UNION COUNTY MOSQUITO EXTERMINATION COMMISSION

324 NORTH AVENUE, EAST
CRANFORD, N. J.

MEMBERS

Wm. G. [redacted], Jr., M. D., PRESIDENT
ROSELLE

JOSEPH J. O'NEILL, VICE-PRES.
ELIZABETH

THEODORE W. [redacted], JR., TREASURER
ROSELLE

FRANK M. [redacted]
[redacted]

JOSEPH [redacted]
ELIZABETH

NEWTON J. [redacted]
CLARK

ROBERT W. NELS
SUPT. - SECRETARY

TELEPHONE
BRIDGE 6-1164

September 21, 1964

State of New Jersey
Department of Health
Trenton, New Jersey

Attention: Dr. Roscoe P. Kandle, State Commissioner of Health

Gentlemen:

At a recent meeting of our commission, the subject of raw sewage disposal in the North Elizabeth meadows was discussed.

For many years now, the City of Newark has been allowing the improper discharge of raw, untreated sewage into what has been known as Peddie Ditch and Bound Creek. This material went directly into Newark Bay without benefit of any treatment. Up until this time, the situation has been geographically beyond our direct control.

Now, however, the Port of New York Authority has constructed a peripheral diversion ditch around the Newark Airport. This ditch, 80 feet wide on the bottom, 120 feet wide at the top, now carries all of this raw sewage, abattoir waste, heavy waste effluents from Anheuser Busch brewery, plus all of the sanitary sewage waste from Newark Airport itself. This horribly polluted liquid now flows in this wide open ditch, along Route #1 to North Avenue, Elizabeth, at which point it turns and goes east along North Avenue to the New Jersey Turnpike, where it then turns north and flows along the Turnpike to Bound Creek where it discharges through sidegates into Newark Bay through the Port Elizabeth channel.

Typhoid fever possibly was excusable at the beginning of the 20th century. In 1964 it would be deplorable. We recognize this potential typhoid reservoir and we respectfully draw your attention to the urgent need for unequivocable correction.

Very truly yours,

[redacted]
Superintendent

BAC 000033

File

Let's protect our earth

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
METRO BUREAU OF REGIONAL ENFORCEMENT
2 BABCOCK PLACE
WEST ORANGE, NEW JERSEY 07052

GEORGE G. McCANN, P.E.
DIRECTOR

DIRK C. HOFMAN, P.E.
DEPUTY DIRECTOR

June 6, 1988

Mr. George Cook, Supervisor
Envionmental Protection Unit
Port Authority of New York and New Jersey
Newark International Airport
Newark, New Jersey 07114

Re: Compliance Evaluation Inspection
Newark International Airport
NJPDES No. NJ003824
Newark/Essex County

Dear Mr. Cook:

A Compliance Evaluation Inspection of your facility was conducted by a representative of this Division on April 6, 1988. A copy of the completed inspection report form is enclosed for your information.

Your facility received a rating of "UNACCEPTABLE" due to the following deficiencies:

1. The Discharge Monitoring Reports (DMR) for the period 2/1/88 to 2/29/88 reveal the following violations:

   a. Chemical Oxygen Demand exceeded Permit limits for discharges 006, 008, 009, 011, 014A & 015.

   b. Flow was not monitored and reported as required for discharges 006, 007, 008, 009, 011, 013, 014A, & 015. (In the absence of individual flow meters, flow can be calculated using area and rainfall data)

   c. Petroleum Hydrocarbons was incorrectly reported on the DMRs for discharges 006, 007, 008, 009, 011, 013, 014A & 015. N.J.A.C. 7:14A-14.5(c)3 states, "The discharger shall analyze each sample individually and report a maximum value for the samples". Only the maximum value should be reported on the DMR.

PA0487

2. Samples taken from submerged outfalls are not representative of the stormwater runoff from discharges 006, 008, 009, 013, 014, 014B and 015.

3. Samples taken on April 6, 1988 reveal the following violations: ("K" = less than)

DISCHARGE NO.	SAMPLE RESULT	PERMIT LIMIT
006	COD 250K mg/l	100 mg/l
007	TSS 108 mg/l	100 mg/l
015	COD 250 mg/l	100 mg/l

In addition, it has been determined that Newark Airport will need a wastewater collection system operator with a C-2 license based on an estimated population of 12,000. Please contact this Department's Bureau of Revenue at (609) 984-7731 for information and an application concerning this requirement.

Since the deficiencies cited above are presently, or could, in the future, adversely affect effluent quality, you are DIRECTED to institute measures to correct the deficiencies. A written report concerning specific details of remedial measures to be instituted, as well as an implementation timetable, must be submitted to this Department and USEPA, Permits Administration Branch, within thirty (30) calendar days of the date of this correspondence.

Both the New Jersey Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 466 et seq.) provide for substantial monetary and criminal penalties in cases of permit violations.

Failure to fully comply with the above will result in the initiation of enforcement action by this Department and/or the United States Environmental Protection Agency. This shall in no way be construed, however, to indicate any exemption on your part from possible penalties for violations indicated by the Compliance Evaluation Inspection, as stated above.

Please direct all correspondence and inquiries to Helen Wright, the member of my staff responsible for this case, who can be reached at (201) 669-3900, or by letter through this Division.

Very truly yours,

Thomas B. Harrington
Supervisor, Compliance
Monitoring Unit
Metro Bureau of
Regional Enforcement

E34:G26

c: Dr. Richard A. Baker, USEPA
Mr. Paul Molinari, USEPA
Ms. Bernice Malione, USEPA
Mr. Robert J. Grimm, H.O.
Bureau of Revenue

bc: Zaheer Hussain
Robert Candido

PA0489

Let's protect our earth

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF WATER RESOURCES
METRO BUREAU OF REGIONAL ENFORCEMENT

2 BABCOCK PLACE
WEST ORANGE, NEW JERSEY 07052

GEORGE G. McCANN, P.E.
DIRECTOR

DIRK C. HOFMAN, P.E.
DEPUTY DIRECTOR

January 6, 1989

Mr. George Cook, Supervisor
Environmental Protection Unit
Port Authority of New York and New Jersey
Newark International Airport
Newark, New Jersey 07114

Re: Compliance Evaluation Inspection
Newark International Airport
NJPDES No. NJ 0003824
Newark/Essex County

Dear Mr. Cook:

A Compliance Evaluation Inspection of your facility was conducted by a representative of this Division on November 29, 1988. A copy of the completed inspection report form is enclosed for your information.

Your facility received a rating of "UNACCEPTABLE" due to the following deficiencies:

1. The Discharge Monitoring Reports (DMR) for the period 3/1/88 to 9/30/88 reveal the following violations:

DISCH.	PARAMETER	PERMIT LIMIT	DATE	SAMPLE RESULT
006	COD	100 mg/l max	5/88	430 mg/l max
			6/88	214
			7/88	122
			8/88	350
			9/88	278
	TSS	100 mg/l max	5/88	348 mg/l max
	Pet. Hy.	15 mg/l max	5/88	84.9 mg/l mx
007	Temp.	30 deg max	8/88	73.5 deg max
008	COD	100 mg/l max	5/88	148 mg/l max
			6/88	756
			7/88	365

PA0498

			9/88	348
	Pet. Hy.	15 mg/1 max	7/88	1130 mg/1 max
009	COD	100 mg/1 max	5/88	102 mg/1 max
			7/88	292
			8/88	420
			9/88	464
011	COD	100 mg/1 max	3/88	132 mg/1 max
			7/88	122
			8/88	164
	Pet. Hy.	15 mg/1 max	8/88	22.1 mg/1 mx
013	COD	100 mg/1 max	7/88	170 mg/1 max
014	COD	100 mg/1 max	7/88	389 mg/1 max
			8/88	187
	Pet. Hy.	15 mg/1 max	7/88	52.5 mg/1 mx
015	COD	100 mg/1 max	3/88	260 mg/1 max
			4/88	1518
			5/88	640
			6/88	720
			7/88	1391
			8/88	1226
024	COD	100 mg/1 max	9/88	232 mg/1 max

2. Samples taken from submerged outfalls are not representative of the stormwater runoff from discharges 006, 008, 009, 013, 014, 014B and 015.

3. Newark Airport has failed to employ a wastewater collection system operator with a C-2 license as required by the Water Supply and Wastewater Operators' Licensing Act N.J.S.A. 58:11=64 et seq. and mentioned in the directive letter of June 6, 1988.

4. There is no N-2 licensed operator for the oil/water separators as required by Part IV - B/C, Page 1 of 4, 1.A. of NJPDES Permit No. NJ0003824, effective August 1, 1986.

Since the deficiencies cited are presently, or could, in the future, adversely affect effluent quality, you are DIRECTED to institute measures to correct the deficiencies. A written report concerning specific details of remedial measures to be instituted, as well as an implementation timetable, must be submitted to this Department and USEPA, Permits Administration Branch, within thirty (30) calendar days of the date of this correspondence.

Both the New Jersey Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 466 et seq.) provide for substantial monetary and criminal penalties in cases of permit violations.

Failure to fully comply with the above will result in the initiation of enforcement action by this Department and/or the United States Environmental Protection Agency. This shall in no way be construed, however, to indicate any exemption on your part from possible penalties for violations indicated by the Compliance Evaluation Inspection, as stated above.

Please direct all correspondence and inquiries to Helen Wright, the member of my staff responsible for this case, who can be reached at (201) 669-3900, or by letter through this Division.

Very truly yours,

Thomas B. Harrington
Supervisor, Surface Water Unit
Metro Bureau of
Regional Enforcement

A34/G26

C: Richard A. Baker, USEPA
Paul Molinari, USEPA
Bernice Malione, USEPA
Robert J. Grimm, H.O.

BC: Zaheer Hussain
James Lyko
~~Central~~ File
Metro

PA0500

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029, Trenton, N.J. 08625

DISCHARGE SURVEILLANCE REPORT

PERMIT # NJ0003824 NO. OF DISCHARGES _____ CLASS MAJ - IND

DISCHARGER PORT AUTHORITY OF N.Y. + N.J. / NEWARK INTERNATIONAL AIRPORT

OWNER SAME

MUNICIPALITY NEWARK COUNTY ESSEX WATERSHED CODE I

LOCATION ROUTE 1 NORTH

RECEIVING WATERS ELIZ. CHANNEL STREAM CLASS SE-3

~~LICENSED OPERATOR & PLANT CLASS~~ GEORGE COOK - SUPV. ENV. PROT. UNIT

TRAINEE/ASSISTANT _____ OTHER INFO. 96.1-2093

DEFICIENCIES OR COMMENTS

1. A C-2 LICENSED OPERATOR HAS NOT BEEN EMPLOYED.
2. NUMEROUS D.M.R. VIOLATIONS.
3. IMPROPER SAMPLING LOCATIONS.
4. NO N-2 OPERATOR FOR O/W SEPARATORS.

OVERALL RATING ☐ Acceptable ☐ Conditionally Acceptable ☒ Unacceptable

EVALUATOR HELEN WRIGHT TITLE E.C.I.

INFORMATION FURNISHED BY (Name) GEORGE COOK, BERNICE MALIONE

(Title) SUPV. / PERMIT ADM. (Organization) P.A. N.Y. + N.J.

DATE OF INSPECTION 11/29/88

PA0501

Form DWR-053-A
4/78

N.J.D.E.P.
D.W.R.
DISCHARGE SURVEILLANCE REPORT

Permit #: NJ0003824
Date: 11/29/88

NWK. APT. INDUSTRIAL TREATMENT PROCESS EVALUATION

RATING CODES: S = Satisfactory M = Marginal U = Unsatisfactory NA = Not Applicable

		RATING	COMMENTS
GENERAL	DISCHARGE # 011 + 024	---	FUEL FARM AREA
	WASTEWATER SOURCE(S)	---	STORMWATER RUNOFF
	CONTINUITY OF OPERATION	---	DURING RAINFALL
	BYPASSES/OVERFLOWS	S	NONE
	S.P.C.C. PLAN	S	REVIEWED 1988
	ALARM SYSTEMS	S	HIGH WATER → OFFICE
	ALTERNATE POWER SUPPLY	S	DIESEL GENERATORS AT SEVERAL LOCATIONS
			MORE THAN ONE LEG FROM PSE+G.
TREATMENT PROCESSES	DPCC PLAN	S	
	OIL/WATER SEPARATOR	S	PUMPED FROM FUEL FARM AREA → 011
		S	GRAVITY FROM FUEL SELECTION AREA → 024
	MONITORING WELLS	NI	SAMPLED MONTHLY
	OIL SKIMMERS	NI	
	COALESCENT PLATES	S	
SLUDGE HANDLING	SKIMMED OIL	S	GEN. I.D. NJD 098148807
			OIL RECOVERED - SOME USED
	DISPOSAL SITE	S	LIGNETTI WASTE OIL - NJDEP S 6247 →
			OLD BRIDGE, N.J. AS NEEDED.
OTHER INFORMATION	FLOW METER & RECORDER	S	FLOW EST. BASED ON RAINFALL
	RECORDS	S	
	SAMPLING PROCEDURES	NI	
	ANALYSES PERFORMED BY	S	NY TEST CERT. 73469
	OGDEN ALLIED	---	FUEL FARM + SELECTION AREA
	AVIATION SERVICES		BILL BEEMAN - TANK FARM MGR.
			(201) 961-2292 (2058)
	LICENSED OPERATOR	U	NO N-2 L.C.
	FINAL EFFLUENT APPEARENCE	NI	
	REC. WATERS APPEARENCE	M	

PA0502

Form DWR-053-A
4/78

N.J.D.E.P.
D.W.R.
DISCHARGE SURVEILLANCE REPORT

Permit #: NJ0003824
Date: 11/29/88

NWK APT. INDUSTRIAL TREATMENT PROCESS EVALUATION

RATING CODES: S = Satisfactory M = Marginal U = Unsatisfactory NA = Not Applicable

		RATING	COMMENTS
GENERAL	DISCHARGE # 014	---	STORMWATER RUNOFF FROM 001, 002, 004-6,
	WASTEWATER SOURCE(S)	---	008-10, 012-23, 025-028 AND 032-033
	CONTINUITY OF OPERATION	---	DURING RAINFALL
	BYPASSES/OVERFLOWS	S	NONE
	S.P.C.C. PLAN	S	
	ALARM SYSTEMS	NA	
	ALTERNATE POWER SUPPLY	NA	
TREATMENT PROCESSES	DISCHARGE # 001	—	STORMWATER RUNOFF FROM TERMINALS
	# 008	—	RUNOFF FROM RUNWAYS
	# 009	—	
	# 013	—	
	# 014	—	
	# 015	—	
	# 007	—	STORMWATER
	# 007B	—	N.C.C.W. BOILER ROOM MAY — OCTOBER
	BAY WATER PUMP STA.	—	NOT IN USE NOV → APRIL. MAINTENANCE
	HYPOCHLORINATION		IN PROGRESS. STARBOARD ST. PORT NWK
		—	BOOMS TO CATCH OIL LOCATED AT
			VARIOUS OUTFALLS.
SLUDGE HANDLING	DISPOSAL SITE	S	LIONETTI WASTE OIL
OTHER INFORMATION	FLOW METER & RECORDER	S	ESTIMATED BY RAINFALL + AREA
	RECORDS	S	
	SAMPLING PROCEDURES	NI	SAMPLING STILL NOT REPRESENTATIVE OF
	ANALYSES PERFORMED BY	S	NYTEST ENV. INC. # 73469 DISCH.
	B.M.P. PLAN	S	8/31/87 CERT MAIL → ED. POST
	FINAL EFFLUENT APPEARENCE	NI	NO RAINFALL AT INSP.
	REC. WATERS APPEARENCE	M	PERIPHERAL DITCH

PA0503

Form DWR-053
3/81

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029, Trenton, N.J. 08625

DISCHARGE SURVEILLANCE REPORT

Permit # NJ0004928
Date 11/29/88

PLANT DIAGRAM AND FLOW SEQUENCE:

RAINFALL → RUNOFF FROM TERMINAL AREAS → 006
→ RUNOFF FROM RUNWAYS → 008, 009, 013-015
→ GENERAL RUNOFF → 001, 002, 004-006, 008-010, 012-023, 025-028, 032-033 → 014
→ STORMWATER OCTOBER to MAY → 007

OIL/WATER SEPARATOR – BULK FUEL STORAGE AREA → 011
OIL/WATER SEPARATOR – FUEL SELECTION AREA → 024

NEWARK BAY → BAY WATER PUMP STATION → CENTRAL HEAT AND REFRIG. PLANT → 007B
HYPO CHLORINATOR → BAY WATER PUMP STATION
CENTRAL HEAT AND REFRIG. PLANT → BOILER BLOWDOWN → SANITARY SEWER

DISCHARGE DATA

SOURCE: D.M.R's. PERIOD: 3/1/88 to 9/30/88

DIS	PARA	DATE	PERMIT LIMITS	VIOLATION	DIS	PARA	DATE	PERMIT LIMITS	VIOLATION
	SEE LETTER FOR LIST OF VIOLATIONS.								

MONITORING DEFICIENCIES:

PA0504

Metro file

Let's protect our earth

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF WATER RESOURCES
METRO BUREAU OF REGIONAL ENFORCEMENT
2 BABCOCK PLACE
WEST ORANGE, NEW JERSEY 07052

Eric Evenson
Acting Director

DIRK C. HOFMAN, P.E.
DEPUTY DIRECTOR

December 29, 1989

Mr. R. M. Monti, P.E.
Director of Engineering
Port Authority of New York and New Jersey
1 World Trade Center
New York, New York 10048

Re: Compliance Evaluation Inspection
Newark International Airport
NJPDES No. NJ0003824
Newark/Essex County

Dear Mr. Monti:

A Compliance Evaluation Inspection of your facility was conducted by a representative of this Division on October 16, 1989. A copy of the completed inspection report form is enclosed for your information.

Your facility received a rating of "UNACCEPTABLE" due to the following deficiencies:

1. Discharge Monitoring Reports (DMR's) for the period March 1, 1989 - August 31, 1989 reveal the following violations:

DATE	DISCH.	PARAMETER	SAMPLE RESULT	PERMIT
3/89	009	COD	162 mg/1 dmx	100 mg/1 dmx
3/89	009	pH	5.54 units min	6.0 units min
3/89	015	COD	144 mg/1 dmx	100 mg/1 dmx
4/89	009	pH	5.9 units min	6.0 units min
4/89	011	COD	1610 mg/1 min	100 mg/1 dmx
4/89	024	COD	141 mg/1 dmx	100 mg/1 dmx
4/89	024	pH	5.76 units min	6.0 units min

PA0535

DATE	DISCH.	PARAMETER	SAMPLE RESULT	PERMIT
5/89	008	PHC	19 mg/l dmx	15 mg/ dmx
5/89	009	pH	5.8 units min	6.0 units min
5/89	011	TSS	91 mg/l dmx	50 mg/l dmx
5/89	011	PHC	20 mg/l dmx	15 mg/l dmx
5/89	024	COD	134 mg/l dmx	100 mg/l dmx
5/89	024	pH	5.79 units min	6.0 mg/l min
5/89	024	TSS	83 mg/l dmx	50 mg/l dmx
6/89	008	PHC	145 mg/l dmx	15 mg/l dmx
6/89	009	COD	259 mg/l dmx	100 mg/l dmx
6/89	013	COD	259 mg/l dmx	100 mg/l dmx
6/89	014A	COD	140 mg/l dmx	100 mg/l dmx
6/89	015	COD	793 mg/l dmx	100 mg/l dmx
7/89	008	COD	124 mg/l	100 mg/l dmx
7/89	008	TSS	150 mg/l dmx	100 mg/l dmx
7/89	009	COD	107 mg/l dmx	100 mg/l dmx
7/89	013	pH	5.94 units min	6.0 units min
7/89	024	COD	192 mg/l dmx	100 mg/l dmx
8/89	009	COD	117 mg/l dmx	100 mg/l dmx
8/89	011	COD	150 mg/l dmx	100 mg/l dmx
8/89	011	PHC	32.6 mg/l dmx	15 mg/l dmx

By copy of a letter addressed to the Port Authority, dated November 22, 1989, MBRE has been advised that the proposed alternate sampling plan submitted by Port Authority to provide for sampling locations that are representative of the stormwater discharges with the exception of 011, 024 and 014B) has been found to be unacceptable by the Bureau of Industrial Discharge Permits (BIDP). Port Authority is requested to forward a copy of the submission required by BDIP in the November 22, 1989 correspondence to MBRE.

The deficiencies for discharges 011 and 024, noted above, have placed your facility in significant violation of the terms and conditions of your NJPDES permit and/or the Water Pollution Control Act Regulations (N.J.A.C. 7:14A-1 et seq.). You are therefore directed to institute corrective measures. A written report concerning specific details of remedial measures to be ibstituted, as well as an implementation timetable, must be submitted to this Department and USEPA, Permits Administration Branch, within thirty (30) calendar days of the date of this correspondence.

You are advised that the New Jersey Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) provides for substantial monetary and criminal penalties in cases of permit violations.

Please direct all correspondence and inquiries to Helen Wright, the Environmental Compliance Investigator responsible for this case, who can be reached at (201) 669-3900, or by letter through this Bureau.

Failure to fully comply with the above will result in the initiation of enforcement action by this Department. This shall in no way be construed, however, to indicate any exemption on your part from possible penalties for violations indicated by the Compliance Evaluation Inspection, as stated above.

Very truly yours,

Thomas B. Harrington
Acting Section Chief, Surface Water
Sewer System Enforcement Section
Metro Bureau of
Regional Enforcement

A34:G26

c: Chief, Permits Administrative Branch, USEPA
Mr. Patrick M. Durack, USEPA
Ms. Bernice Malione, Port Auth.
Mr. Robert J. Grimm, H.O.
Mr. George Cook, Supervisor

BC: ZAHEER HUSSAIN
JAMES LYKO
CENTRAL FILE

PA0537

Form DWR-063
1/81

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029, Trenton, N.J. 08625

DISCHARGE SURVEILLANCE REPORT

PERMIT # NJ 0003824 NO. OF DISCHARGES 9 CLASS MAJ-IND

DISCHARGER NEWARK INTERNATIONAL AIRPORT

OWNER PORT AUTHORITY OF NEW YORK & NEW JERSEY

MUNICIPALITY NEWARK/ELIZ. COUNTY ESSEX WATERSHED CODE 1

LOCATION ROUTE 1 NORTH

RECEIVING WATERS PORT ELIZ. CHANNEL & NWK CHAN STREAM CLASS SE-3

LICENSED OPERATOR & PLANT CLASS BRIAN AUCHTER N-1

~~TRAINEE/ASSISTANT~~ MIKE CUTRUZZULA, SR ENV SPEC. OTHER INFO. (201)961-2093

DEFICIENCIES OR COMMENTS SEE LETTER FOR DMR VIOLATIONS

OVERALL RATING ☐ Acceptable ☐ Conditionally Acceptable ☒ Unacceptable

EVALUATOR HELEN WRIGHT TITLE E.C.I.

INFORMATION FURNISHED BY (Name) MIKE CUTRUZZULA

(Title) SEN. ENV. SPEC. (Organization) PORT AUTHORITY

DATE OF INSPECTION 10/16/89

PA0538

NWK AP.

INDUSTRIAL TREATMENT PROCESS EVALUATION

RATING CODES: S = Satisfactory M = Marginal U = Unsatisfactory NA = Not Applicable

		RATING	NI=NOT INSPECTED COMMENTS
GENERAL	DISCHARGES# SEE BELOW	—	
	WASTEWATER SOURCE(S)	—	STORMWATER RUNOFF
	CONTINUITY OF OPERATION	—	INTERMITTENT-DURING RAIN EVENTS
	BYPASSES/OVERFLOWS	NA	
	S.P.C.C. PLAN DPCC.	S	REVIEWED 1988
	ALARM SYSTEMS	S	MANNED 24 HRS. HIGH WATER ON O/W SEP.
	ALTERNATE POWER SUPPLY	S	
	BMP PLAN	S	
TREATMENT PROCESSES	DISCHARGE 006	—	STORMWATER FROM TERMINALS
	007	—	INTAKE
	007B	—	NCCW MAY - OCT.
	008	—	STORMWATER FROM RUNWAYS
	009	—	" " "
	011	—	STORMWATER FROM FUEL FARM - BULK STORAGE
	013	—	STORMWATER FROM RUNWAYS
	014A	—	001, 002, 004-6, 008-10, 012-23, 025-28 + 032-033
	014B	—	DOWNSTREAM OF 014A AT TIDEGATE
	015	—	STORMWATER FROM RUNWAYS
	024	—	O/W SEPARATOR - FUEL SELECTION AREA
	BAY WATER PUMP STATION	NI	INTAKE FROM NEWARK BAY FOR NCCW. TREATED - HYPOCHLORINATION
SLUDGE HANDLING	CONTAINMENT BOOMS	S	ON DISCHARGES TO DITCH.
	OIL/WATER SEP.	S	N-1 LICENSED OPERATOR
	WASTE OIL	S	GEN. ID NJD 098148107
	DISPOSAL SITE	S	LIONETTI OIL, OLD BRIDGE, N.J.
OTHER INFORMATION	FLOW METER & RECORDER	S	ESTIMATED BY RAINFALL
	RECORDS	S	PERMIT. DMR'S. LAB. REPORTS ETC.
	SAMPLING PROCEDURES	S	
	ANALYSES PERFORMED BY	S	N.Y. TEST # 73469 WESTBURY, LI, NY
		U	SAMPLES NOT REPRESENTATIVE - TAKEN IN DITCH
	COLLECTION SYSTEM		C-2 L.O. JIM HENDERSON
	STORMWATER PUMP STA.	N.A.	CITY OF NEWARK - 5 PUMPS - ONLY 1 IN OPER. BEING REPAIRED.
	COMBINED SEWER OVERFLOWS	—	FROM CITY OF NEWARK & CITY OF ELIZABETH ENTER PERIPHERAL DITCH.
	FINAL EFFLUENT APPEARENCE	M	
	REC. WATERS APPEARENCE	U	SECTIONS OF DITCH APPEAR BLACK/SEPTIC

PA0539

Form DWR-053
3/81

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029, Trenton, N.J. 08625

DISCHARGE SURVEILLANCE REPORT

Permit # NJ0003824
Date 10/16/89

L. DIAGRAM AND FLOW SEQUENCE:

STORMWATER RUNOFF FROM TERMINAL [illegible] ——

CHANNEL WATER → NO. [illegible] A.C. UNITS —— [illegible]
HYPOCHLORITE [illegible]

STORMWATER RUNOFF FROM RUNWAYS —— [illegible]

STORMWATER
CLEANING WASTE } [illegible] AREA → O/W SEPARATOR → [illegible]
MON. WELL DISCH.

GENERAL STORMWATER —— [illegible]

SEE LETTER FOR D.M.R. VIOLATIONS

DISCHARGE DATA

SOURCE: [illegible] 00, 011 ... 14 PERIOD: [illegible]

DIS	PARA	SAMPLE TYPE	PERMIT LIMITS	DATA	DIS	PARA	SAMPLE TYPE	PERMIT LIMITS	DATA
	[illegible]		RESULTS WILL BE		REPORTED		[illegible]	[illegible]	

MONITORING DEFICIENCIES:

PA0540

TIERRA-A-018384

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF ENFORCEMENT POLICY
METRO BUREAU OF REGIONAL ENFORCEMENT
2 BABCOCK PLACE
WEST ORANGE, NEW JERSEY 07052
(201) 669-3900

MEMORANDUM

TO: Richard J. McManus, Director

FROM: Peter T. Lynch, Chief
Metro Bureau of Water and Hazardous
Waste Enforcement Field Operations

SUBJECT: Administrative Order and Notice of
Civil Administrative Penalty Assessment
Port Authority of New York and New Jersey
Newark Airport/Newark/Essex County

DATE: January 10, 1992

The issues to be considered regarding trial and/or settlement of this case are as follows:

1. An Administrative Order and Notice of Civil Administrative Penalty Assessment for Discharge Monitoring Report violations in the amount of $98,750 was issued on December 1, 1991.

2. A completed "Administrative Hearing Request Checklist and Tracking Form" was received by the Department on January 3, 1992.

3. Upon review of the hearing request, the Department has determined it to be timely and complete.

4. The Port Authority has indicated a willingness to negotiate a settlement with NJDEPE prior to the processing of the hearing request.

If you have any questions regarding this matter, please contact me at (201)669-3900.

PA0709

5. Part III - B/C 1.A of the Permit sets forth specific parameters to be reported on Discharge Monitoring Report forms (hereinafter "DMRs") and identifies discharge limitations for each parameter for each permitted outfall.

6. The Port Authority has submitted DMRs to NJDEPE as required by Part 1 - I, and Part III - B/C of the Permit for the period January 1, 1991 through June 30, 1991. The DMRs demonstrate that the Port Authority has violated the discharge limits of the Permit. Listed below are the dates and parameters which were violated.

DMR NUMBER	MONIT. PERIOD END DATE	VIOL	DSN NO.	PARAMETER	LOAD CONC	LIMIT TYPE	LIMIT	UNITS	DATA
91010115	1/31/91	EFF	011	pH	CONC	MIN	6	su	5.36
		EFF	011	PHC	CONC	MAX	15	mg/l	20.40
		EFF	022	pH	CONC	MIN	6	su	2.21
		EFF	022	TSS	CONC	MAX	50	mg/l	86.00
91020104	2/28/91	EFF	022	TOC	CONC	MAX	50	mg/l	132.00
		EFF	022	TSS	CONC	MAX	50	mg/l	82.00
91030113	3/31/91	EFF	011	PHC	CONC	MAX	15	mg/l	16.60
		EFF	022	TOC	CONC	MAX	50	mg/l	59.70
91050101	5/31/91	EFF	011	PHC	CONC	MAX	15	mg/l	29.90
91060109	6/30/91	EFF	022	TOC	CONC	MAX	50	mg/l	293.00

Definitions of abbreviations used above:

PHC	-Petroleum Hydrocarbons	TSS	-Total Suspended Solids
TOC	-Total Organic Carbon	CONC	-Concentration
MAX	-Daily Maximum	MIN	-Minimum
mg/l	-Milligrams per liter	EFF	-Effluent
su	-Standard Units		

7. Based on the facts set forth in these FINDINGS, the Department has determined that the Port Authority has violated the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., specifically N.J.S.A. 7:14A-1 et seq., specifically N.J.A.C. 7:14A-1.2.

ORDER

NOW, THEREFORE, IT IS HEREBY ORDERED THAT:

8. The Port Authority shall discharge pollutants only in conformity with NJPDES Permit No. NJ0003824, the New Jersey Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., and the regulations promulgated pursuant thereto, N.J.A.C. 7:14A-1.1 et seq.

Paletta

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF FACILITY WIDE ENFORCEMENT
METRO BUREAU OF REGIONAL ENFORCEMENT
2 BABCOCK PLACE
WEST ORANGE, NEW JERSEY 07052

(201) 669-3900

March 31, 1992

Mr. R. M. Monti, P.E.
Director of Engineering
Port Authority of New York and New Jersey
1 World Trade Center
New York, New York 10048

Re: Compliance Evaluation Inspection
Newark International Airport
NJPDES No. NJ 0003824
Newark/Essex County

Dear Mr. Monti:

A Compliance Evaluation Inspection of your facility was conducted by a representative of this Bureau on February 19, 1992. A copy of the completed inspection report form is enclosed for your information.

Your facility received a rating of "UNACCEPTABLE" due to the following deficiency:

1) A review of the Discharge Monitoring Reports (DMRs) for the period of July 1, 1991 to December 31, 1991 reveal that the facility has exceeded its NJPDES permit limits for Total Organics Carbon (TOC), Petroleum Hydrocarbons (PHC), and pH as detailed below:

DMR NUMBER	MONIT. PERIOD END DATE	Viol	DSN NO.	PARAMETER	LOAD CONC	LIMIT TYPE	LIMIT	UNITS	DATA
91070118	7/31/91	EFF	011	TOC	CONC	MAX	50.0	mg/l	94.0
91070118	7/31/91	EFF	022	PHC	CONC	MAX	15.0	mg/l	220.7
91080101	8/31/91	EFF	011	TOC	CONC	MAX	50.0	mg/l	103.0
91080101	8/31/91	EFF	022	pH	CONC	MIN	6.0	su	5.93
91080101	8/31/91	EFF	022	PHC	CONC	MAX	15.0	mg/l	525.4

PA0743

Failure to fully comply with the above will result in the initiation of enforcement action by this Department. This shall in no way be construed, however, to indicate any exemption on your part from possible penalties for violations indicated by the Compliance Evaluation Inspection as stated above.

Very truly yours,

Janet Budesa Carroll
Acting Section Chief
Surface Water and
Sewer System Enforcement
Metro Bureau of Water and
Hazardous Waste Enforcement

E31:G27

c: Chief - Permits Administration Branch, USEPA
Patrick M. Durack, USEPA
Joseph McGinley, H.O.
Bernice Malione, Port Authority
George Cook, Supervisor Env. Prot. Unit

bc: Zaheer Hussain
Edward Bonnano
Central File

Enclosure

PA0744

FILE

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY
DIVISION OF FACILITY WIDE ENFORCEMENT
Metro Bureau of Water and Hazardous Waste Enforcement
2 Babcock Place, West Orange, N.J. 07052
(201) 669-3900

March 26, 1993

Mr. R. M. Monti, P.E.
Director of Engineering
Port Authority of New York and New Jersey
1 World Trade
New York, NY 10048

Re: Compliance Evaluation Inspection
Newark International Airport
NJPDES No. NJ 0003824
Newark/Essex County

Dear Mr. Monti:

A Compliance Evaluation Inspection of your facility was conducted by a representative of this Bureau on March 19, 1993. A copy of the completed inspection report form is enclosed for your information.

Your facility received a rating of "UNACCEPTABLE" due to the following deficiencies:

A review of the Discharge Monitoring Reports (DMRs) for the period of July 1, 1992 to January 31, 1993 has revealed the following violations.

DMR NUMBER	MONTI. END DATE	VIOL.	DSN NO.	PARA	LOAD CONC	LIMIT TYPE	LIMIT	UNITS	DATA
92070177	7/31/92	EFF	008	TOC	CONC	MAX	50.0	mg/l	51.7
92070177	7/31/92	EFF	013	TSS	CONC	MAX	100.0	mg/l	232.0
92070177	7/31/92	EFF	014	PHC	CONC	MAX	15.0	mg/l	24.1
92070177	7/31/92	EFF	002	pH	CONC	MIN	6.0	su	5.9
92080177	8/31/92	EFF	014	PHC	CONC	MAX	15.0	mg/l	68.8
92100177	10/31/92	EFF	007	NET TSS	CONC	AVG	30.0	mg/l	37.0
92120175	12/31/92	EFF	013	TSS	CONC	MAX	100.0	mg/l	134.0
92120175	12/31/92	EFF	014	TSS	CONC	MAX	100.0	mg/l	176.0
92120175	12/31/92	EFF	014	PHC	CONC	MAX	15.0	mg/l	35.3

PA0860

The deficiencies noted above have placed your facility in significant violation of the terms and conditions of your NJPDES permit and/or the Water Pollution Control Act Regulations (N.J.A.C. 7:14A-1 et seq.). This office acknowledges that discussions are on-going between the Port Authority and the Department regarding the development of Best Management Practices (BMP) plan for airport stormwater management in lieu of quantitative discharge limits, therefore no further response is required at this time.

If you have any questions regarding this correspondence, please contact Louis P. Polletta , the Environmental Specialist responsible for this case, who can be reached at (201) 669-3900, or by letter through this Bureau.

Very truly yours,

for Janet Budesa Carroll
Acting Section Chief
Metro Bureau of Water and
Hazardous Waste Enforcement

E33:G27

c: Patrick M. Durack, USEPA
William Anthony Pittaro. H.O.
George Cook, Port Authority

bc: Zaheer Hussain
Ed Neafsey, Criminal Justice
Central File

Enclosure

PA0861

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029, Trenton, N.J. 08625

DISCHARGE SURVEILLANCE REPORT

PERMIT # NJ0003824 NO. OF DISCHARGES 41 CLASS MAJ - IND

DISCHARGER NEWARK INTERNATIONAL AIRPORT

OWNER PORT AUTHORITY OF NEW YORK AND NEW JERSEY

MUNICIPALITY NEWARK / ELIZABETH COUNTY ESSEX WATERSHED CODE N

LOCATION ROUTE 1 NORTH

RECEIVING WATERS PERIPHERAL DITCH → PORT NEWARK AND PORT ELIZABETH CHANNELS → NEWARK BAY STREAM CLASS FW2-NT → SE3

LICENSED OPERATOR & PLANT CLASS STEVEN MANN / OGDEN AVIATION SERVICES (N-1)

TRAINEE/ASSISTANT — OTHER INFO. (201) 961-2093

DEFICIENCIES: - SEE ATTACHED LETTER -

COMMENTS: PRESENTLY, OUTFALLS 007, 011, AND 022 ARE THE ONLY OUTFALLS WHICH PROVIDE REPRESENTATIVE SAMPLING OF THE MONITORED ACTIVITY. REPRESENTATIVES OF THE PORT AUTHORITY AND THE NJDEPE ARE DISCUSSING THE DEVELOPMENT OF A BEST MANAGEMENT PRACTICES (BMP) PLAN FOR AIRPORT STORMWATER MANAGEMENT IN LIEU OF QUANTITATIVE DISCHARGE LIMITS.

OVERALL RATING ☐ Acceptable ☐ Conditionally Acceptable ☑ Unacceptable

EVALUATOR LOUIS P. POLLETTA TITLE ENVIRONMENTAL SPECIALIST

INFORMATION FURNISHED BY (Name) GEORGE COOK / MIKE CUTRUZZOLA / STEVEN MANN

(Title) SENIOR ENV. PROGRAM SPECIALIST / SENIOR ENV. SPECIALIST / LICENSED OPERATOR (Organization) PORT AUTHORITY / PORT AUTHORITY / OGDEN AVIATION SERVICES

DATE OF INSPECTION March 12, 1993

PA0862

DWR-083-A 78

N.J.D.E.P.
D.W.R.
DISCHARGE SURVEILLANCE REPORT

Permit #: NJ0003824
Date: MARCH 19, 1993

NEWARK AIRPORT

INDUSTRIAL TREATMENT PROCESS EVALUATION

RATING CODES: S = Satisfactory M = Marginal U = Unsatisfactory NA = Not Applicable

		RATING	COMMENTS
GENERAL	DISCHARGES# SEE BELOW	—	
	WASTEWATER SOURCE(S)	—	STORMWATER RUNOFF, O/W SEPARATORS, NCCW
	CONTINUITY OF OPERATION	—	INTERMITTENT
	BYPASSES/OVERFLOWS	S	NONE
	S.P.C.C. PLAN + D.P.C.C.	S	REVISED FEBRUARY 1993
	ALARM SYSTEMS	S	HIGH WATER ON O/W SEPARATOR, MANNED 24 HRS DAY
	ALTERNATE POWER SUPPLY	S	2 LEGS PSE&G, DIESEL GENERATORS VARIOUS LOCATIONS
	BEST MANAGEMENT PRACTICES PLAN	—	
TREATMENT PROCESSES	DISCHARGES 011	—	1. FUEL FARM STORMWATER RUNOFF
			2. SUB SURFACE OIL RECOVERY SYSTEM (TANK FARM AREA)
	VERTICAL TUBE COALESCING		3. BUCKEYE PIPELINE 120-30 GALLONS PER DAY.
	PACT O/W SEPARATORS AT		NOTE: THE FOLLOWING WASTEWATER SOURCES ARE NO LONGER
	DSN 011 AND 022.		DISCHARGED TO 011.
			1. HYDRANT PIT WATER (300 PITS EMPTIED VIA VACUUM TRUCK) HYDRANT
			PIT WATER IS NOW STORED IN TANKS 44 AND 48.
			2. DRAW OFF WATER FUEL TANK SUMPING. NOTE: SINCE 1987 A CLOSED SUMPING
			SYSTEM HAS ELIMINATED THIS DISCHARGE TO 011.
	024	—	3. DSN 024 (FUEL SELECTION SITE) THIS O/W SEPARATOR WAS DECOMMISSIONED
			AND WAS USED AS A STORAGE TANK FOR RUNOFF WHICH WAS DISCHARGED TO 011
			A ROOF WAS PUT OVER THE SITE TO ELIMINATE RUNOFF.
	022	—	OGDEN MAINTENANCE AREA / FLOOR DRAINS & FUELING AREA RUNOFF
	007	—	NCCW (MAY – OCTOBER)
SLUDGE HANDLING		S	NEWARK AIRPORT EPA GENERATOR ID NJD098148807
	PORT AUTHORITY / WASTE OIL	S	LIONETTI OIL NJD084044064
	OGDEN / SLUDGE FROM SEPARATOR	S	TRANSPORTER: AUCHTER NJD980772708
	CLEANING		DISPOSAL: B&L NJD064981988, S&W NJD099129110,
			REMTECH NJD980536577
	OGDEN / WASTE OIL	S	TRANSPORTER: LOEFFEL'S NJD980755171
			DISPOSAL: C/R WARNER NJD001188174
INFORMATION	FLOW METER & RECORDER	S	STORMWATER ESTIMATED / O/W SEPARATOR FLOW CALCULATED FROM PUMPING HOURS
	RECORDS	S	
	SAMPLING PROCEDURES	S	FACILITY PERSONNEL
	ANALYSES PERFORMED BY	S	LABORATORY RESOURCES, INC.
			WESTWOOD, NJ CERT. # 02046
	PERMIT STATUS		
	MODIFIED PERMIT EXPIRED 7/11/91		BIOASSAY PERFORMED BY: (ASI) AQUA SURVEY, INC.
	RENEWAL APPLICATION RECEIVED 11/11/91		FLEMINGTON, NJ CERT # 10309
	SANITARY COLLECTION SYSTEM	S	C-2 LICENSED OPERATOR JIM HENDERSON
OTHER	PERIPHERAL DITCH	—	COMBINED SEWER OVERFLOWS (CSOs) FROM THE CITIES OF NEWARK AND ELIZABETH DISCHARGE TO DITCH.
	STORMWATER PUMP STATION	—	OWNED BY THE CITY OF NEWARK - PUMPS FROM DITCH TO THE ELIZABETH CHANNEL.
	FINAL EFFLUENT APPEARENCE	—	NO DISCHARGE AT INSPECTION
	REC. WATERS APPEARENCE	—	PERIPHERAL DITCH → ELIZABETH CHANNEL
			DSN 015 DISCHARGES DIRECTLY TO THE NEWARK CHANNEL

CN 029, Trenton, N.J. 08625

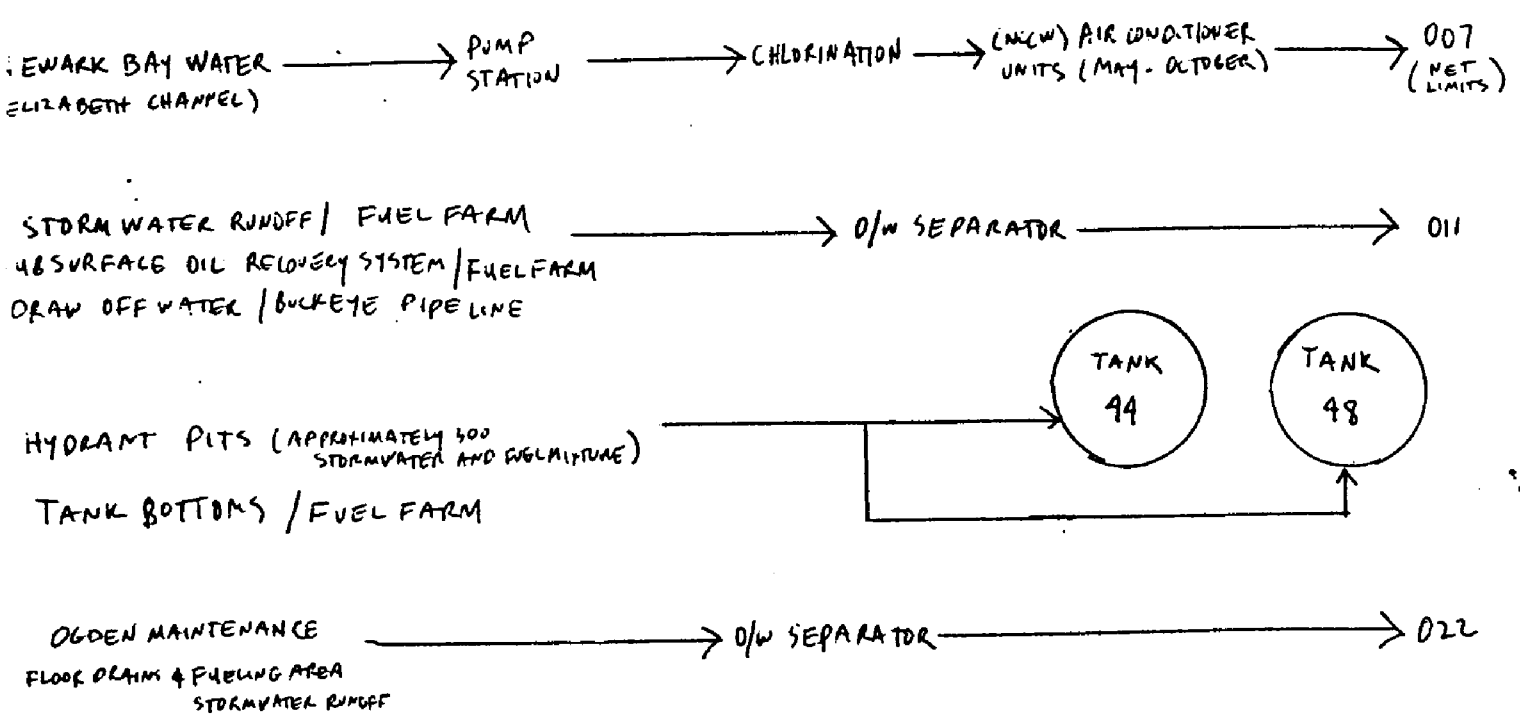
DISCHARGE SURVEILLANCE REPORT

Permit # NJ0003824
Date MARCH 19, 1993

NEWARK AIRPORT

NT DIAGRAM AND FLOW SEQUENCE:

NOTE: All discharges listed below are to the peripheral ditch.



The permittee is authorized to discharge stormwater from outfalls 001, 002, 005, 006, 008-010, 013-021, 023, 025-028, 032-033. Additional outfalls are not yet permitted (034-046, 048-049)

- NO SAMPLES TAKEN BY METRO -

DISCHARGE DATA

RCE: DISCHARGE MONITORING REPORTS PERIOD: July 1, 1992 to January 31, 1993

ER MBER	MONITORING PERIOD	VIOLATION TYPE	DSN No.	SAMPLE TYPE	PARAMETER	PERMIT LIMITS	DATA
70177	7/1/92 - 7/31/92	EFFLUENT	008	GRAB	TOC	50 mg/l	51.7 mg/l
070177	7/1/92 - 7/31/92	EFFLUENT	013	GRAB	TSS	100 mg/l	232 mg/l
070177	7/1/92 - 7/31/92	EFFLUENT	014	MULTI-GRAB	PHC	DAILY MAXIMUM 15 mg/l	24.1 mg/l
070177	7/1/92 - 7/31/92	EFFLUENT	022	GRAB	pH	6 - 9 SU	5.9 SU
080177	8/1/92 - 8/31/92	EFFLUENT	014	MULTI-GRAB	PHC	DAILY MAXIMUM 15 mg/l	68.8 mg/l
100177	10/1/92 - 10/31/92	EFFLUENT	007	GRAB	NET TSS	MONTHLY AVERAGE 30 mg/l	37 mg/l
20175	12/1/92 - 12/31/92	EFFLUENT	013	GRAB	TSS	100 mg/l	134 mg/l
	12/1/92 - 12/31/92	EFFLUENT	014	GRAB	TSS	100 mg/l	176 mg/l
20175	12/1/92 - 12/31/92	EFFLUENT	014	MULT-GRAB	PHC	DAILY MAXIMUM 15 mg/l	35.3 mg/l

MONITORING DEFICIENCIES: listed above

FWE-016
4/93

New Jersey Department of Environmental Protection and Energy
Division of Facility Wide Enforcement - Metro Field Office
2 Babcock Place
West Orange, N.J. 07052

NOTICE OF VIOLATION

PROGRAM NJWPES DATE 9-1-94
TELEPHONE NO. 201 669-3900

PCWS # _____ TYPE SUPPLY _____ NJPDES # 0003824 TYPE DISCH. SW RCRA # _____
NAME OF FACILITY Continental - Newark Airport
LOCATION OF FACILITY Newark Airport
FACILITY REPRESENTATIVE AND TITLE Carol A Clancy, Permit Administrator

You are hereby NOTIFIED that during an inspection of your facility on the above date, the following violations were noted and remedial actions are required:

DESCRIPTION OF VIOLATION / REMEDIAL ACTION: Serious Violations -

1/94 - #022 TSS 76 mg/l 3/94 - clear
5/94 - #001 TRC 94 mg/l 2/94 - #011 TRC [illegible]
TRC 23 mg/l max
4/94 - #022 TRC 21 mg/l max #022 TOC 130 mg/l max

The above noted violations are in violation of the following N.J. Statutes/Regulations, and will be recorded as part of the permanent enforcement history of your facility:

✓ New Jersey Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) and appropriate Regulations.
_____ New Jersey Safe Drinking Water Act (N.J.S.A. 58:12A-1 et seq.) and appropriate Regulations.
_____ New Jersey Water Supply Management Act (N.J.S.A. 58:1A-1 et seq.) and appropriate Regulations.
_____ New Jersey Solid Waste Management Act (N.J.S.A. 13:1E-1 et seq.) and appropriate Regulations.
_____ New Jersey Water Supply & Wastewater Operators' Licensing Act (N.J.S.A. 58:11-64 et seq.).

Remedial action to correct these violations must be initiated immediately. Within five (5) calendar days of receipt of this Notice of Violation, you shall telephone the investigator issuing this notice at the above number with the corrective measures you have initiated to attain compliance. The issuance of this document serves as notice to you that the Department has determined that a violation has occurred and does not preclude the State of New Jersey or any of its agencies from initiation of further administrative or judicial enforcement action, or from assessing penalties, with respect to this or other violations. Violations of these regulations are subject to penalties of up to $50,000 per day.

Further enforcement action, which will require a written response, may be issued on these violation(s) and any additional violations found during the inspection.

Violation received by

Investigator, Division of Facility Wide Enforcement
Department of Environmental Protection & Energy

PA1055

White - Original Canary - Bureau File Pink - Criminal Justice Goldenrod - Central File

FWE-005 (7.92)
formerly DEPE-105

New Jersey Department of Environmental Protection and Energy
Division of Facility Wide Enforcement
Water and Hazardous Waste Enforcement

NJPDES FACILITY INTERIM INSPECTION REPORT

FACILITY NAME: Port Authority - Newark Airport DATE: 9/1/94

PERMIT #: NJ0003824 DSN #: 007011 002 TYPE: [X] DSW [ ] SIU [ ] DGW

MUNICIPALITY: Newark COUNTY: Essex

[X] A review of your facility's Discharge Monitoring Reports and a random check of written summaries of certified laboratory test results from the period of 2/94 to 7/94 did not reveal any monitoring or reporting deficiencies.

[ ] A review of your facility's Discharge Monitoring Reports and a random check of written summaries of certified laboratory test results from the period of 2/94 to 7/94 did not reveal any Serious Discharge Violations or discharge violations which triggered or sustained Significant Non-Compliance. However, please be advised that any minor violations should be addressed to insure that they do not reoccur.

[ ] A visual inspection of your facility on this date did not reveal any significant operation and/or maintenance deficiencies. Please correct any minor deficiencies noted below:

[X] **SERIOUS OR SIGNIFICANT PERMIT VIOLATIONS AND/OR OPERATION AND MAINTENANCE DEFICIENCIES HAVE BEEN IDENTIFIED BY THIS INSPECTION. REFER TO THE ATTACHED NOTICE(S) OF VIOLATION FOR DETAILS.**

INSPECTOR: [illegible] TITLE: [illegible]

FACILITY REPRESENTATIVE [illegible] SIGNATURE: [illegible]

DISTRIBUTION: *White - Permittee* *Yellow - Bureau* *Pink - Central File*

PA1056

NEWARK INTERNATIONAL AIRPORT
Water Pollution Control Program
Interim Status Report

The Port Authority of New
York and New Jersey

July 1, 1980

NEWARK INTERNATIONAL AIRPORT
WATER POLLUTION CONTROL PROGRAM
INTERIM STATUS REPORT

During 1979, there were approximately 850,000 aircraft take-offs and landings through the New York Metropolitan area's three major airports for both international and domestic flights. To support 199,078 flights at Newark International Airport, 188,000,000 gallons of aircraft fuel were dispensed in 1979. Because of the quantities involved, a significant amount of aircraft fuel is required to be stored on airport. Storage and handling of such quantities of petroleum based fuel results in a potential for water pollution. The Port Authority of New York and New Jersey as operator of the Airports has conscientiously and at considerable cost, undertaken an extensive water pollution control program with the cooperation of federal and state agencies, airlines, and the operators of the fuel storage and distribution systems for Newark International, J.F. Kennedy International and LaGuardia Airports.

The purpose of this report concerning Newark International Airport is to summarize progress to date, mention environmentally significant findings, and indicate future efforts.

In April, 1972, the Port Authority retained the Calspan Corporation to furnish technical assistance in analyzing the effects of airport drainage on surrounding waters and if necessary, to recommend ways to improve the quality of the drainage to achieve airport-wide compliance with the NPDES Permit requirements under the Federal Water Pollution Control Act

Amendments of 1972. Intensive sampling and chemical analyses were performed on discharged water at the airport outfalls, and problem areas were defined. As a result, immediate measures were implemented to protect the environment, tenant environmental educational programs were developed and requisite long term efforts were identified to improve the quality of waste water emanating from the airports.

Additionally, in light of the discovery of significant oil lenses in the vicinity of the Bulk Fuel Farm at Kennedy Airport, the Port Authority is endeavoring to identify concentrations of oil in the ground at the Airports under its jurisdiction and to develop solutions to such concentrations.

In 1979, the capital cost to build improvements to airport drainage systems, begun in 1977 and scheduled for completion the end of 1980, at Newark, Kennedy and LaGuardia Airports was estimated at $12,100,000. This sum does not include the cost of prior installation of pollution control equipment and improved housekeeping activities undertaken by the Port Authority and its tenants, which costs are reflected in higher maintenance expenses; nor does this figure take into account the cost of identifying possible oil lenses and developing appropriate solutions, other than at the Kennedy Airport Bulk Fuel Farm.

Section I of this report discusses activities other than those related to investigations of fuel oil concentrations in the ground and solutions. Section II discusses that topic.

Section I

The following describes what has been accomplished and what is being done at Newark International Airport at four major geographical areas: maintenance locations, passenger terminals, the fuel farms and the Peripheral Ditch.

Maintenance Areas

All maintenance areas in hangars, automotive, and equipment service areas are provided with oil/water separators which have been connected to sanitary drains leading to municipal waste treatment plants serving this area. All existing oil/water separators have been checked and upgraded where necessary and are maintained in operational order. New oil/water separators have been added to areas previously not served with oil/water separators.

All Port Authority oil/water separators are serviced by Port Authority staff, and oil/water separators belonging to tenants are under the tenant's own maintenance program. Port Authority personnel inspect all oil/water separators whether belonging to tenants or the Port Authority on a weekly basis. Deficiencies found are promptly taken care of to maintain equipment efficiency.

All rental car wash facilities are equipped with wash water recycling equipment which eliminates the discharge of waste water to the storm drainage system.

Passenger Terminal Area

Calspan identified the primary potential pollutant originating on passenger terminal ramps as floating oil and fuel resulting from spills, accumulated oil, grease and suspended solids resulting from concentrated activitiy of aircraft and service vehicles and minor aircraft maintenance. The airport pollution control effort has focused on (1) strict enforcement of good housekeeping regulations to control pollution at its source and minimize accidental spills and (2) removal of accidentally spilled oil and fuel by containment and spill recovery.

Through the Airport Environmental Council, which consists of Port Authority pollution control staff and representatives of major operating tenants, the following practices have been agreed to and put into practice:

1) No equipment maintenance, other than emergency repairs, is allowed in ramp areas. All regular maintenance activities must be done in hangars protected by oil/water separators;

2) No equipment (including aircraft) washing is allowed in ramp areas;

3) Notice of reportable accidental spills of fuel or oil is to be reported to the Port Authority Police and the Environmental Control Unit and analyzed as to cause so problem areas can be corrected;

4) All spills of fuel/oil must immediately be picked up by absorbents which are subsequently removed for disposal off airport;

5) Airlines using the ramp should maintain a regular ramp scrubbing program. Ramp scrubbing should be done with vacuum pick-up to eliminate waste water from going into the storm system.

Port Authority staff monitor compliance with these arrangements through regular ramp "housekeeping" inspection and inspection of all hydrant pits in the ramp area. Staff also respond to spill reports, check all relevant manholes and catchbasins, monitor the removal of remove any fuel/oil found therein, analyze spill reports for common causes in order to prevent future spills.

Port Authority staff periodically monitor the ramp operation of the aircraft fuelers. Programs to replace all hydrant heads to reduce leakage during fueling operations and to water-seal all hydrant pits in the ramp to prevent seepage of fuel accidentally spilled in the pits will be implemented in the very near future.

Oil has been observed in the sump pits in the crawl spaces of Terminals A & B. Maintenance programs have been initiated to periodically skim this residual oil from the sump pits and the sump pit rooms are being continually ventilated in order to prevent the buildup of hazardous fumes while a solution is being addressed.

Port Authority staff also coordinate the removal of waste oil of the operating tenants by licensed waste-oil disposers thus ensuring the proper disposal of waste oil generated by tenant operation.

Fuel Farms

At the South Fuel Farm, to ensure that NPDES permit requirements for discharges would be met, an extensive upgrading of the drainage system was carried out in 1979 at the cost of $875,000. The system is designed to process storm water from the fuel farm area through oil-water separators prior to discharging runoff into waters surrounding the airport. As part of the upgrading program, a large holding tank adequate to retain the initial 15 minutes of surface run-off during a heavy downpour was installed with an automatic oil skimmer. Another oil-water separator equipped with coalesor plates and skimmers was added to the existing system as the primary oil water separation system. The existing system thus serves as a secondary separation system and drainage from the fuel farm is treated twice prior to

discharging into the airport peripheral ditch. This system is inspected every day for proper operation and the effluent is sampled for monthly analyses which are reported on a quarterly basis to the U.S.E.P.A. Additionally the outfall at the fuel farm is equipped with winged walls to which a containment boom is installed. This boom site has a work platform and waste oil storage tank to facilitate prompt removal should a breakdown occur in the oil-water separators.

The North Fuel Farm was permanently deactivated in late 1979. Although no activities of fuel storage and supply are being carried out in this area, Port Authority staff make daily inspections of a limited leaching system that has been installed which collects underground oil into a leaching well served by an automatic oil recovery system operating 24 hours a day.

THE PERIPHERAL DITCH

Pollution control activities for the Peripheral Ditch involve keeping the ditch free of debris from upstream and maintenance of containment booms.

Since the Peripheral Ditch has historically been an open drain for neighboring communities, debris of all kind, such as telephone poles, household garbage, beer and soda cans, oil from engine oil changes and other off-Airport sources, has been carried to the ditch from upstream. To control this influx, the Port Authority on its own volition has installed containment booms at the points of inflow. These sites are inspected daily, and debris, as soon as sufficiently accumlated, is removed therefrom to keep the ditch clean. Heavy rainfall also washes debris from along the banks, especially phragmites which are contained by our booms. Due to the nature and bulk of the debris found, the services of an environmental cleanup contractor are used to assist removal.

Containment Booms at Outfalls - Containment booms with skirts of 12 inches deep are installed at outfalls to prevent accidental fuel/oil spills from getting into the ditch.

Containment Booms Across the Ditch - At several locations booms as long as 120 feet are stretched across the ditch to prevent accidental spills from going downstream to Newark Bay. Containment booms, backed up by an absorbent boom,

are installed to prevent escape of fuel oil through connectors of the boom sections.

Boom Site Facilities - Boom sites are provided with working platforms, waste oil storage tanks, storage facilities for absorbent material and occasionally spare booms to ensure availability of material and equipment in case of emergency.

INVESTIGATION OF UNDERGROUND OIL CONCENTRATIONS

The investigations being undertaken are in no way meant as an admission that the Port Authority is responsible for any oil lenses or leaks discovered nor does the Port Authority assume any liability in connection therewith. It will, however, endeavor to cooperate with all concerned to develop appropriate remedial measures.

Areas Being Investigated

The three areas at Newark International Airport designated for investigation of underground fuel concentrations total approximately 130 acres. (See Newark International Airport Plot Plan attached hereto)

The first site is the Airport Bulk Storage site which is approximately 25 acres in size and contains 24 above-grade, diked, storage tanks with a total capactiy of 10,700,000 gallons. Aviation Fuel arrives at the airport via Buckeye Pipeline.

The second area to be investigated is the pipe distribution run from the Bulk Storage area passing through a Fuel Selection Area en route to the aircraft fueling positions at the Terminal Buildings. At the Fuel Selection Area, six 14" diameter and twelve 12" diameter pipes are interconnected with

eleven 18" diameter pipes. The 12" diameter pipes terminate at the two active terminals at 225 underground hydrant pits from which hose connections are made to fuel aircraft. The 14" diameter pipes are extended to the perimeter of the active area and dead-ended. These lines will be extended with the commencement of activities at currently inactive Terminal C. The area encompassed in this investigation is approximately 90 acres.

The third area to be investigated is the North Fuel Farm which was decommissioned in 1979 and encompasses an area of approximately 15 acres.

Methods of Investigation

The investigation is being performed by the installation of well points at pre-selected locations and the utilization of a Scully Water Detector to determine the presence of oil. The well points are PVC pipe slotted for almost its entire embedded length. The pipe is inserted into the ground to a depth that insures its penetration below the ground water elevation. The continuous slotted pipe assures that any oil floating on the surface of the water is free to enter the pipe at its natural elevation and also assures that fluctuations in underground liquid surface will be accurately reflected within the pipe.

The Scully type of Water Detector is a device that was developed for measuring the depth of water collecting beneath fuel/oil in fuel/oil tanks. The device is battery operated and

the probe can be safely passed through fuel/oil. An alarm will sound when the probe makes contact with the water. For this investigation, the probe is slowly lowered down the well point pipe. When the alarm sounds, the lowering is stopped and the probe is marked. The probe is withdrawn and the presence of oil is measured by observing the length of any wet marks above the bottom of the probe and noting its odor. Some samples of the oil are taken and forwarded to a laboratory for testing and identification.

Because of the large acreages being investigated, the installation of well points at each site was initially limited in number. These exploratory well points were located to give a reasonable representation of the site investigated and were generally centered in the area being investigated. Upon the identification of underground oil concentrations at any well point, supplementary well points will be installed to determine the horizontal limits and thicknesses of the oil concentration.

Preliminary Findings

Bulk Storage Areas: Of 15 well points installed in this area, four showed indication of oil ranging up to 2.5 feet in thickness.

Fuel Tansfer Lines Between Bulk Storage Area and Aircraft Fueling Areas: Installation of well points in this area has not yet been performed. The work will be getting underway shortly.

Aircraft Fueling Areas at Terminal Buildings: The Installation of well points in this area is currently underway.

North Fuel Storage Area (De-Commissioned): Of 11 well points installed in this area, seven showed indication of oil ranging from 0.1 to 1.3 feet in thickness.

Proposed Program of Investigation

A. Continue to collect the following required information for analysis:

1. Identify supplementary well points required to identify horizontal and vertical limits of underground oil concentrations.
2. Submit representative samples to laboratory for identification of any fuel present.
3. Graphically plot underground liquid surface gradient.
4. Graphically plot thicknesses of identified underground oil concentrations.
5. Identify geological features influencing flow of underground liquid using existing available boring information and supplementary borings, as required.
6. Research available information on hydrology of ground water in the general area being investigated.

7. Identify storm drainage lines passing through the identified underground oil concentrations.

8. Check identified storm drainage lines for infiltration of oil.

9. Identify features of aircraft fueling system that could be contributing to development of underground oil concentrations.

B. Analyze:

1. The influence, if any, of accumulated underground oil on local storm drainage lines and local navigable waters.

2. The influence of accumulated underground oil on ground water.

3. The possible migration of accumulated underground oil.

4. The aircraft fueling system to identify source of accumulated underground oil.

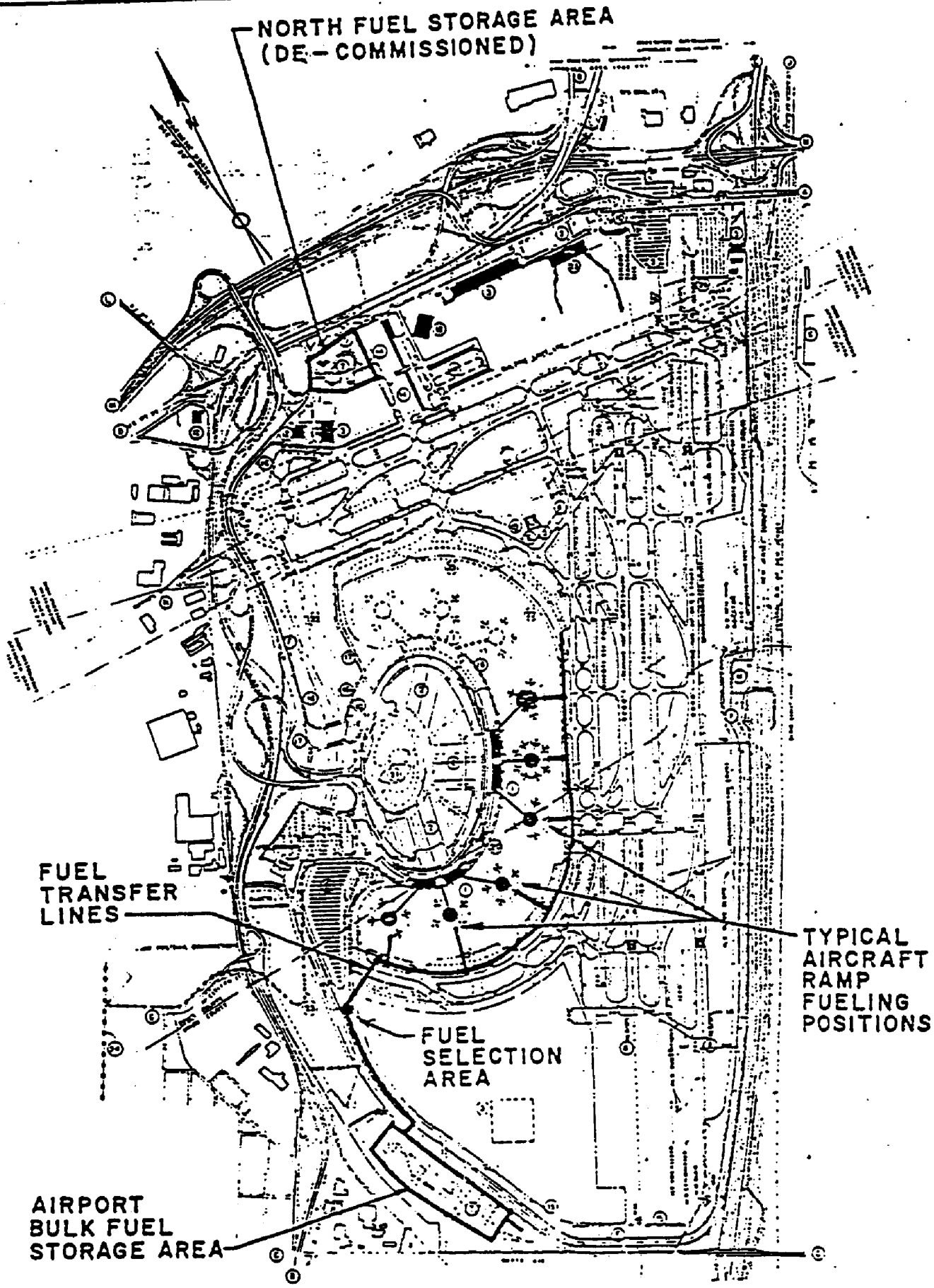
C. Review:

1. Alternatve methods for containment and/or removal of accumulated underground oil, as appropriate.

2. Alternate modifications to the physical plant and/or operations of the aircraft fueling system to minimize leakage of oil underground.

D. Identify well points which would be read periodically and that could reasonably indicate changes in underground oil concentrations.

E. Select appropriate measures for implementation.

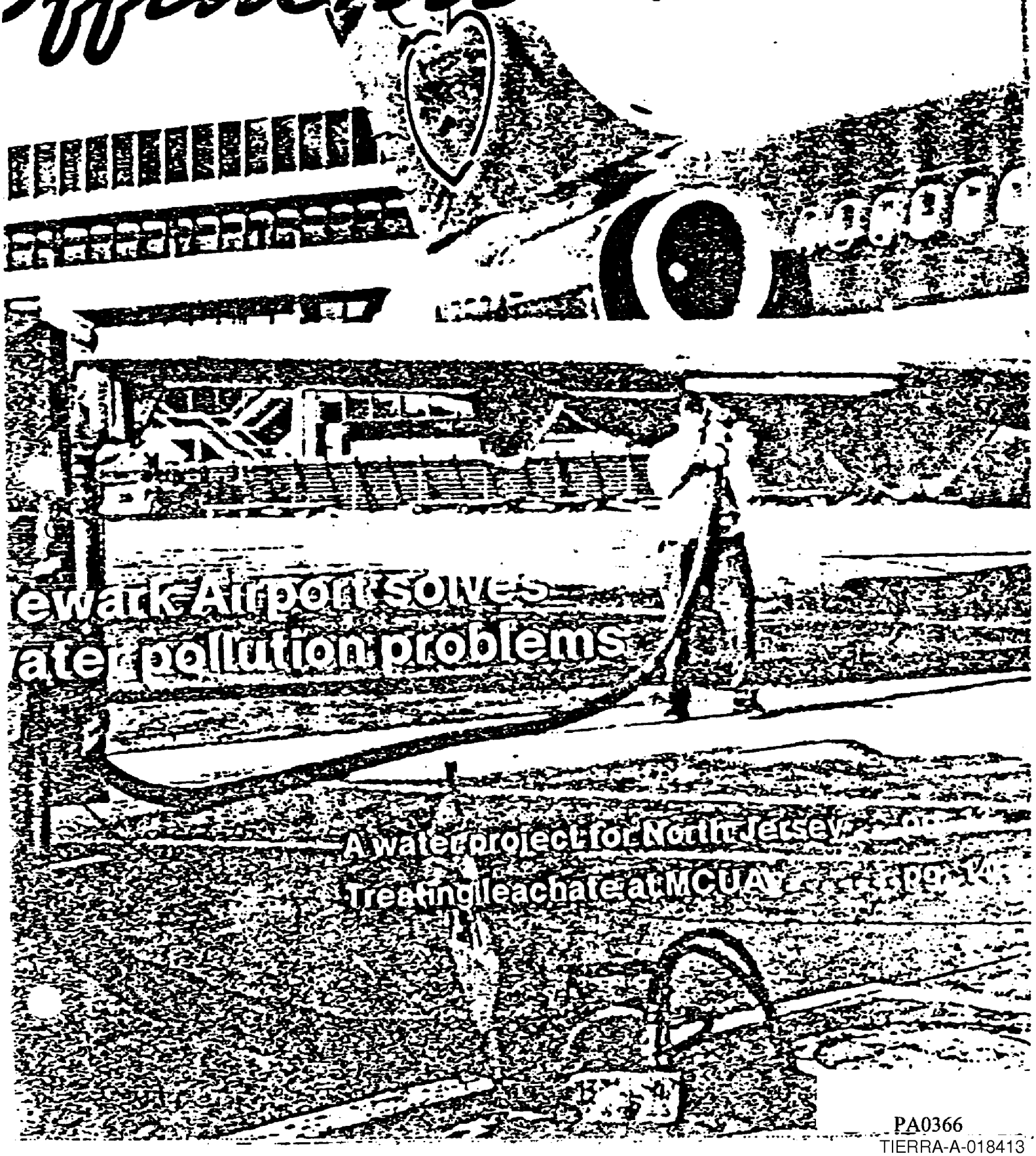


NEWARK INTERNATIONAL AIRPORT
PLOT PLAN

PA0323

Jersey Vol. 18 No. 3 November 1982

Effluents

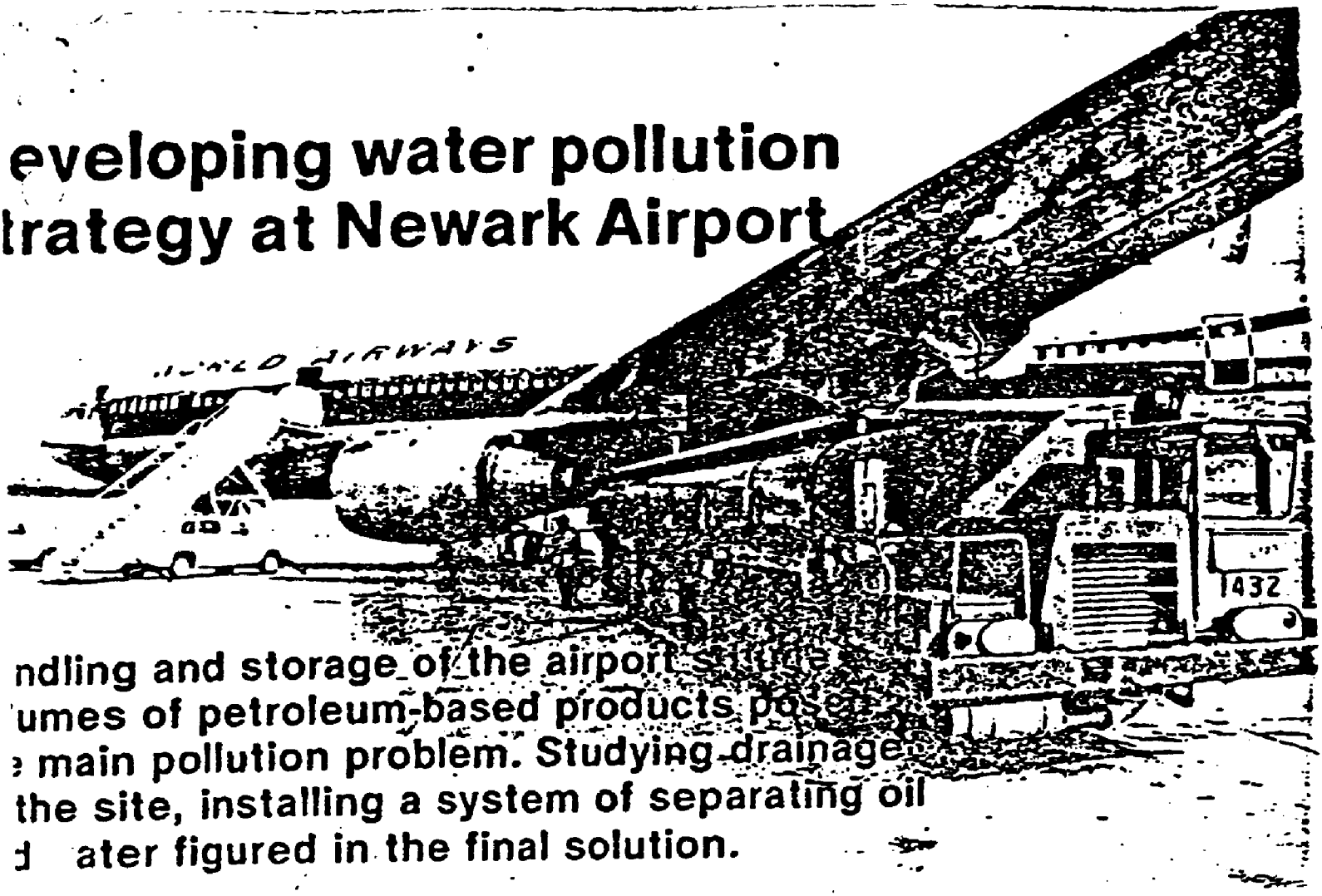


ewark Airport solves ater pollution problems

A water project for North Jersey

Treating leachate at MCUA

eveloping water pollution trategy at Newark Airport



ndling and storage of the airport's huge umes of petroleum-based products pose main pollution problem. Studying drainage the site, installing a system of separating oil d ater figured in the final solution.

Plane being refueled on the apron at Newark Airport, another area where controls were needed.

By Cliff Ross
Editor, Effluents

Airports have their own unique water pollution control problems, and for a good lesson in how to go about finding solutions to them you can't do better than spending a day with the pollution control team at Newark International Airport.

Progress is found on all sides. But in recent months a major effort has been undertaken to remove underground oil through the drilling of recovery wells — the latest state-of-the-art, continuous system for removal of oil from the ground within the airport site. The pumps keep pumping every day of the week and the separated oil is trapped and re ared while the clear water is led off to catch basins.

In its several dimensions, the total program allows the Port Authority of New York and New Jersey to lay claim to Newark Airport as one of the most environmentally advanced of any of the big airports in the country. The program has been under

It's easy enough to understand why protecting against oil spills and the need for separation and extraction of oil from water (whether runoff or ground water) can become an airport's biggest pollution control challenge, when it's seen in terms of the scale of handling and storage of petroleum-based aircraft fuels. The scale can be enormous. And the potential for water pollution is present. This can be the case at any large airport, not just Newark, in the view of airport pollution-watchers.

During 1981 at Newark Airport, for example, to support the 199,000 flights in and out of the airport, 185 million gallons of aircraft fuel were dispensed. So, with almost 200,000 flights at Newark, no imagination is needed to see why such enormous amounts of aircraft fuel must be stored and handled at the site. An average of more than half million gallons of fuel are needed for normal day-to-day airline operations.

total of approximately 794,000 aircraft takeoffs and landings in 1981 through the three Authority-operated airports in the greater New York metropolitan area you can guess at the fuel handling magnitude overall and the critical importance attached to that fuel handling system to maintain an outstanding pollution control program.

The experts acknowledge that anticipating what could happen at oil storage sites and pipe distribution systems was critical to how the pollution control system was going to be organized and then faithfully followed.

Early in 1970 with the rapid growth of air traffic and with the environmental movement picking up speed the Port Authority started looking at the problem of pollution control at its airports. A first step, according to Andy Attar, Supervisor of Airport Environmental and Energy Planning Section of the Aviation Planning Divi-

ed to Cornell Aeronautical Laboratories (later to become the Calspan Corporation). Calspan was to furnish the following:

- Assistance in analyzing the effects of airport drainage (runoff) on surrounding waters. Recommend ways to improve the quality of airport drainage waters
- Device an upgrading of the oil/water separating system wherever processed water was to be discharged to the airport's sanitary sewer system which is serviced by the Passaic Valley Sewerage Commissioners.

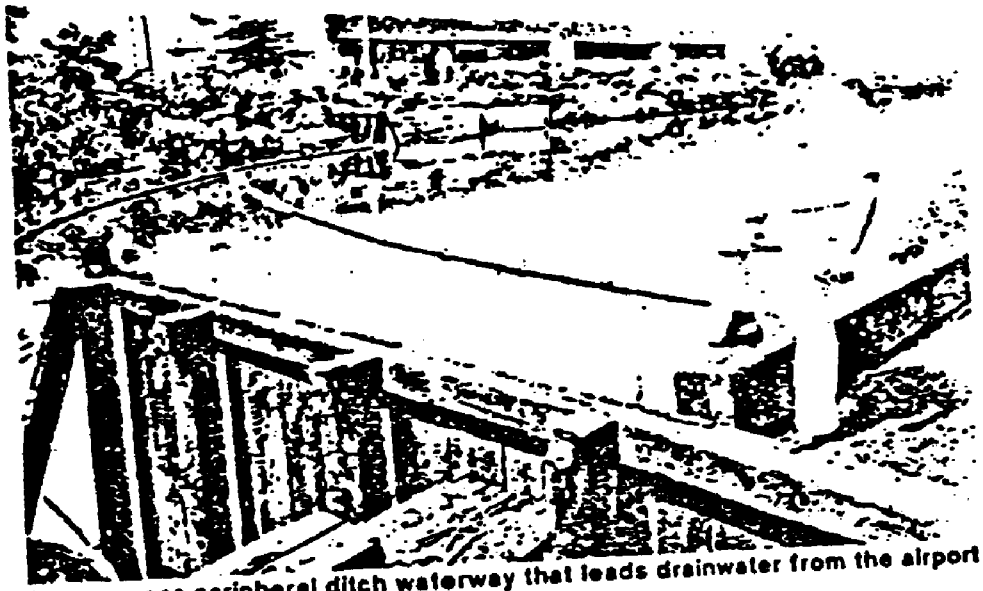
Newark Airport's overall objective was to achieve airport-wide compliance with the permit requirements under the National Pollution Discharge Elimination System (the NPDES program). "For Calspan," says Attar, "the assignment for getting results seemed clear — intensive sampling of all airport outfalls and chemical analyses of the samples at the site and then identifying where the problems loomed the largest."

Where were the problem areas after study? As many suspected, the problem areas were found to be (1) in the maintenance shops of aircraft and the ground support equipment; (2) the fuel farms, and (3) at aircraft aprons at the terminal areas.

For the record, the cost of the water pollution control program projects at Newark International Airport in work undertaken from 1977 through the Spring of 1982 was in the neighborhood of $6 million. In this effort, Newark Airport, under General Manager John Dickerson, had a team of its own engineers that included Myron Woller, Manager, Plant and Structures Division, Stanley Wolek, Supervisor of the Airport Maintenance Services, and members of the environmental unit that worked along with Calspan from the first days of the planning. All of them have lived with the experience at Newark from the days when a pilot treatment plan was organized to study the best strategy for treating effluents chemically. Also participating at another level was an Airport Environmental Council which consisted of Port Authority pollution control staffers and representatives of the major operating airlines.

For an understanding of what has been accomplished and what is now being done within Newark International Airport at maintenance areas, at the passenger terminal areas, at the fuel farms, at the fuel selection area of the fuel transfer piping system, and with the 4.5 mile "peripheral ditch" around the airport, the Port Authority staff sets it all down in the following detail:

New Jersey EFFLUENTS



Boom across peripheral ditch waterway that leads drainwater from the airport site.

Maintenance areas

Maintenance areas in hangars, automotive and equipment service areas, are provided with oil-water separators which have been connected to sanitary sewers leading to municipal waste treatment plants serving the Airport. All existing oil-water separators have been checked and upgraded where necessary and are maintained in operational order. Additional oil-water separators have been added to areas previously not served with oil-water separators.

All Port Authority oil-water separators are serviced by Port Authority staff, and separators belonging to the air lines are under the airlines' maintenance programs. Port Authority environmental unit personnel inspect all oil-water separators on a weekly basis, including those belonging to the airlines.

All waste water discharged by rental car washing facilities is routed into the sanitary drainage system.

Passenger Terminal area

Calspan identified the primary pollutant originating on passenger terminal ramps as floating oil and fuel resulting from spills, accumulated oil, grease, and suspended solids due to various activities such as aircraft, service vehicles and minor aircraft maintenance. The airport pollution control effort then focused on: (a) strict enforcement of good "housekeeping" regulations to control pollution at its source and minimize accidental spills; and (b) removal of accidentally spilled oil and fuel by containment and spill recovery.

Through the Airport Environmental Council the following procedures were put into practice:

- No equipment maintenance, other than emergency repairs, is allowed in ramp areas. All regular maintenance activities must be done in hangars protected by oil-water separators.
- No washing of equipment or aircraft is allowed in ramp areas.
- The Port Authority Police and the Environmental Control Unit are notified of accidental spills of fuel or oil and an analysis is performed to determine the cause of the problem and corrective action is immediately taken.
- All spills of fuel or oil must be picked up immediately with absorbents, which are subsequently removed for disposal off airport.
- Airlines using the ramp maintain a ramp scrubbing program. Ramp scrubbing is done with vacuum pick-up equipment to prevent waste water from going into the storm drainage system.

• • •

Although Allied Aviation Fuel Service is the Port Authority's fuel system operator and is responsible for cleaning up and reporting fuel spills and sumping hydrant pits, Port Authority staff monitors compliance with these arrangements through regular ramp "housekeeping" inspection.

Staff also responds to spill reports, checks all relevant manholes and catch basins, monitors the removal of

Driving ... that's helped mak... Newark Airport a le...der among the nation's airports in pollution protection.

any fuel or oil found therein, analyzes ...ill reports for common causes in order to prevent future spills and takes corrective action when required.

A program to seal 230 hydrant pits was started in July of 1980 and completed in October 1980. An epoxy coating was applied to each pit which covered the concrete bottom and partially up the steel pit sides, to prevent seepage of oil into the ground. In addition, during that period 230 hydrant valves were replaced, and the underhydrant valves were rehabilitated in order to eliminate or minimize any amount of leakage.

Oil was observed in the sump pits in the crawl spaces of airport Terminals A and B, and automatic skimming systems were installed in the sump pits so that any oil which had found its way into the pits could be continually removed for subsequent disposal. Maintenance programs were initiated to continually ventilate the sump pit rooms to prevent the buildup of fumes.

To identify where oil-saturated soils exist in the ground, 38 well ...ints were installed around the Ser...ce Road and next to the terminal buildings. The readings from these well points are being monitored to evaluate the extent of oil underground.

Additional intercepting absorbent booms were installed at seven locations in the underground storm drainage system to assist the removal of any accidental fuel spills that may find their way into the system. These booms are an additional safeguard to the regular routine catch basin and manhole inspections.

The fuel farms

At the South Bulk Fuel Farm, to ensure that the (NPDES) permit requirements for discharges would be met, an extensive upgrading of the drainage system was carried out in 1979 at the cost of $875,000. The system is designed to process storm water from the fuel farm area, including the truck loading and unloading areas, through oil-water separators prior to discharging runoff into waters surrounding the airport.

As part of the upgrading program, a ...rge holding tank adequate to retain the initial 15 minutes of surface runoff (30,000 gallons) was installed with an automatic oil skimmer. Another oil-water separator equipped with coalesor plates and skimmers was added to the system as the primary oil water separation system.

The existing system thus serves as a secondary separation system, and drainage from the fuel farm is treated twice prior to discharging into the airport Peripheral Ditch. This system is inspected every day for proper operation and the effluent is sampled and analyzed in accordance with the airport NPDES Permit.

The outfall at the fuel farm is equipped with winged walls to which a containment boom is installed. This boom site has a work platform and a waste oil storage tank to facilitate prompt removal of any oil if a breakdown should occur in the oil-water separators.

In addition, 60 well points were installed and are monitored to locate the extent and character of any oil underground. Based on the oil readings in the well points, four oil recovery wells were installed early this year. The wells were sunk 24-25 feet deep, are equipped with automatic skimming and water suppression systems and continuously are removing the oil and water as it leaches into these recovery wells.

The North Fuel Farm was permanently deactivated in late 1979. Although no activities of fuel storage and supply are being carried out in this area, Port Authority staff installed 26 well points which are monitored to determine the reduction in oil, accomplished by a leaching system. In addition, two oil recovery wells of the same type as those used in the South Bulk Fuel Farm have been installed early this year.

Selection area of the fuel transfer piping system

At the Fuel Selection Area of the fuel transfer piping system, six 14 inch diameter and twelve 12 inch diameter pipes are interconnected with eleven 18 inch diameter pipes via manifold systems extending from the 18 inch diameter pipes. This area includes surge suppressors to minimize over-pressurizing the piping system, and provides the airlines with flexibility in selecting grade and type of fuel by appropriate interconnection of incoming and outgoing pipes.

As a permanent improvement to the area, an impermeable underground barrier was installed to intercept all oil leaks, drippings, and storm water runoff in the contaminated area. The captured fluids are routed to a new oil-water separator. The separated oil is retained in an oil storage tank which is periodically emptied by a licensed contractor. The effluent of the separator is discharged into the peripheral ditch and is sampled and analyzed in accordance with the airport NPDES permit.

Periodic pressure testing of the underground fuel transfer system has taken place to verify the integrity of the underground piping system. There is no indication of leaks within the underground system as a result of these pressure tests. In addition, the Port Authority Engineering Department has decided that a leak detection test should be performed by the manufacturer of sophisticated leak detection equipment and, based upon results, an evaluation will be made as to whether the equipment will be purchased by the Port Authority to continually monitor the underground system.

The "Peripheral Ditch"

Pollution control activities for the "Peripheral Ditch" involve keeping the ditch free of upstream debris, and maintaining containment booms.

The peripheral ditch has historically been an open sewer for neighboring communities. Debris of all kind such as telephone poles, household garbage, beer and soda cans, oil from engine oil changes and other miscellaneous refuse from off-Airport sources, has been carried to the ditch from upstream. To control this, the Port Authority, of its own volition, installed containment booms across the ditch and at outfalls.

At several locations, booms as long as 120 feet were installed across the ditch to prevent debris and oil in the ditch from going downstream to Newark Bay. These booms are backed up by an absorbent boom, to prevent escape of fuel oil through connectors of the boom sections.

The boom sites are inspected daily, and debris, as soon as sufficiently accumulated, is removed to keep the ditch clean. Heavy rainfall also washes debris from along the banks. Due to the nature and bulk of the debris found, the services of an environmental cleanup contractor are also used.

At outfalls, containment booms were installed with skirts 12 inches deep to prevent accidental fuel/oil spills from getting into the ditch. The boom sites were provided with working platforms, which are equipped

(Continued on page 18)

with electrical power
oil storage tanks, storage facilities for absorbent material, and occasionally spare booms to ensure availability of material and equipment in case of emergency.

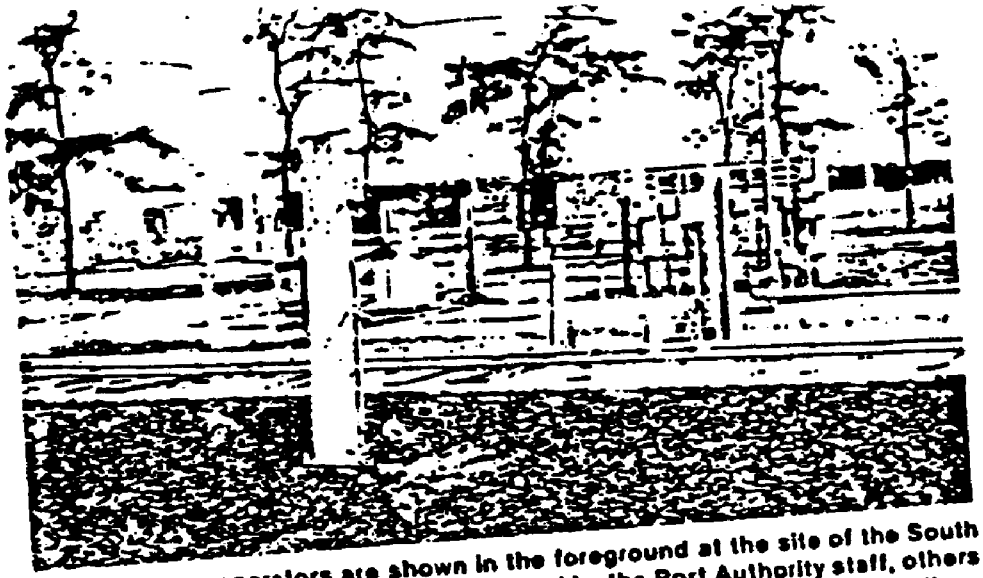
Investigating oil-saturated soils

In addition to the elements of the airport's water pollution control program described above, which is an on-going airport routine these days, the matter of solving the problems of underground oil-saturated soils had a big place in the recommendations of Calspan Inc. The matter was seen as a possible long-term project since the Port Authority's pollution control staff labored under no illusions that hydrocarbon product in the soils was insignificant.

What you have at Newark Airport today is a system of recovery wells — with more wells to come probably — that remove scavenger oil picked up by a contractor and hauled away from the airport. The scavenger pays for the waste oil. So the Port Authority realizes a monetary return. A total of 13,000 gallons of waste fuel was recovered from the underground recovery wells in the first year of the program, according to Stanley Wolek, who notes that three sites were investigated for underground oil-saturated soil concentrations comprising an area of about 130 acres.

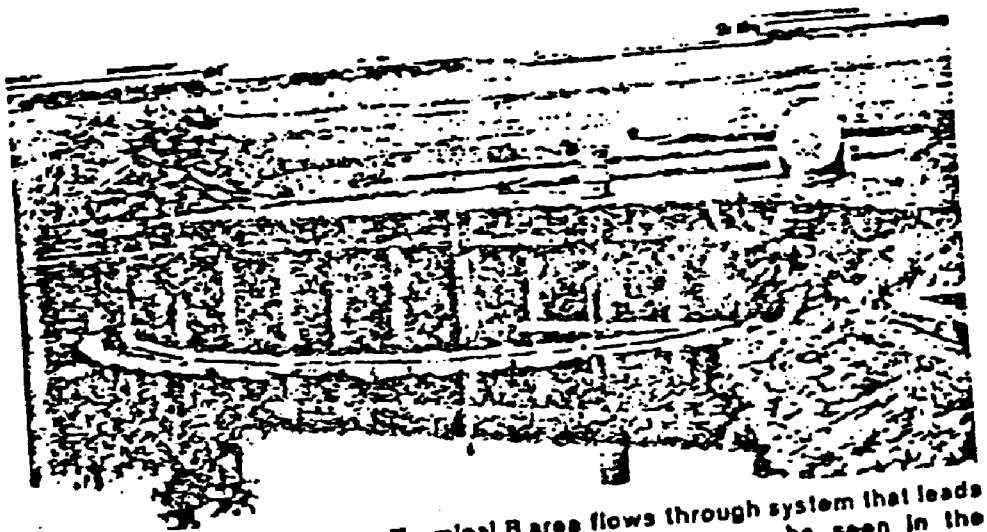
The first site investigated was the South Bulk Fuel Farm, a complex of 24 fuel storage tanks, with associated transfer pumps and filter separator units. The area is approximately 25 acres in size. Fuel storage tanks are of either 516,000 gallon or 378,800 gallon capacity, and each tank is protected by a retaining dike system. Fuel is usually brought into the tank area by underground pipeline, and is transferred under pressure though a filter separator unit into the assigned tank. Fuel leaves the area for airplane use after it is pumped through a filter separator unit, usually by one of the 11 main fuel transfer lines that lead to the fuel selection area. Fuel to the North Terminal section of the fuel selection area must be transported in by tank trucks because the fuel transfer piping system does not extend to this area.

The second site investigated was the North Fuel Farm, which was decommissioned as an active fuel storage area in 1979. This fuel farm is located in the northwest corner of the airport and occupies approximately 15 acres. Four groups of mounded-over storage tanks, ranging in capacity from 180,000 to 300,000 gallons, are included in the total storage volume of 940,000 gallons. There is no underground fuel transfer piping



The oil/water separators are shown in the foreground at the site of the South Fuel Farm. Some separators are maintained by the Port Authority staff, others belonging to the air lines are inspected and serviced by the airlines themselves.

Stanley Wollek, right, Supervisor of Airport Maintenance Services and Dick Halik inspect an oil recovery well at the South Fuel Fuel Farm at the airport. Oil recovery from the ground plays a major role in pollution control.



Ramp surface drainage from Terminal B area flows through system that leads to the outfall at the Tide Gate. Terminal buildings can be seen in the background.

system associated with the Nor... Fuel Farm.

The third area investigated encompassed about 90 acres. It's the jet transfer piping system between the busy South Fuel Farm and the terminal buildings serving the public. The piping system in comprised of buried steel pipe with welded joints. The pipes are epoxy-coated, wrapped with asphalt impregnated material and connected to a cathodic protection system, all to minimize the possibility of leaks in the system and to protect it against corrosion.

A total of 230 valves are used for transferring fuel to aircraft via the piping system. The valves are located in pits and connected to ring minifold pipes by bolted flanges to provide for periodic maintenance and replacement of the valves.

Methods of Investigation

The initial phase of the investigation was performed by installing well points at pre-selected locations and utilizing a Scully Water Detector to determine the presence and depth of oil. The wellpoints consist of 1 ½ inch diameter slotted PVC pipe. The pipes are inserted into the ground to a depth that ensures their penetration below the ground water elevation. The continuous slotted pipe assures that any oil floating on the surface of the water is free to enter the pipe at its natural elevation and also assures that any fluctuations in the underground liquid surface will be accurately reflected within the pipe.

The water detector device was developed for measuring the depth of water that collects beneath fuel oil in storage tanks. This device is battery operated and the probe can be safely passed through fuel oil. An alarm sounds when the probe makes contact with water.

The wellpoint data obtained was plotted in relation to existing facilities. Geotechnical data also was evaluated for analyses of impacts of oil on ground water, and for lateral movement of the underground oil. Tentative hypotheses were formulated which, in some cases, required further investigation including additional site inspections, installation of additional wellpoints to more accurately define the limits of oil-saturated soils, and the observation of routine operations at the various sites.

Selected samples of detected oil were taken and forwarded to the Chemistry Department of the University of Rhode Island for infrared spectroscopy testing to identify the oil.

Large areas investigated

Due to the large areas investigated, only a limited number of wellpoints was initially installed at each site. These exploratory wellpoints were located to provide a reasonable sampling of the site under investigation. Upon the detection of underground oil at any wellpoint, supplementary wellpoints were installed to define the horizontal limits and thickness of the oil-saturated soils encountered.

Placement of the supplementary wellpoints was performed in stages. Upon finding oil in a wellpoint, additional wellpoints were installed around the first to establish the limits of the oil-saturated soils. If oil was found in a supplementary wellpoint, additional wellpoints were installed. This procedure was repeated through several stages until the outer perimeter of wellpoints indicated the absence of oil. At each stage, readings were taken at all wellpoints installed in that stage, as well as those installed in all prior stages.

Observations at south fuel farm

Sixty wellpoints were installed in the South Bulk Fuel Farm area to determine the presence of *oil-saturated soils*. Oil was found in 26 of the 60 wellpoints. The thickness of oil ranged from 0.1 feet to 4.1 feet. Each fuel storage tank is equipped with a drawoff valve, located near the bottom of the tank, to allow for the removal of condensate from the tank. Periodically the valve is opened and the condensate is allowed to drain out into the underground storm water drainage system and pass through the oil-water separator system. At the first sign of clear fuel, the valve is closed.

The South Bulk Fuel Farm was excavated during construction to

emove an underlying layer of organic silt. The excavated area was backfilled with select sand. A strip of the original soil was left in place between the excavation and the peripheral h to keep the excavation dry. The ct of this construction was to create a basin of relatively impermeable original soils filled with permeable sand.

The fuel farm storm water drainage system is located within the sand filled basin created during construction, and any fluid passing through the system is treated by a two-stage oil-water separator system prior to discharge of the water into the Peripheral Ditch. The effluent from this system is monitored for compliance with State and Federal permit requirements.

The hydraulic gradient in the fuel farm dips toward the main run of the storm drainage system which parallels the Peripheral Ditch.

The configuration of the underground oil-saturated soils, as defined by the wellpoint data, suggested that the potential sources of oil were: 1) leakage from mechanical equipment which penetrates cracks and joints in the slabs beneath the equipment; and 2) leakage through the joints in the storm water drainage s used to convey condensate t... the fuel storage tanks to the oil-water separator system.

The well point data also indicated that the subsurface conditions confine the accumulation of oil to within the sand-filled basin area created during the construction of the fuel farm complex; the oil does not penetrate the earth embankment of the Peripheral Ditch, and it does infiltrate into the storm drainage system, where it is captured by the existing oil-water separator system.

Observations at north fuel farm

Twenty-six wellpoints were installed in the decommissioned North Fuel Farm area to establish the presence of any oil-saturated soil concentrations. Oil was found in 14 of the 26 wellpoints. The thickness of oil ranged from 0.1 feet to 2.8 feet. The North Fuel Farm is situated on a thick layer of miscellaneous refuse which is underlain by a deposit of organic silt. The elevation of the storm drainage system draining the North Fuel Farm is higher than the underground oil. Therefore, oil from the identified oil-saturated soils does not infiltrate these lines. Oil is currently being removed from the North Fuel Farm by pumping from two oil recovery wells similar to the types installed in the South Bulk Fuel Farm. These wells are also equipped with automatic skimmers and water level suppression pumps to continually remove the oil that leaches into the wells.

Observations at fuel transfer piping system

Fifty-four wellpoints were installed along the fuel transfer pipes and the Central Terminal Area. Oil was found in 24 of the 54 wellpoints. The thickness of oil ranged from 0.3 feet to 3.6 feet. None of the wellpoints along the main pipe runs revealed accumulations of oil. The lack of oil in the wellpoint along the main fuel pipe runs indicate that this portion of the system is not a source of underground oil at this time.

Some oil was noted in the sump pits located in the crawl space under both Terminals A and B. Oil samples were collected and analyzed for possible source indentification using infrared spectroscopy. The oil-turated soils in the apron areas appeared to occur in isolated locations rather than in a continuous way, and of small significance.

Interim recommendations and possible long-term solutions for the fuel transfer piping system and the Central Terminal Area are directed towards maintaining the integrity of the underground fueling system. An early warning surveillance program, using the existing wellpoints will be initiated to identify system leakage; isolate the leak; promptly perform necessary repairs; and remove any oil resulting from the leak.

Depending on the long term solutions actually implemented, the following elements of a monitoring and maintenance program might be found applicable at the South Bulk Fuel Farm, the North Fuel Farm and the fuel transfer piping system central terminal area, according to the pollution team:

- Modify existing 86 observation wells for permanent installation.
- Plot and evaluate readings of observation wells.
- Maintain records of oil recovered to assess the effectiveness of recovery wells.
- Maintain records of effectiveness of listening posts.
- Conduct periodic testing of hydrant pit sealings.
- Make periodic adjustments of recovery well pumps.

To the visitor at Newark International Airport, the emphasis on water pollution control seems to be one of continuing examination into the problems, improvement of existing systems and a resolve to make them work even better, and finally a team dedication to keeping Newark's system at the top of the field.

38-0993

EFO-M (CEHA)

New Jersey Department of Environmental Protection
COMMUNICATIONS CENTER NOTIFICATION REPORT

Received: 9/26/93 TD Log # 16413
Operator:JOES Case # 93-9-26-1049-14

Notification Type: Facility

Reported By	Affiliation	Phone
BEN BARSOLONA	BRITISH PETRO INC	201-465-2431
Street Address	Municipality	State

Incident Location: Other

Site IN NEWARK BAY		Phone	
Street Address	Municipality	County	State
DOREMUS AVE	PORT NEWARK	ESSEX	NJ

Location Type Commercial Incident Date 9/26/93 Time 1015

Substance Released OIL SHEEN
Amount Released ( )UNK
ID:Known State Liquid CAS# Release Is Continuous
Additional Substances
Substance Contained? N Hazardous Material? Y TCPA? N A310 Letter? Y
COMU CODE: 0714 REF CODE: 001

Incident Description Spill

Injuries? N Public Evac? N Facility Evac? N Public Exposure? N
Police On Scene? N Firemen On Scene? N DEP Requested? N Wind Sp/Dir

Contamination Of Water Receiving Water NEWARK BAY
Status At Scene OIL SHEEN APROX 600 YDS LONG SEEN ON WATER,SOURCE UNK

Responsible Party Known

Party IN NEWARK BAY		Phone	
Contact		Title	
Street Address	Municipality	County	State
DOREUMS AVE	PORT NEWARK	ESSEX	NJ

OFFICIALS NOTIFIED

	NAME	TITLE	PHONE	DATE	TIME
NJSP :	NJSP	FAX		9/26	
MUNIC:	NEWARK CITY	DISP 75	201-733-7400	9/26	1056
OTHER:					

	Name	Affiliation		Method	Date	Time	T/N
1.	BRUCE DOYLE	DRPSR	ERI	Home	9/26	1054	T
2.		DFC		Faxed	9/26		T
3.		OEP	Monitoring	Faxed	9/26		T

COMMENTS

Oil Spill problem w/runoff from airport. The airport drains To 1 outfall at the head of Newark Bay Channel, condition happens when ever there is heavy Rain

PA0985

Jet fuel is spilled at airport

50,000 gallons lost in Newark accident

10/12/88 By Karl Stark
Record Staff Writer

Workers Tuesday were still cleaning up a large jet fuel spill at Newark International Airport, where at least 50,000 gallons leaked onto a construction area after an underground valve was mistakenly left open.

The leak occurred at a construction site where Federal Express is building a cargo ramp and its own taxiway, officials said.

Vincent Bonaventura, the airport's general manager, said a worker doing preventative maintenance mistakenly pressurized the jet fuel system early Sunday morning without realizing that the system had been turned off and left open.

The spill is believed to have begun around 3:30 Sunday morning and was not detected for five hours. By then, at least 50,000 gallons of jet fuel had spilled onto the ground and seeped underground and into a 100-foot-long trench, Bonaventura said.

"No matter how you look at it, it was an expensive spill," he said. The fuel alone is worth more than $100,000, and airport workers have spent many man-hours cleaning it up during the last two days, officials said.

Joseph Hoyle, an inspector for the state Department of Environmental Protection, said the spill will require extensive cleanup to protect the ground water, including the removal of an undetermined amount of tainted soil.

Hoyle said there was no evidence yet of groundwater contamination. The drainage ditch where the fuel collected was 4 to 5 feet underground, or 7 feet above ground water in the area. Hoyle said he was not aware of any fissure in the earth that would have enabled the fuel to rapidly reach the ground water.

State law allows for a fine of up to $25,000 per spill violation. But Hoyle said it was premature to conclude whether a fine would be imposed.

Ogden-Allied owns the fuel distribution network and employed the worker who started the spill. But Bonaventura and other officials said it was unclear who would bear the cleanup cost until the investigation is completed.

No airline traffic was disrupted, because the unpaved site is still under construction and was not being used by commercial aircraft.

New Jersey Department of Environmental Protection
Division of Environmental Quality
Bureau of Emergency Response
Region I

INVESTIGATION

Case #: 88-10-09-1253 File #: 07-14

Investigators: Joseph E. Hoyle Jr. Date: 10/9/88 Time Arrived: 1302
Time Departed:2200

Location: Federal Express
Address: Newark Airport
Newark, N.J.
Location Phone #:

Responsible Party: Port Authority NY&NJ
Mailing Address: Newark Airport

Health Dept. Rep: none Phone #:

Origin of Complaint: George Cook Phone #: (201) 921-2205
Nature of Complaint: Massive fuel (aircraft) spill.

Findings: Responded to an incident involving the uncontrolled release of aircraft fuel.

Upon arrival at the main gate of Federal Express Newark, I met with Mr. George Cook, Port Authority New York/New Jersey. At our meeting it was discussed the chain of events, and reporting procedures. According to Mr. Cook, the spill occurred early in the morning and was not detected until 0800 hours. A P.A. Inspector reported that there was a heavy odor of fuel coming from the tank farm. Notifying the appropriate authority and summoning the fire department and rescue squad they were able to locate where the odor was coming from. Fuel was seen gushing from a line and a-worker quickly turned off the valves to stop the leak.

Mr. Cook escorted me to where the spill occurred. Located at a construction site for Federal Express, it could be seen vac trucks and an F-40 fire/rescue vehicle providing overwatch security for the operation. We inspected the area more closely and where the material had exited from an end line. The supersaturated soil encompasses a perimeter of 200X200 square feet. Mr. Cook explained that a main fuel line runs from the tank farm underneath the apron out to the construction site. Where its supposed to be blocked. Part of the line is exposed and lays in a trench approx. 5 to 7 feet deep. Inside the trench I could see where the fuel had been leaking. There are three isolation valves which service this station line. According to Mr. Cook isolation valve #2 is inoperative and remained open, the other two were opened by someone, or had been left open from previous work. I inquired are there any storm drains in the area and found out that there are. The fuel had made its way into the drains and out into the peripheral ditch. I questioned the potability of this ditch and was informed that it only contained storm runoff water.

Proceeding on with our inspection the next place that we went to was the ditch and there I could observe two vac trucks and containment booms in the water. The material in the water measured 3 inches. I instructed Mr. Cook to have more booms in place both to the East and West of the ones that were already there. Reason for this the weather forecast called for torrential rain showers and possible flooding. Mr. Cook noted that at the time of our inspection the amount of fuel was nearing the 21,000 gallon mark and still pumping. All containment measures are under control.

Finally, we met with Mr. Walter Grigoleit, General Manager of Ogden Allied Fuel. Ogden Allied supplies fuel to all of the terminals at the airport through one centrally located line, the fuel is then branched off according to the terminals needs. I asked Mr. Grigoleit if he knew how much fuel was lost. According to the General Manager it would be another 24 to 48 hours before they could accurately tell how much product was discharged. It would be after all of the distribution slips were turned in. Mr. Grigoleit noted that the site of the spill was being worked by the Lansing Conduit Company, 170-02 93rd Avenue, Jamaica New York, Mr. Dominick (Dick) Licata, (718) 297-5544, which subcontracted out to the Tri-County Asphalt. According to Mr. Grigoleit, there was a maintenance man working last night making his checks of all the valves, his name is Orlando Reberio. Mr. Grigoleit supplied us with an engineering plan of how the construction of the access ramp was to be built. I asked what was the disposition of the end line and was told that in the future as needs require another section of the line would be added.

Again finally having determined the cause of the spill, by which someone had left or opened the secondary feed lines and an isolation valve which normally would be closed, containment and clean up operations in progress, I recommend the following:

1. Verbally issued a cease and desist order.
2. Provide adequate recovery of all product from both the ground and from the water body which has been impacted.
3. Prepare a professionally written document pertaining to the actual cause of the spill including names and functions of the responsible parties.
4. Provide to the Department of Environmental Protection a professionals written document pertaining to groundwater monitoring and possible clean up, a sampling plan of all suspected sites through out the complex.

After making the required recommendations I issued to Mr. George Cook Port Authority 2 (two) Notice of Violations:

1. NJSA 58:10-23.11.C - Discharge of a Hazardous Substance is Prohibited. Discharge of "Jet A" fuel in excess of 21 gallons. Direct result of improper maintenance management. Defective isolation valve.

2. NJSA 58:10-23.11.E - Notification to the Department of Environmental Protection. Failure to notify the New Jersey Department of Environmental Protection in a timely manner. Resultant of miscommunication between levels of management.

After issuing the Notice of Violations I, the writer of this document secured the site.

Conclusions: BER I responded to an incident involving the uncontrolled release of aviation fuel. Upon arrival on scene it was learned that a valve was left open and a fuel line was charged. The time of the incident started in the early morning hours and was not detected until 0800 am. Upon finding the source of the discharge two of the three isolation valves were shut off and the third remained inoperative. Some of the fuel entered into the area storm drains which lead to a peripheral ditch. According to sources this ditch is not a potable water source. Clean up started, and containment of the water. Recovery operations revealed that 21,000 gallons of Jet A fuel. was recovered. I issued two Notice of Violations; 1. Discharge of a Hazardous Substance and 2. Non Notification to the Department. BER I secured the site. No further actions required.

Recommendations: This incident be referred to the following agencies for their input:

1. DHWM-M
2. DWR-M
3. DFG&W

Investigator

27 Oct 88
Date

Supervisor

Date

PA0496

THE PORT OF NEW YORK AUTHORITY
111 Eighth Avenue - at 15th Street, New York, N.Y. 10011

Planning and Development Department
Roger H. Gilman, Director

Hayden B. Johnson, Deputy Director Telephone 620-7225

November 18, 1971

Mr. Christian T. Hoffman, Jr.
Supervising Public Health Engineer
Water Pollution Control Program
New Jersey State Department of
Environmental Protection
P.O. Box 1540
Trenton, New Jersey 08625

Dear Mr. Hoffman:

At the meeting in the offices of the Interstate Sanitation Commission on October 4, it was agreed that we would submit to you, and to the New York State Department of Environmental Conservation and the Interstate Sanitation Commission, a list of all outfalls at Port Authority facilities which discharge into navigable waters. We have now developed such a list, a copy of which is enclosed for your information.

At the present time, we are analyzing each of the outfalls in detail to determine which may fall under the provisions of the Refuse Act of 1899. We expect, in the near future, to make application for the required permits to the Corps of Engineers for all such outfalls.

Sincerely,

Hayden B. Johnson, Coordinator
Office for Environmental Programs

BAC 00003

INVENTORY OF
WASTE WATER OUTFALLS
AT PORT OF NEW YORK AUTHORITY FACILITIES
DISCHARGING INTO
NAVIGABLE WATERS OR TRIBUTARIES

The Port of New York Authority
Office for Environmental Programs
November 1971

INTRODUCTION

In May 1970, the Office for Environmental Programs was created within the Planning and Development Department of The Port of New York Authority. The new office was set up primarily to coordinate the many different activities and programs carried out throughout all phases of the Port Authority's operations which have a bearing on environmental matters.

Early in 1971, primarily on the basis of a forthcoming program under which the U.S. Army Corps of Engineers would issue permits for various outfalls discharging into navigable waters or their tributaries, the Office for Environmental Programs requested the Port Authority's Inspection and Safety Division to prepare an inventory of all such outfalls at Port Authority facilities. A preliminary report on this subject was made in May and further data developed over the summer.

The material which follows discusses the matter of storm and sanitary sewage outfalls at each of our facilities. It also sets forth programs now under way or being planned to eliminate all sanitary sewage outfalls and to take action to prevent contaminants from entering the storm sewer systems at each facility.

New Jersey

Hoboken Port Authority Marine Terminal

All sanitary sewage at the Hoboken piers is discharged into the municipal sewer system.

A separate storm sewer system discharges into the Hudson River.

Elizabeth Port Authority Marine Terminal

All sanitary sewage from the buildings at Elizabeth Port Authority Marine Terminals is discharged into the municipal sewer system with the exception of Buildings Nos. 104 and 193, which are served by septic tanks and leaching fields. The leaching fields are currently being investigated to assure that they are functioning correctly and are of adequate size and design.

A separate storm sewer system discharges into the Elizabeth Channel and Newark Bay.

Port Newark - Port Authority Marine Terminal

Sanitary sewage from most of Port Newark is now discharged into a combination storm-sanitary sewer system which discharges into Newark Bay and/or the Newark Channel at the rate of 100,000 gallons per day from various outfalls. A project for new sanitary sewers to divert all sanitary sewage presently discharged from the north side of Port Newark to the Doremus Avenue interceptor main is scheduled for completion by the end of 1971.

On the south side of Port Newark, contract documents are being prepared for an interceptor main which will receive sanitary sewage from all buildings on the south side of Newark Channel, including some sewage from various commercial uses. The project is scheduled for completion in the latter part of 1972.

When these projects are completed, only storm water will be discharged into the Newark Channel and Newark Bay through the storm sewer system.

PORT AUTHORITY TRANS HUDSON (PATH) SYSTEM

New Jersey and New York

All sanitary sewage from the PATH system is discharged into the various municipal sewer systems in the areas served by PATH.

There are two New Jersey outfalls and only one New York outfall in the PATH system. All three serve to discharge Hudson River water seepage back into the river.

PORT AUTHORITY TUNNELS AND BRIDGES

New York And New Jersey

George Washington Bridge

Storm water from the George Washington Bridge decks and roadways is discharged directly into the Hudson River. During winter months, some salt used for melting ice and snow is in the runoff. When the walls of the Bridge's tunnel approaches are washed, depending on soil accumulations, a small amount of water containing detergents and various automotive emission products deposited on walls from passing vehicles may also be discharged into the River. Detergents which are considered environmentally sound are specified for the washings.

All sanitary sewage from the toll booths and Administrative buildings is discharged into municipal sewer systems.

Goethals Bridge, Outerbridge Crossing and Bayonne Bridge

Storm water from the decks and roadways is discharged into various receiving bodies of water from these Bridges. During winter months, there is some salt, used for melting ice and snow, in the runoff.

The Goethals Bridge has its own package sewage treatment plant, with an estimated average daily discharge of 2,000 gallons a day. The plant's effluent is checked daily to determine its chlorine residual. Personnel operating the plant have had appropriate formal training, and a permit for the plant was obtained from the State of New York when operations began. Treated effluent from the plant is pumped into a drainage ditch which eventually reaches the Arthur Kill.

Sanitary sewage from the toll booths and administrative buildings at the Bayonne Bridge is discharged into the New York City municipal sewer system. At the Outerbridge Crossing two septic tanks on the New York side collect sanitary sewage from a field office and a garage. Plans are being developed to provide a package treatment plant at the Outerbridge Crossing similar to that currently operating at the Goethals Bridge.

Holland Tunnel

Storm water which accumulates on the Holland Tunnel roadways is pumped to both the New York and New Jersey shores and discharged directly into the Hudson River. This water may contain some detergents which are used for washing the tunnel walls as well as various automotive emission products deposited on walls from vehicles passing through the Tunnel. Detergents which are considered environmentally sound are specified for the washings.

The River Vent Buildings have toilets which discharge into the river, but the amount of these discharges is very small since there are no personnel routinely stationed in these buildings. The estimated gallons of sanitary sewage from the River Vent Buildings is approximately 150 gallons per day. The Authority is presently investigating the substitution of chemical toilets for water carriage toilets, as well as the feasibility of connecting the existing toilets to the City sewer system.

Lincoln Tunnel

Storm water which has accumulated on the Lincoln Tunnel roadways is pumped to the New York and New Jersey shores and discharged directly into the Hudson River. This water may contain some detergents used for washing the Tunnel walls as well as various automotive emission products

[redacted] Detergents which are considered environmentally sound are specified for the washings.

Sanitary wastes from the New York River Buildings are discharged into the Hudson River, and septic tank effluent from the New Jersey River Buildings is discharged into the River, although some of this may be absorbed by surrounding soil. The estimated gallons of sanitary sewage from each of the River Vent Buildings is approximately 150 gallons per day. The [redacted] system, and studies are also under way to determine the most feasible means of discharging storm and waste water into the municipal sewage system.

Staff is also investigating the feasibility of discharging sanitary wastes from the New York River Building into the peripheral sewer now being constructed along the Hudson River waterfront by the City of New York.

PORT AUTHORITY AIRPORTS

The Port Authority is currently developing a program to provide long-range solutions to the storm water problems at the four airports and the two heliports. The first stage of this program, which will identify the problem, will probably take about a year to complete. It is assumed that this study will develop alternate solutions, and that a second stage, implementing the recommendations, will get underway within a year.

New Jersey

Newark Airport

All sanitary sewage from the new terminal complex will discharge into the Newark city sewer system. Plans are currently being prepared for a collector system to carry sanitary wastes from the existing facilities north of Runway 11/29, including the maintenance base at the northeast corner of Newark Airport, into the city system. The sewage from these buildings, which amounts to approximately 1,200 gallons per day, is currently discharged into the peripheral ditch which in turn discharges into the head of the Port Newark Channel.

Most of the storm water at Newark Airport also runs off into the Peripheral Ditch. Recently, the water entering this ditch from off Airport sources was evaluated and found to be of a very low quality, composed of natural land runoff water, storm water, industrial waste water and sanitary waste water. The presence of both industrial and sanitary wastes was demonstrated by laboratory tests. This condition can only be corrected by joint action with other agencies. However, the Authority is studying several short-term methods of improving the quality of the water in the ditch as it flows through airport property, including the installation of aeration equipment to increase the digestion rate of the wastes and the use of absorbent materials to remove oily wastes from the water.

Teterboro Airport

Storm water runoff from runways and taxiways at Teterboro Airport is discharged into two drainage ditches. Both of them, labeled the East Riser and West Riser ditches, originate off the airport and flow through

the property, eventually reaching the Hackensack River. Both ditches are maintained by Bergen County and, according to county officials, contain only storm water from the surrounding areas.

All sanitary sewage from the Administrative Building and other buildings on the airport is discharged into the municipal sanitary sewage system.