description

Ground water in the industrial area is not used for drinking water supplies. The site is unlikely to influence water quality of the local drinking water supply source.

01 [X] H. Worker Exposure/Injury
03 Workers Potentially Affected: 12
02 [ ] Observed (Date:) [X] Potential [ ] Alle
04 Narrative Description

If safety procedures are violated, potential for worker exposure seems likely because of the toxic nature of products.

01 [ ] I. Population Exposure/Injury
03 Population Potentially Affected:
02 [ ] Observed (Date:) [ ] Potential [ ] Alle
04 Narrative Description

Current operations are unlikely to result in population exposure/injury.

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 State: OR | 02 Site Num: D0277343

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. Damage to Flora — 02 ☐ Observed (Date: _____) ☐ Potential ☐ All
04 Narrative Description

None reported, observed, or suspected.

01 ☒ K. Damage to Fauna — 02 ☒ Observed (Date: Unknown) ☐ Potential ☐ All
04 Narrative Description (include name(s) of species)

The Willamette River is about 0.75 miles from the site. The presence of coal tar constituents have been detect in river sediments.

01 ☐ L. Contamination of Food Chain — 02 ☐ Observed (Date: _____) ☐ Potential ☐ All
04 Narrative Description

None reported, observed, or suspected.

01 ☒ M. Unstable Containment of Wastes (Spills/runoff/standing liquids, leaking drums) — 02 ☐ Observed (Date: _____) ☒ Potential ☐ All
03 Population Potentially Affected: _____ 04 Narrative Description

Potential for leaching of contaminants from disposed waste products into subsurface.

01 ☒ N. Damage to Off-site Property — 02 ☐ Observed (Date: _____) ☒ Potential ☐ All
04 Narrative Description

Damage to off-site property may result through subsurface migration of contaminants.

01 ☐ O. Contamination of Sewers, Storm Drains, WWTPs — 02 ☐ Observed (Date: _____) ☐ Potential ☐ All
04 Narrative Description

None reported, observed, or suspected.

01 ☒ P. Illegal/Unauthorized Dumping — 02 ☐ Observed (Date: _____) ☒ Potential ☐ All
04 Narrative Description

Waste products containing phenols and other tar compounds were disposed on site by Koppers Co., Inc. in the pas

05 Description of Any Other Known, Potential, or Alleged Hazards

Potential spills of liquid products as a result of a long operation period of the facility having a large stor capacity and extensive piping system.

III. TOTAL POPULATION POTENTIALLY AFFECTED:

IV. COMMENTS

It is recommended that a study be conducted at the Koppers Co., Inc. Site.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Memo from Gray to Calala, 08/27/84, ODEQ Files; Analytical Results of Samples from Koppers Co., Inc. Site, 07/1 T. Berkmeir, 08/21/79, EPA Region X Files; Memo from C. H. Gray to G. Calala, 08/27/84; Memo, 11/27/87, USGS Me Memo, 07/28/1970, ODEQ Files.

KOPPERS

Interoffice Correspondence

To P. W. Guth

Location Northwest

Subject DEQ REPLY

From Organic Materials Division

Location Manufacturing Services

Date March 26, 1975

Please sign the attached letter and forward to the DEQ by Certified Mail, Return Receipt Requested.

JMA

Jon M. Anderson

JMA:em
Attachment

cc: C. H. Teller, Sr. (With Attachment)
R. L. Shannon " "
J. Little " "
T. Smith " "

K-6 REV. 2

NWT 001625

Organic Materials Division, Koppers Company, Inc.
Pittsburgh, Pa. 15219, Telephone 412-391-3300

Certified Mail
Return Receipt Requested

KOPPERS

March 27, 1975

Department of Environmental Quality
Northwest Region
1010 N.E. Couch Street
Portland, Oregon 97232

Attn: Mr. Richard J. Nichols
Engineer-Technical Services

Re: Appl. No. OR-000077-9
File No. 47430

Gentlemen:

We are in receipt of the draft NPDES permit for the Koppers Company plant located at 7540 N.W. St. Helens Road, and wish to make several comments on it.

Since the proposed permit specifies that the discharge limitations will be achieved by connecting all wastewaters to the City of Portland sewage system, the City must agree to accept this effluent before the permit can be issued in the final form. The compliance program to be prepared by Koppers must have a firm basis on which to proceed.

The compliance schedule should be revised so that final plans for connection to the sewage system are due 60 days after the City accepts this connection principle. Engineering cannot begin on the connection facilities until the City provides a firm design basis by agreeing to accept the effluent. Discharge to the municipal system would be 9 months after the connection plan is approved by the City. This period of time is required due to the delivery time for pumps and other equipment of approximately 34 weeks.

Thank you for this opportunity to comment.

Very truly yours,

P. W. Guth
Superintendent

Northwest Plant
(Portland Ore)
Water Pollution

KOPPERS

Interoffice Correspondence

To W. B. Jackson

Location

Subject Northwest Plant

From K. R. Caldwell

Location

Date May 3, 1971

The Northwest plant will have to file for a Corps of Engineers Permit. We have been operating and discharging in effect under the Northwest Natural Gas Company's permit. I talked to Northwest and was told that we would have to file for our own permit as they were not going to cover us. Arrangements have been made to get samples to Research to characterize the effluent.

Installation of the Portland sanitary sewer system will be completed in the fall of 1971 and it is hoped we can discharge into it. I have asked Paul Guth to obtain from them what water they will accept. I don't believe that they will take decanter water (currently being irrigated) without treatment. Since Northwest is currently getting topped tar for raw material, the contaminated water load is lower than for a normal tar plant. At Portland we have to do the following:

(1) Analyze contaminated water to irrigation and determine volume

(2) Confirm location of sewer outlet from tank farm drains and amount of water and volume

(3) Apply for Oregon permit

(4) Apply for Corps of Engineers permit - may be simultaneous

The Northwest plant is a clean plant and it is obvious that plant personnel are proud of the plant.

Although this plant has not had major problems on air pollution, we need some engineering work and a plan formulated. If we have this, I think we could make modest improvements over a period of time, and be all right when questioned by air enforcement people.

Kay R Caldwell

KRC/mak

cc: P. Bost/J. Little
E. Eynon
P. Guth
D. L. O'Dell
B. Pospishil
T. Smith

Northwest Plant

January 6, 1971

Department of Environmental Quality
1400 S.W. 5th Avenue
Portland, Oregon

Attention: Mr. Kenneth H. Spies, Director

Gentlemen:

Re: Waste Discharge Permit
File No. 62231

We contacted Mr. Bob Gilbert of your office about the provisions of your Waste Discharge Permit.

We had several questions which he has answered as follows:

1. The present drain line which carries clean cooling water from our Liquid Natural Gas plant to the river will require a yearly renewable permit for its operation. It does not need to be diverted from the river in the forseeable future.

2. We are preparing plans for the disposal of an existing tar pond. It is one of the areas referred to in Item 3 of the permit. The second area referred to will be eliminated as a result of piping the cooling water from the Liquid Natural Gas plant to the river. The plan for the tar pond disposal has been submitted to our management for approval. Upon their acceptance and prior to March 31, 1971 we will submit it to the Department of Environmental Quality. The present rain water runoff will be trapped to keep it free of oil or contaminants. We have contacted Koppers Company about the water from the process boiler blowdown. We will give them copies of Waste Discharge Permit No. 62231 so they can comply with Item 1 and other items that may be of concern.

3. We have three sanitary sewers and Koppers has one. These are to be connected to the City of Portland sanitary sewer within 30 days of the notification of the completion of the sewer past the plant.

4. The present storm drains carry rain water to the river. These will continue to be acceptable without a permit in the forseeable future.

NWT 001629

5. The present rain water that enters our property from the Rivergate Rock Plant across St. Helens Road and then turns off our property onto the Allen Tract is not a problem to us as long as we or Koppers do not discharge any untreated process water to it.

We will contact you as soon as possible with preliminary drafts of our proposal for the tar pond disposal. Please contact us about any changes in our permit and feel free to inspect the area whenever necessary. We would appreciate it if your representative would contact the plant engineer of the Liquid Natural Gas plant, H.A. Grobey at the plant or by phone (226-4211) when they do visit the site.

Very truly yours,

D.F. DeVine
Engineering Department

D:f

cc: R.T. Miller
E.D. Rowan
C.A. Roberts
H.A. Grobey

Recd 12/21/70 D.

DEPARTMENT OF ENVIRONMENTAL QUALITY

STATE OFFICE BUILDING • 1400 S.W. 5th AVENUE • PORTLAND, OREGON • 97201

TOM McCALL
GOVERNOR
KENNETH H. SPIES
Director
ENVIRONMENTAL QUALITY COMMISSION
B. A. McPHILLIPS
Chairman, McMinnville
EDWARD C. HARMS, JR.
Springfield
STORRS S. WATERMAN
Portland
GEORGE A. McMATH
Portland
ARNOLD M. COGAN
Portland

December 18, 1970

Northwest Natural Gas Company
123 N. W. Flanders Street
Portland, Oregon 97209

Attention: Mr. W. A. Cook, Senior Vice President

Gentlemen:

Re: Waste Discharge Permit
File No. 62231

Your application for a Waste Discharge Permit has been reviewed by the Department of Environmental Quality, and proposed waste discharge permit provisions have been drafted. You are invited to review the attached copy and submit any comments you may have in writing prior to January 6, 1971.

After that date, all comments received will be evaluated by the Department of Environmental Quality and final action on your application will be taken in accordance with the procedures set forth in Paragraph 45.040 of the attached copy of Regulations Pertaining to Waste Discharge Permits (Oregon Administrative Rules, Chapter 340). You will be advised of the action taken as soon as possible after January 6, 1971.

Very truly yours,

Kenneth H. Spies

Kenneth H. Spies, Director
Department of Environmental Quality

HLS:mjb
Attachments

cc: Commission Members
cc: Portland District Office

Mailing Address: P.O. Box 231, Portland, Oregon 97207 — Telephone: (503) 229-5696

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMO

To: Environmental Quality Commission Members

Date: DEC 18 1970

From: Bob Gilbert, Portland District Office

Subject: Northwest Natural Gas Company, Portland
Proposed Waste Discharge Permit Provisions

Northwest Natural Gas Company operates a liquified natural gas plant near the St. Johns Bridge in Northwest Portland. Natural gas is liquified during the summer months, when consumer demand is lowest, and stored for use in the winter months when consumption is at its peak.

To supply natural gas during the high-demand winter months, liquid gas is pumped from storage, revaporized and released to provide increased gas supplies. In order to operate the plant, the company purchases approximately 70 gallons per minute of water from the city of Portland. This water is used in the closed shell and tube heat exchange for cooling natural gas. No chemicals are utilized for rust corrosion control.

Presently, this cooling water is discharged into a pond where a petroleum-based substance was disposed of in recent years. As the cooling water flows through the pond, an oily film is retained. Separating the uncontaminated cooling water from this pond is the necessary first step in solving the company's present discharge problem. At this time, the staff feels that the waste flow (70 gpm at 100° F.) will have a minimal effect on the Willamette River.

Northwest Natural Gas also leases a portion of its property to Koppers Company, Incorporated, Organic Materials Division. Koppers presently discharges approximately 20 gpm into another part ot the property. This part was also used as a disposal site for a petroleum-based substance. As the waste flows through the pond, an oily film is retained. The waste must be separated from the pond and some type of pre-treatment installed before the waste can be acceptable for discharge into a city of Portland sewer.

The staff feels that separate treatment facilities for these particular industries should not be considered, but that all acceptable wastes should be discharged into an area-wide system when completed by the city of Portland.

mjb
Attachment

DEQ-1

NWT 001632

PROPOSED WASTE DISCHARGE PERMIT PROVISIONS

Prepared by the Staff of the
DEPARTMENT OF ENVIRONMENTAL QUALITY

PRELIMINARY PROPOSAL

Recommended Expiration Date: 12-31-71
Page 1 of 3

APPLICANT:

Northwest Natural Gas Company
123 N. W. Flanders Street
Portland, Oregon 97209

REFERENCE INFORMATION

File Number: 62231
Appl. No.: 1124 Received: 9-9-70
Major Bnt: Willamette Minor Bnt: _____
Receiving Stream: Willamette River
River Mile: _____
County: Multnomah

Until such time as this permit expires or is modified or revoked, Northwest Natural Gas Company is herewith permitted to:

a. Extend an existing cooling water line so that it will be submerged below low water level of the Willamette River.
b. Discharge uncontaminated cooling waters to the Willamette River for the company's natural gas plant.

All of the above activities must be carried out in conformance with the requirements, limitations, and conditions which follow.

All other waste discharges are prohibited.

1. Prior to March 31, 1971, the permittee shall complete all necessary negotiations with the City of Portland and shall submit to the Department of Environmental Quality evidence of agreement together with a schedule for completing construction of necessary facilities so that all wastes acceptable, or that can be made acceptable by pretreatment, be discharged to the city's sanitary sewer. These facilities shall be completed by September 1, 1971 such that the wastes can be discharged to the city's sanitary sewer system within 30 days after notification of the completion of such sewer in the area. Plans for collection, pretreatment and disposal facilities shall be submitted to the Department of Environmental Quality (and the city) for review and approval prior to construction.

2. For all wastes which are not acceptable for discharge to the city system, the permittee shall construct and place into operation before September 1, 1971 such facilities as are necessary to provide the highest and best treatment in accordance with the following requirements:

   a. Prior to March 31, 1971, detailed engineering plans and specifications shall be submitted to the Department of Environmental Quality for review and approval in writing prior to construction as required by ORS 449.395.

   b. All facilities shall be constructed in accordance with the approved plans.

   c. The Department of Environmental Quality shall be notified in writing when the facilities are complete and ready to be placed in operation.

PROPOSED WASTE DISCHARGE PERMIT PROVISIONS

Prepared by the Staff of the
DEPARTMENT OF ENVIRONMENTAL QUALITY

3. Prior to March 31, 1971, the permittee shall submit to the Department of Environmental Quality a program and time schedule for the continuation of a land fill which will eliminate the two existing waste disposal ponds.

4. All plant processes and all existing waste collection, treatment, and disposal facilities shall be operated and maintained at all times at maximum efficiency and in a manner which will minimize waste discharges.

5. Sanitary wastes shall be disposed of to a septic tank and drainfield system which has been installed in accordance with the recommendations of the Oregon State Board of Health and the local county health department or by other approved means.

6. All solids which are removed from the waste shall be utilized or disposed of in a manner which will prevent their entry into the waters of the state and such that health hazards and nuisance conditions are not created.

7. No petroleum base products or other substances which might cause the Water Quality Standards of the State of Oregon to be violated shall be discharged or otherwise allowed to reach any of the waters of the state.

8. In the event the permittee is temporarily unable to comply with any of the conditions of this permit, due to breakdown of equipment or other cause, the permittee shall immediately notify the Department of Environmental Quality of the breakdown or cause, and the steps taken to correct the problem and prevent its recurrence.

9. Authorized representatives of the Department of Environmental Quality shall be permitted access to the premises of all facilities owned and operated by the permittee at all reasonable times for the purpose of making inspections, surveys, collecting samples, obtaining data, and carrying out other necessary functions related to this permit.

10. Whenever a significant change in the character of the waste is anticipated or whenever a change in the waste to be discharged in excess of the conditions of this permit is anticipated, a new application shall be submitted together with the necessary reports, plans, and specifications for the proposed changes. No change shall be made until plans are approved and a new permit issued.

11. In the event that a change in the conditions of the receiving waters results in a dangerous degree of pollution, the Department of Environmental Quality may specify additional conditions to this permit.

12. This permit is subject to termination if the Department of Environmental Quality finds:

    a. That it was procured by misrepresentation of any material fact or by lack of full disclosure in the application.

PROPOSED WASTE DISCHARGE PERMIT PROVISIONS

Prepared by the Staff of the
DEPARTMENT OF ENVIRONMENTAL QUALITY

Recom. Expir. Date: 12-31-71

b. That there has been a violation of any of the conditions contained herein.

c. That there has been a material change in quantity or character of waste or method of waste disposal.

File
1000-300

KOPPERS

Interoffice Correspondence

To P. W. Guth

From Organic Materials Division

Location Northwest Plant

Location Manufacturing Services

Subject DEQ LETTER

Date June 28, 1977

Please sign the attached letter and forward to the

DEQ by Certified Mail, Return Receipt Requested.

JMA

Jon M. Anderson

JMA:em
Attachment

cc: J. Little (With Attachment)
R. L. Shannon " "

Organic Materials Division, Koppers Company, Inc.
Pittsburgh, Pa. 15219, Telephone 412 .-3300

Certified Mail
Return Receipt Requested

KOPPERS

June 28, 1977

Oregon Department of Environmental Quality
1234 S.W. Morrison Street
Portland, Oregon 97205

Gentlemen:

In accordance with Condition No. 9 of Addendum No. 1 to Permit No. 26-2930, we wish to advise the Department that there is no longer any unprocessed coal tar remaining at this facility.

Very truly yours,

P. W. Guth
Plant Superintendent
Koppers Company, Inc.
7540 N.W. St. Helens Road
Portland, Oregon 97229

OCTOBER 6, 1975

DEPARTMENT OF ENVIRONMENTAL QUALITY
1234 S.W. MORRISON STREET
PORTLAND, OREGON 97205

ATTN: MR. LARRY PATTERSON

DEAR SIR:

WE ARE IN THE PROCESS OF REVISING OUR SPILL PREVENTION, AND CONTINGENCY PLAN TO CONFORM TO OUR WASTE WATER PERMIT. THE PLAN WILL BE COMPLETED BY OCTOBER 31, 1975.

SINCERELY

Paul W. Guth

PAUL W. GUTH
PLANT SUPERINTENDENT

PWG:ip
cc J Anderson

SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN

Section 311(j)(1)(C) of the Federal Water Pollution Control Act Amendments of 1972, authorized the President to issue regulations establishing procedures, methods, equipment and other requirements to prevent discharges of oil and hazardous substances from vessels and from onshore facilities and offshore facilities, and to contain such discharges. The President delegated the responsibility for such regulations to the Administrator of the Environmental Protection Agency. Accordingly, the Administrator developed and promulgated Oil Pollution Prevention Regulations in 40 CFR Part 112. These regulations require owners and operators on shore and offshore non-transportation-related facilities to develop and implement Spill Prevention Control and Countermeasure (SPCC) Plans to prevent the discharge of oil into the navigable waters of the United States or adjoining shoreline. Owners or operators are not required to develop an SPCC Plan if their facilities have not discharged and because of their location could not be reasonably expected to discharge oil into the navigable waters of the United States.

GENERAL INFORMATION

1. Name and location of facility:

   Name Koppers Company, Inc.
   Location:
   Direction and distance to nearest town (attach map) _____
   County Multnomah State Oregon

2. Name, address and phone number of owner or operator:

   Name Koppers Company, Inc.
   Address: 7540 N.W.
   Street St. Helens Rd. State Oregon
   City Portland Zip 97229 County Multnomah
   Telephone No. 503 286-3681

3. Name or title and telephone number of person in charge of facility:

   Name or title Paul Guth Telephone: 503 286-3681

4. Name and telephone number of person responsible for oil spill prevention at facility:

   Name Paul Guth Telephone: 503 286-3681

Certification

I hereby certify and attest that I am familiar with the facility and the information contained in this plan and that to the best of my knowledge and belief such information is true, complete and accurate. Further, this plan has been prepared in accordance with good engineering practices.

Donald Lee O'Dell
Printed name of Registered Engineer
Date: July 3, 1974

[illegible]
Signature of Registered Engineer
Registration No. [illegible]

NWT 001639

SPILL RECORD

	Yes	No
1. This facility, over the past year, has had a reportable spill.	____	X

2. Descriptions of any reportable spills are given below, including corrective action taken and plans for preventing recurrence:

Phone Numbers

Environmental Protection Agency	- 221-3250
Department of Environmental Quality	- 229-5696
Fire Department	- 232-2111
Coast Guard	- 221-2994
Police Department	- 226-7551

NWT 001640

PREDICTION OF POTENTIAL SPILLS

1. Name of plant(s): Northwest

2. Nearest navigable water:

   A. Name: Williamette River

   B. Distance and direction from plant(s): East of Plant approx. 1800 ft.

3. Possible spill sources:

Source	Type of Failure	Maximum Volume(bbls.)	Maximum Flow Rate(bbls./hr.)	Direction of Flow
See attached sheet.				

SPILL PREVENTION PLAN CHECKLIST

1. Secondary containment and/or diversionary structures are used for possible spill sources:

Source	Type of Containment or Diversionary Structure
See attached sheet.	

Select from:
Onshore: Dikes, berms, retaining walls; curbing; culverting, gutters, drains; weirs, booms, other barriers; spill diversion and retention ponds.
Offshore: Floating booms or fences; floating oil/water separators with storage.

2. If the containment or diversionary structures above are impracticable, state reasons for impracticability N/A

and attach a strong oil spill contingency plan and written commitment of manpower, equipment and materials required to expeditiously control and remove any harmful quantity of oil discharged. Check if attached:

Contingency Plan _____ Written Commitment _____

Discussion: _____

NWT 001641

SPILL PREVENTION PLAN CHECKLIST

3. Onshore Facilities (Excluding Production)

A. Drainage:	Yes	No
(1) Drains from diked storage areas have valves.	X	
(2) Drain valves are manual, open-and-closed design.	X	
(3) Rainwater from diked areas is inspected before draining.	X	
(4) Plant drainage systems are equipped with either:		
a. Ponds, lagoons, or catchment basins to retain oil, or	X	
b. A diversion system at the final discharge point which could contain an uncontrolled spill and return the oil to the plant.		
(5) Flow of drainage water between treatment units is by either:		
a. Natural hydraulic flow, or		
b. Two "lift" pumps (one a spare and one permanently installed).		

Discussion: _____

B. Bulk Storage Tanks		
(1) Tank material and construction comply with API specifications	X	
(2) Secondary containment volume (3 million) is greater than the largest single tank capacity plus an allowance for rainwater.	X	
(3) Drainage of rainwater from diked areas into open waters, by-passing inplant treatment, is accomplished according to the following: N/A		
a. Normally the bypass valve is sealed close.		
b. The rainwater is inspected to ensure compliance with water quality standards.		
c. The bypass valve is opened and resealed under responsible supervision.		
d. Records are kept of bypassing and drainage events.		
(4) Buried metallic storage tanks: N/A		
a. New tanks are coated and wrapped to reduce corrosion.		
b. Cathodic protection is provided for tanks as determined by electrolytic testing.		
c. Tanks are pressure tested on a scheduled, periodic basis.		
(5) Partially buried metallic tanks are avoided (for storing oil) unless adequate shell coating is provided for the buried portion. N/A		

NWT 001642

	Yes	No
(6) Aboveground tanks are tested by one of the following methods:		
a. Hydrostatic testing	____	____
b. Visual inspection	X	____
c. Shell thickness testing (comparison records of shell thickness reduction are maintained)	____	____
(7) Internal heating coil leakage is controlled by one or more of the following:		
a. Monitoring the steam return or exhaust lines for oil.	X	____
b. Passing the steam return or exhaust lines through a settling tank, skimmer or other separation system.	____	____
c. Installing external heating systems.	____	____
(8) All bulk storage tanks are externally inspected on a monthly basis (including seams, rivets, bolts, gaskets, nozzle connections, valves, connected pipelines, and tank foundation and/or supports) for leaks or failures.	X	____
(9) Tanks are fail-safe engineered by the following:		
a. High liquid level alarms with an audible signal at a constantly manned station.	____	____
b. High liquid level pump cutoff devices.	____	____
c. Direct communication between the tank gauger and pumping station.	____	____
d. One fast means of determining the liquid level in tanks (such as digital computers, telepulse, or direct visual gauges).	X	____
e. Liquid level sensing devices are inspected and tested on a scheduled, periodic basis.	____	____

Discussion: _____

_____

_____

4. Intra-Facility Transfer Operations, Pumping, and Inplant Process (Onshore; Excluding Production)

A. Buried Pipelines

(1) Pipelines are wrapped and coated to reduce corrosion	____	____
(2) Cathodic protection is provided for pipelines as determined by electrolytic testing.	____	____
(3) When a pipeline section is exposed, it is inspected and corrective action taken as necessary.	X	____

Discussion: _____

_____

_____

10000

NWT 001643

	Yes	No
B. Pipeline terminal connections are capped or blank-flanged and marked if the pipeline is not in service or on standby service for long periods.	X	

Discussion: _____

C. Pipe supports are designed to minimize abrasion and corrosion and allow for expansion and contractions. X

Discussion: _____

D. All aboveground valves and pipelines are inspected on a scheduled, periodic basis (including flange joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces). X

Discussion: _____

E. Vehicles entering the facility are inspected and/or warned to avoid damaging aboveground piping. X

Discussion: _____

5. Intra-facility Tank Car & Tank Truck Loading/Unloading (Onshore)

A. Loading/unloading procedures meet the minimum requirements and regulations of the Department of Transportation.
B. The unloading area has quick drainage system.
C. The containment system will hold maximum capacity of any single tank truck loaded/unloaded in the plant.
D. An interlocked warning light or physical barrier system or warning signs are provided in loading/unloading areas to prevent vehicular departure before disconnect of transfer lines.
E. Drains and outlets on tank trucks and tank cars are checked for leakage before loading or unloading. X

Discussion: _____

NWT 001644

SPILL PREVENTION PLAN CHECKLIST

6. Inspections and Records	Yes	No
A. The required inspections follow written procedures	____	____
B. The written procedures and a record of inspections, signed by the appropriate supervisor, are included in the SPCC Plan.	____	____

Discussion: _____

_____

_____

7. Security (Excluding Production)		
A. Plants handling or storing oil are fenced.	X	____
B. Entrance gates are locked and/or guarded when the plant is unattended or not in production.	X	____
C. Any valves which permit direct outward flow of a tank's contents are locked closed when in non-operating or non-standby status.	____	____
D. Starter controls on all oil pumps in non-operating or non-standby status are locked or electrically isolated in the "off" position.	____	____
E. The loading/unloading connections of oil pipelines are capped or blank-flanged when not in service or on standby service for extended periods.	____	____

F. Description of the lighting around the facility: General yard lighting.

_____

_____

Discussion: _____

_____

_____

8. Personnel, Training, and Spill Prevention Procedures		
A. Personnel are properly instructed in the following:		
(1) Operation and maintenance of equipment to prevent oil discharges, and	X	____
(2) Applicable pollution control laws, rules, and regulations.	X	____
B. Spill prevention briefings for the operating personnel are conducted on a scheduled, periodic basis.	____	____

NWT 001645

SPILL PREVENTION PLAN CHECKLIST

Discussion: _____

NWT 001646

KOPPERS COMPANY, INC.

PORTLAND, OREGON

Tank No.	Gallons (M)	Contents
1	660	Tar
2	1065	Tar
3	99	Creosote
4	99	Creosote
11	254	Tar
17	20	Creosote
18	20	Creosote
19	20	Creosote
20	317	Creosote
23	20	Creosote
33	45	Creosote
34	45	Creosote
65	880	Tar
66	240	Creosote
67	102	Creosote
68	248	Creosote
90	209	Creosote
101	750	Creosote

Prediction of Potential Spills

2B. The water flow leaving the plant and entering the Willamette River at approx. 3/4 of a mile from the plant. The water flows South of the plant and then East into the river.

The river at closest point to the plant is 1800 ft., but the water from the plant does not enter here.

File 1000-300

RECEIVED
JUN 5 1975

DEPARTMENT OF ENVIRONMENTAL QUALITY

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5696

ROBERT W. STRAUB
GOVERNOR

KESSLER R. CANNON
Director

May 30, 1975

Koppers
Organic Materials Division
7540 N. W. St. Helens Road
Portland, Oregon 97229

Attention: Mr. Paul W. Guth, Plant Superintendent

Re: W. Q. - Koppers
Multnomah County

Gentlemen:

This letter will refer to your letter, dated May 20, 1975, concerning your comments relative to the proposed NPDES Waste Discharge Permit for your Portland plant.

The phenol effluent discharge limitations of 0.5 mg/l (monthly average) and 0.7 mg/l (daily maximum) as required in the permit beginning July 1, 1977, are the minimum levels which we believe we can allow from your plant. The Water Quality Standards for the Willamette River for phenols is 0.001 mg/l. Even with a discharge level of 0.5 mg/l from your plant, your waste will have to be diluted 500 times to meet the standards.

Furthermore, we believe your Company can practicably install a waste water control system which can reliably meet these effluent limitations. It is true that an oil-water separator alone will probably not be able to achieve these limits, but a separator followed by a small aerated lagoon should provide sufficient treatment.

In regards to your comment relative to the oil and grease effluent discharge limitations, it should be pointed out that oil terminals in the Portland area can consistently meet oil grease limits of 10 mg/l (monthly average) and 15 mg/l (daily maximum). Most of these terminals use only a gravity separator for treatment. Consequently, we can find no reason for increasing the daily maximum oil and grease limitation to 20 mg/l.

NWT 001648

Finally, as proposed, the permit does not prohibit you from discharging your waste water to the City of Portland sewerage system. Should your Company be granted permission from the City to discharge wastes to the City's sewerage system, you could connect your wastes to that system without violating the permit or receiving Departmental approval. Consequently, there is no need to add a condition to the permit to allow you to connect to the City of Portland sewerage system.

Should you have questions relative to this matter, please feel free to contact Mr. Dick Nichols in this office at 229-5309.

Very truly yours,

KESSLER R. CANNON
Director

Charles K. Ashbaker, Administrator
Water Pollution Control Division
Water Quality Program

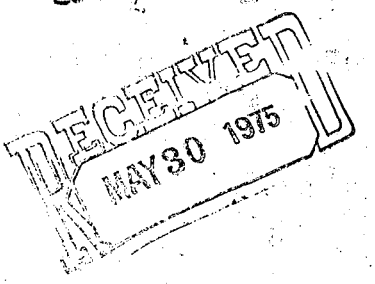
RJN:rb

cc: NWRO (DEQ)

Organic Materials Division, Koppers Company, Inc.
7540 N.W. St. Helens Road, Portland, Ore. 97229
Telephone 503-286-3681

File 1000-300

RECEIVED MAY 30 1975



KOPPERS
Chemicals
and Coatings

MAY 28, 1975

DEPT. OF ENVIRONMENTAL QUALITY
1234 S.W. MORRISON STREET
PORTLAND, OREGON 97205
ATTN: DOUGLAS D. FRALEY

GENTLEMEN:

THIS IS THE PROGRAM FOR OUR TIMELY ELIMINATION OF MATERIAL WHICH COULD CAUSE THE WATERS TO BE CONTAMINATED.

WE WILL PUT IN A THREE STAGE FILTER SYSTEM AT THE OUTFALL OF THE WATER LEAVING OUR PLANT.

AT TRACK #3 WE WILL PICK UP THE SOILED GROUND AND REPLACE WITH FRESH MATERIAL. BETWEEN THE TRACK WE WILL LET THE BALLAST SHOW. THE WALLED-IN CEMENT AREA BY TRACK #3 WILL ALSO HAVE THE SOILED GROUND REMOVED AND THEN BE REPLACED WITH FRESH MATERIAL.

THE LOADING SPOUTS WILL HAVE CONTAINERS TO CATCH ANY DRIPPINGS. THERE WILL BE PORTABLE CATCH BASINS BENEATH THE TANK CARS TO CATCH ANY DRIPPINGS ALSO.

THE UNLOADING LINE WILL BE REVAMPED TO MINIMIZE ANY CHANCE OF SPILLAGE. THE FLEX HOSES WILL CONTAIN CAPS FOR THE HOSES WHEN THEY ARE NOT IN USE.

TRACK #5 WILL HAVE THE SOILED MATERIAL REMOVED BETWEEN AND ON EITHER SIDE OF THE TRACK. SOME PORTIONS WILL BE FILLED IN BETWEEN THE TRACKS BECAUSE OF VEHICLE TRAFFIC OVER THE TRACKS.

THE AREA AROUND #42 TANK WILL THEN BE CLEANED OF SOILED GROUND AND THIS REPLACED WITH FRESH MATERIAL.

THE TAR PUMPS AREA WILL BE CLEANED AND HAVE DRIP PANS FOR ANY LEAKAGE.

RESPECTFULLY,

Paul W. Guth

PAUL W. GUTH

PLANT MANAGER

cc R. Shannon
J. Anderson
J. Little

File 1000-35?

KOPPERS

Interoffice Correspondence

RECEIVED
OPERATIONS DEPT.
ENGINEERING
OCT 30 1974
NOTED

DLO		CGK	
JMA			
AC			
SEP			
		RAS	
		MAT	
TH		GBW	
WRJ			
		File	

To Paul W. Guth

Location Northwest

Subject AIR AND WATER PERMITS

From Organic Materials Division

Location Manufacturing Services

Date October 30, 1974

Please sign the attached letters and forward to the DEQ by Certified Mail, Return Receipt Requested.

Jon M. Anderson

JMA:em
Attachments

cc: C. H. Teller, Sr. (With Attachments)
J. Little " "
R. L. Shannon " "
T. Smith " "

10000

K-5 REV. 2

Organic Materials Division, Koppers Company, Inc.
Pittsburgh, Pa. 15219, Telephone 412-391-3300

Certified Mail
Return Receipt Requested

KOPPERS

October 30, 1974

Mr. Richard J. Nichols
Engineer - Technical Services
Department of Environmental Quality
1010 N.E. Couch Street
Portland, Oregon 97232

Re: Appl. No. 071-OYA-2-000189

Dear Sir:

On March 7, 1974, a letter was sent to Mr. Charles K. Ashbaker of your office advising that production at this location had been temporarily suspended, and that effluent sampling at that time would not be representative. On September 24, 1974, you visited the plant to review plant operations and the effluent permit application. As of this date, production has not resumed, and plans are still indefinite as to when it will resume.

The major portion of the effluent from this location is ground water which collects in the tank farm area. The floor of the tank farm, which is below grade, will be paved to reduce the volume of ground water which infiltrates this area. This water will be pretreated in the API separator and then discharged, together with boiler house effluent, to the sanitary sewer which has recently been extended through the plant property.

These plans will be reviewed with the sewer authority to obtain their approval.

Very truly yours,

Paul W. Guth
Plant Superintendent

16000

Organic Materials Division, Koppers Company, Inc.
Pittsburgh, Pa. 15219, Telephone 412-391-3300

Certified Mail
Return Receipt Requested

KOPPERS

October 30, 1974

Mr. Thomas R. Bispham
Assistant Portland District Manager
Department of Environmental Quality
1010 N.E. Couch Street
Portland, Oregon 97232

Dear Sir:

On September 24, 1974, you visited the plant to review the status of our pending application for an air contaminant discharge permit. At that time, planned revisions in plant operation were brought to your attention.

Since the date of that meeting, these plans have not developed as quickly as anticipated. The plant has not resumed production, and it is unclear at this time when production will resume.

Prior to beginning any construction of new equipment or significant modification of existing equipment, permit applications will be filed with your office.

Very truly yours,

Paul W. Guth
Plant Superintendent

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File 1000-300

KOPPERS

Interoffice Correspondence

To Paul W. Guth

Location Northwest Plant

Subject WATER PERMIT

From Organic Materials

Location Manufacturing Services

Date March 6, 1974

Please sign the attached letter and forward to the DEQ.

Jon M. Anderson

JMA:em
Attachment

cc: C. H. Teller, Sr. (With Attachment)
T. Smith " "
J. Little " "
R. L. Shannon " "
R. S. Detrick " "

RECEIVED
OPERATIONS DEPT.
ENGINEERING
MAR 6 1974

NOTED

DLO		GGK	
JMA		[illegible]	
EMB		[illegible]	
AC		[illegible]	
EJE		CFN	
SRF		LDP	
JWF		RLS	
RAC		MAT	
TH		GBW	
WRJ			
		File	

Organic Materials Division, Koppers Company, Inc.
Pittsburgh, Pa. 15219, Telephone 412 391-3300

KOPPERS

March 7, 1974

Department of Environmental Quality
1234 S.W. Morrison Street
Portland, Oregon 97205

Attn: Mr. Charles K. Ashbaker

Dear Sir:

On January 3, 1974, we advised you that we were undertaking a sampling program of our effluent to determine if the pending Refuse Act permit application was still accurate. Changing market conditions since then have forced us to cease production at this location. Therefore, sampling at this time will not truly indicate plant operations.

Some terminalling and shipping of products will continue. It is estimated that production will be resumed at this location during the third quarter of 1974. At that time, we will sample the effluent and forward the analyses to you.

Very truly yours,

Paul W. Guth
Superintendent
Koppers Company, Inc.
7540 N.W. St. Helen's Road
Portland, Oregon 97229

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File 1000-300

KOPPERS

Interoffice Correspondence

To Paul W. Guth

From Organic Materials Division

Location Northwest

Location Manufacturing Services

Subject COAST GUARD FINE

Date February 18, 1974

Please sign the enclosed letter and forward, with a check for $100 and the copy of the Coast Guard letter, by Certified Mail, Return Receipt Requested to the Coast Guard at Seattle. The remaining copy is for your file.

Jon M. Anderson

JMA:em
Attachment

cc: C. H. Teller, Sr. (With Attachment)
J. Little " "
T. Smith " "
R. L. Shannon " "

RECEIVED
OPERATIONS DEPT.
ENGINEERING
FEB 18 1974

NOTED			
DLO		GGK	
JMA		MSM	
ENB		HAK	
AC		VN	
EJE		CPN	
SRF		LDP	
JWF		RLS	
RAG		MAS	
TH		GBW	
WRJ			
		File	

10000

K-5 REV. 2

Organic Materials Division, Koppers Company, Inc.
Pittsburgh, Pa. 15219, Telephone 412-391-3300

Certified Mail
Return Receipt
Requested

KOPPERS

February 18, 1974

Commander (m)
United States Coast Guard
Thirteenth Coast Guard District
618 Second Avenue
Seattle, Washington 98104

Gentlemen:

Enclosed is a check for $100.00 as proposed by the Coast Guard letter of January 24, 1974, a copy of which is also enclosed. Regarding that report, we wish to point out several facts which were omitted from it.

Storm water runoff from Koppers property is only a very small portion of the total flow from this outfall during a heavy rain. Because of the heavy runoff from another operation on the other side of St. Helen's Road, Koppers' discharge pipe to the ditch leading to the outfall is usually completely submerged, causing backflow into Koppers' sewer system. Therefore, flow from Koppers' discharge pipe immediately after a rainstorm could contain oil from another source which flowed into Koppers' pipe at the height of the storm flow and was gradually washed out by Koppers' lower flow subsequent to the fall of water level in the ditch.

Prior to this incident, another party, not connected with Koppers Company, was bulldozing silt from the ditch outside Koppers' property to alleviate the backflow into Koppers' sewers mentioned above. In doing so, the fill on Koppers' property was disturbed. This fill is known to have tarry residues deposited there by an entity other than Koppers Company at a time prior to Koppers presence at that site. It is almost certain that heavy rains would leach oil from this fill sufficiently to produce a rainbow on the water in the ditch.

At the time of the Coast Guard inspection, the bulldozer operator was cleaning or had recently cleaned his tractor by hosing it off into the ditch. This is another possible source of oil films.

The Coast Guard inspection report notes that puddles in Koppers' tank farm had rainbows but it does not note the fact that all runoff from the tank farm passes through an API oil separator before discharge. The report does not mention any examination of the effluent from the separator.

The undersigned, as Plant Superintendent, called all of the above to the attention of the Coast Guard, yet no mention of my name and the facts I pointed out have been included in the report or considered in proposing a penalty against Koppers.

1008

Very truly yours,

Paul W. Guth
Plant Superintendent

EFFLUENT TREATMENT FACILITIES

NORTHWEST TAR PLANT

1000

Revised 1/27/66

NWT 001658

January 20, 1966

Effluent Water Handling for Northwest Tar Plant at Portland, Oregon

I. Source of Tar Plant Process Waste Water

As described in the specifications for "Northwest Tar Plant Effluent Facilities," the process waste waters are largely a distillate overhead product from the distillation of tar. The water layer will be decanted to tank T-23 Dehydration Water Tank and this water will then be pumped to Tank T-28 Effluent Surge Tank - 44,000 gallon capacity.

II. Volume and Quality of Process Waste Water

Information obtained from other tar processing plants which are similar in operation to the proposed plant in Portland, Oregon, is used as a basis for estimating the volumes and characteristics of the effluent waters: These values are estimated to be:

		Low	High
Volumes - Gallons/day		1,200	1,800
Characteristics -			
pH		9.3	9.5
COD,	ppm	40,000	53,000
	#/day	400	795
BOD,	ppm	35,000	45,000
	#/day	350	675
Phenol,	ppm	12,000	15,000
	#/day	120	225
Sulfides,	ppm	2,500	5,000
	#/day	25	75

The volumes of these waste waters are kept at a minimum, however, they do have high pollution properties. By keeping the volume of waste water to a minimum, the pounds per day of pollutants are also kept to a minimum.

III. Process Waste Water Treatment

The Effluent Services Group of the Koppers Research Department at Monroeville has studied several treatment methods for handling these process waste waters. The most promising method being soil irrigation or soil percolation. The waste waters are also biodegradable using extended aeration.

A. Soil Irrigation and/or Soil Percolation

Based on extensive field tests, irrigating of plant process waste waters from other Koppers operations which had waters of high oxygen demand values and phenols, a high degree of reduction in oxygen demand values (over 95%) and near complete removal of phenols were obtained by this method of treatment. One of these field tests was operated in a plant near Pittsburgh, Pa. This test was operated for a full year, irrigating throughout the winter

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months. Runoff during thawing periods indicated a high percentage reduction in organics. With this background, tests were started in the laboratory and in 55-gallon drums set up outdoors to determine efficiency of soil percolation using tar plant process effluent waters.

1. Indoor Tests

Test units were set up indoors using glass soil percolation test units (Fisher Cat. No. 13-391) which had 2-1/2" of glass wool and gravel in the base. The diameter of the units above the gravel was 3" and with 15" depth of soils and sand the diameter at the top was 7". These units were started first with 53 ml of 1% phenol on weekdays and after about 3 weeks, the feed waters were switched to tar plant effluent. This rate of application is equivalent to 1500 gallons per 0.5 acre per day. At about this same time, distilled water equivalent to 1" of rain was added once a week to simulate outdoor conditions, also no water soaked through the unit up to this time. Results of these tests can be summarized as follows:

Feed Material

pH	9.3
COD, ppm	53,000
BOD, ppm	43,000
Phenols, ppm	14,500
Sulfides, ppm	2,700

Effluent Characteristics

Date, 1965	Unit 1(33% Garden Soil, 67% Sand)		Unit 2 (Coarse Plant Fill)	
	Phenols, ppm	Other Tests	Phenols, ppm	Other Tests
Sept. 1	Unit started on 1% phenol			
Sept. 15			Unit started on 1% phenol	
Sept. 28	Feeds switched to tar plant waste waters			
Oct. 4	.35		385	
Oct. 11	5.4		438	
Oct. 15	32		350	
Oct. 22	Started adding nutrients with the "rain water" each week			
Oct. 25	8.1		38	
Nov. 1	4.7		.4	
Nov. 8	6.9		0.1	
Nov. 15	2.7		2.4	
Nov. 17		pH 7.4 COD, ppm 116 BOD, ppm 34 Sulfides, ppm <0.1		pH 7.7 COD, ppm 470 BOD, ppm 195 Sulfides, ppm <0.1

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NWT 001660

January 20, 1966

Effluent Water Handling for Northwest Tar Plant at Portland, Oregon

Date, 1965	Phenols, ppm	Other Tests	Phenols, ppm	Other Tests
Nov. 22	16		3.2	
Nov. 26	<0.1		-	
Dec. 6	65		291	
Dec. 13	<0.2		59	
Dec. 20	<0.1		<0.1	
Dec. 27	37		6	
Jan. 19, 1966	10.5	COD, ppm 370	5.5	COD, ppm 345

Test percolation columns have also been operated for two months using dirt from the proposed Portland irrigation area; results to date indicate effluent from the units had phenols reduced to 5 to 95 ppm and COD is reduced to 300 to 1000 ppm.

2. Outdoor Tests

Three 55-gallon steel drums with open tops were set up outdoors at Monroeville. These units were filled with 7" gravel and 24" soil (1 part), and sand (2 parts). A connection from bottom of drum permitted collection of waters passing through this soil. Process effluent waters were then added at rates equivalent to 15,000, 7,500 and 1,500 gallons/day/0.5 acre. After about one week on the high rate unit, phenols were being removed by less than 50%, and on second unit,after two weeks of operation, phenol removal was less than 50%. These two units were then discontinued. At the lower rate of application, results were as follows:

Feed Material

pH	9.5
COD, ppm	5,600
Phenols, ppm	14,600
Sulfides, ppm	4,500

	Effluent Characteristics			Outdoor Conditions for past week		
				Air Temp., °F		Precipitation
Date 1965	Phenols, ppm	COD, ppm	Sulfides, ppm	High	Low	H_2O
Oct. 18	Feed to unit started					
Oct. 25	0.1	24	<0.1	71	26	1.0
Nov. 2	0.1	29	<0.1	55	18	0.1
Nov. 8	0.1	27	<0.1	58	38	0.6
Nov. 15	0.2	128	<0.1	52	23	0.3
Nov. 19	135	980	<0.1	45	29	1.0
Dec. 1	480	1800	<0.1	46	20	-
Dec. 13	1000	4250	<0.1	40	18	-
Dec. 22	1250	-	<0.1	46	15	Snow

NWT 001661

January 20, 1966

Effluent Water Handling for Northwest Tar Plant at Portland, Oregon

The steel drums started rusting badly the first of December and considerable iron was being carried through with the water, thus some of the COD value could be due to ferrous iron present. The units were discontinued before Christmas because of rusting of the drums. Several times in November and December, the effluent applied to soil surface would freeze and a thaw was required to percolate water through the unit.

Thus with greater depths of soil to percolate through or run over at the plant site, this method of waste water handling is expected to provide a high degree of removal for phenols and organic matter from the effluent waters.

B. Extended Aeration Process Effluent Treatment

Continuous flow type laboratory models of extended aeration activated sludge units have been operating on the process effluent waters diluted with about three parts of tap water. Units have been operated for over six weeks using fixed feeds with reductions of: phenol-100% ($<$0.1 ppm); sulfide-100% ($<$0.1 ppm); COD-82-96%; and BOD-95-99%. Several feed rates and other operating conditions were tested and these units were upset with loss of biological activity when feed conditions were varied rapidly. However, with fairly uniform operations, high organic reductions were shown. This method of operation would be Koppers Company's choice after soil percolation and irrigation, or being able to divert the effluent waters to a city sewer system.

IV. Sanitary Waste

Sanitary waste water will be provided with two septic tanks and dry wells or drain fields as outlined in the attached specifications.

V. Conclusions

It is believed that the process waste waters from the proposed tar plant can best be treated by use of soil percolation and irrigation as detailed in attached specifications "Effluent Treatment Facilities - Northwest Tar Plant." This is based on laboratory tests both indoors and outdoors using a tar plant process effluent water similar to that expected at Portland and on larger scale field testing of other Koppers plants' effluent waters. It is recommended that this method of process waste water treatment be installed at the Portland Plant.

Sanitary waste would be handled initially by septic tanks with dry wells or drain fields.

C. W. Fisher

CWF:rtm

NWT 001662

Revised January 27, 1969

NORTHWEST TAR PLANT

EFFLUENT FACILITIES

PROCESS DESCRIPTION

Process Wastes

Dehydration water and wet oil from the still are collected in tanks # 23 and # 18 respectively. Oil-free water is drained from these tanks to the existing adjacent sump, along with water from the pump room floor drains and the laboratory sink drains. As existing sump pump transfers the water to an 18 ft. diameter X 24 ft. high surge tank.

The surge tank is located next to a drain field which has been divided into three sections. Each section has a central ditch which feeds furrows plowed at right angles. Water is admitted to one end of the ditch through an 8" pipe line with a quick opening valve. When the valve is opened, the ditch fills and overflows into the furrows flooding the section.

The water then percolates through the soil and the BOD contributing compounds are consumed by soil bacteria. BOD reduction will exceed 90% the year round and will be well over 95% during the warm months.

Sanitary Wastes

Sanitary wastes are treated in two 1,000 gallon septic tanks. One tank, an existing one, handles the effluent from the main washroom. This area will contain 2 toilets, 1 urinal, 1 Bradley sink, 1 service sink, and 3 shower heads. The other septic tank handles waste from the office (2 toilets, 2 lavatories) and boiler house (1 toilet, 1 lavatory). Both septic tanks overflow into dry wells but could be piped into a city sewer which such a sewer is run adjacent to the plant.

Uncontaminated Wastes

Indirect cooling will drain into an existing ditch leading to the river. City water will be used for cooling.

NWT 001663

KOPPERS COMPANY, INC.
TAR PRODUCTS DIVISION
PITTSBURGH, PA.

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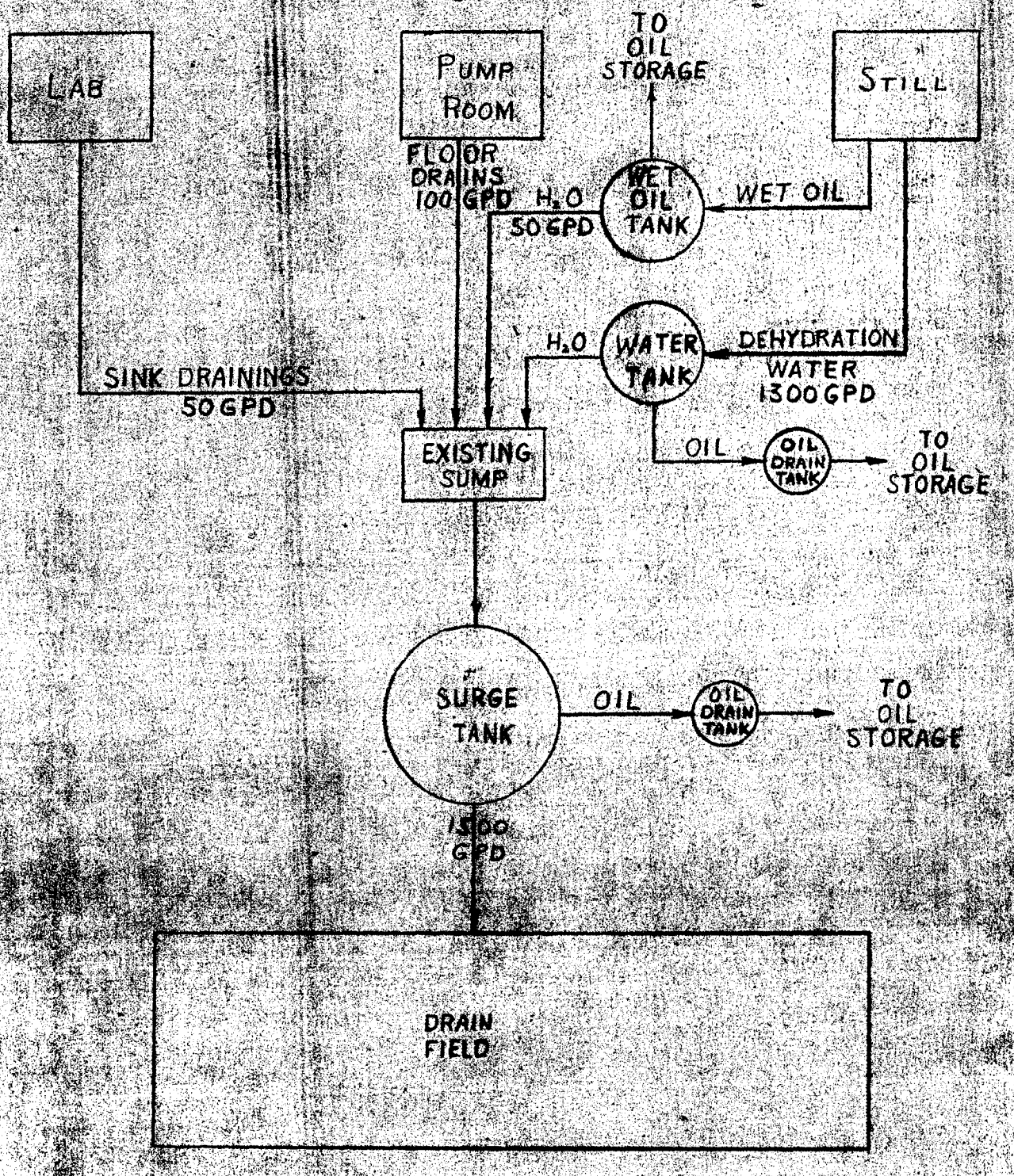
SKETCH SHEET

NAME DATE

DRAWN R. L. SHANNON 1-27-66

CHECKED



REV.	DESCRIPTION	CHKD. BY DATE

CONT. 300-1 NORTH WEST TAR PLANT

TITLE BLOCK FLOW DIAGRAM - PROCESS WASTE DISPOSAL

F-2663-0

NWT 001664

EFFLUENT TREATMENT FACILITIES
NORTHWEST TAR PLANT

PORTLAND, OREGON

	Quantity		
Item 1 Tank T-23	1		Description - Dehydration Water Tank
		Purpose:	Collect dehydration water from the batch still.
		Service:	Intermittent
		Type:	Vertical, cylindrical
		Capacity:	20,000 gallons
		Size:	12' dia. x 24 ft. high
		Remarks:	Use existing tank from Portland Gas Works. Install oil drains
Item 2	1		Pumping Sump
		Purpose:	Collect water from the dehydration water tank, laboratory, floor drains and pump room.
		Service:	Continuous
		Type:	Open concrete pit
		Capacity:	520 gallons ?
		Size:	21'-10" long x 9'-4" wide x 11'-2" deep
		Remarks:	Existing
Item 3 Pumps P 401 P 402	1		Sump Pump
		Purpose:	Transfer water from the pumping sump to the effluent surge tank
		Service:	Intermittent
		Type:	Centrifugal
		Capacity:	30 gpm @ 100 ft., sp. gr. 1.0
		Construction:	All iron
		Remarks:	Existing Pacific Model SLO

Revised 1/27/66

NWT 001665

	Quantity		
Item 4	2		Pump Motors
		Purpose:	Drive transfer pumps
		Service:	Intermittent
		Type:	Squirrel cage induction motor
		Size:	3 HP, 220/440 volt, 3 phase, 60 cycle.
		Remarks:	Existing
Item 5	2		Motor Starters
		Purpose:	Provide Across-the-line starting & electrical disconnect for pump motors.
		Service:	Intermittent
		Type:	Rowan 780 KMF-1 oil immersed, explosion-proof
		Size:	Frame 50
		Remarks:	Existing
Item 6	1		Effluent Surge Tank
		Purpose:	Collect one month's contaminated water ahead of effluent treatment facility.
		Service:	Continuous
		Type:	Vertical cylindrical
		Capacity:	44,000 gallons
		Size:	18"dia. x 24' high
		Nozzles:	Inlet 2 - 4" Vent 1 - 6" Gauge 1 - 6" Relief 6 - 1-1/2" Outlet 2 8" Manways 2 - 20"
		Remarks:	Design to API 650 - Use existing tank from Portland Gas Works. Add nozzles necessary.

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Revised 1/27/56

NWT 001666

	Quantity		
Item 7. Vessels V-401 V-402	2		Oil Drain Tanks
		Purpose:	Collect oil drained from the effluent surge tank and dehydration water tanks
		Service:	Intermittent
		Type:	Vertical, cylindrical, open top
		Capacity:	350 gal.
		Size:	5' dia. x 3' high
		Construction:	1/4" carbon steel plate
Item 8 Pumps P-403 P-404	2		Transfer Pumps
		Purpose:	Transfer oil from the drain tanks to creosote storage
		Service:	Intermittent
		Type:	Rotary
		Capacity:	30 gpm. @ 50 psig., sp. gr. = 1.1
		Construction:	All iron
Item 9	2		Pump Motors
		Purpose:	Drive transfer pump
		Service:	Intermittent
		Type:	Squirrel cage induction motor
		Size:	3 H.P., 220/440 volt, 3 phase, 60 cycles
		Construction:	Class I, Group D, vapor tight
Item 10	2		Motor Starters
		Purpose:	Provide across-the-line starting and electrical disconnect for the pump motor
		Service:	Intermittent
		Type:	Rowan 780-KSF-1, oil immersed, explosion-proof
		Size:	Frame 30

Revised 1/27/66

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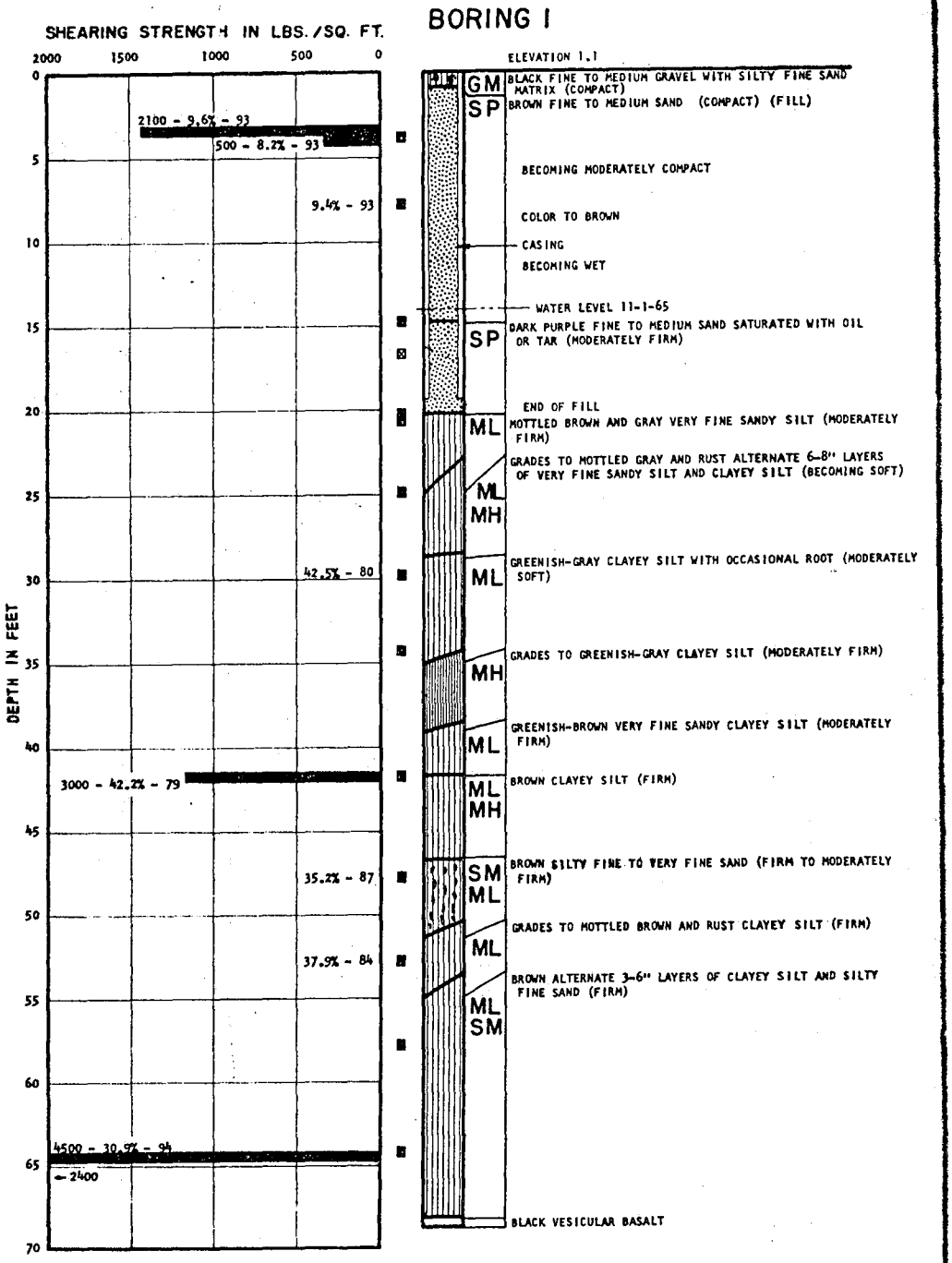
NWT 001667

Item 11	1		Drain Field
		Purpose:	Provide irrigation area for soil percolation treatment of effluent
		Service:	Continuous
		Size:	3/4 acre, divided into 3 equal sections
		Loading:	1500 gpd
		Remarks:	Provide outer earth dike and plow distribution ditches and furrows.
Item 12	4		Well Points
		Purpose:	Provide sample points for effluent leaving the percolation area (drain field)
		Service:	Intermittent
		Type:	1-6" dia. x 8' deep hole with pipe case
			1-6" dia. x 15' deep hole with pipe case
			Cases to be porous for bottom 2 feet.

Revised 1/27/66

NWT 001668

SUB-SURFACE STRATA ADJACENT TO DRAIN FIELD



NWT 001669