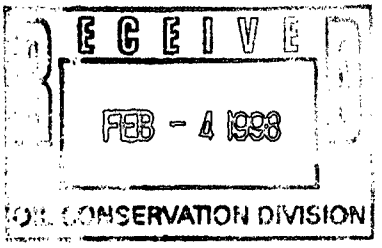
1R - 186

REPORTS

DATE:

1/30/1998

NORTHLAND OPERATING COMPANY



January 30, 1998

Mr. William C. Olson, Hydrogeologist
Environmental Bureau – Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources Department
2040 South Pacheco
Santa Fe, New Mexico 87505

Re: Northland Operating Playa Spill
SE/4 NW/4, Section 30, T13S, R32E

Dear Mr. Olson:

We are in receipt of your letter dated January 12, 1998 regarding our Release Notification report (Form C-141, attached) for the referenced spill. This report provides details of the March 11, 1997 spill, including the note that the fiberglass line was breached in two places by a vehicle not owned or operated by Northland Operating Company. This line had been laid by a previous operator in close proximity to the playa. This saltwater transfer line from the Tract 20 tank battery to the Saltwater Plant #2 was abandoned after this incident and replaced with a line laid well away from the playa. Mr. Ed Marney (a Northland employee) reports that both he and an OCD representative took water samples from the playa lake about one month after the release (circa April 1997). Mr. Marney reports that chlorides approximated 2200 ppm for his sample; chlorides for the OCD sample were reported to be 2600 ppm. Later in the summer (circa late June/early July), it is reported that OCD took another water sample from the playa. Chloride level in this sample was reported to be 13,000 ppm. OCD requested that a water pump be set to remove the high-salinity water from the playa lake. We estimate more than 4000 bbls of water was pumped from the playa into the saltwater injection system over a period of approximately one month. Rains after this period brought chloride levels down in the composite playa water and pumping was discontinued. No further pumping has taken place since that time.

Given the concern raised by Ms. Kieling in her Notice of Violation letter dated October 29, 1997 regarding pits at our Rock Queen Unit Tract 20 tank battery, Northland elected to take water samples from this playa lake and from water wells in the area. The results of those analyses are attached for your review. The water level in the playa lake was relatively low when the sample was taken November 20, 1997. Accordingly, the total dissolved solids was found to be elevated (9399 mg/L) in the sample; chloride level was reported as 5346 mg/L. BTEX levels in all three water samples were non-detectable (below 1.0 micrograms/L).

Northland is prepared to sample the playa lake water for analysis as directed by your January 12 letter. Please be advised that we plan to obtain this water sample from the playa at 12 noon on Monday February 2, 1998. The OCD office in Hobbs was notified regarding this scheduled sampling on Friday January 30. A sample of the saltwater produced with the

3500 OAK LAWN, L.B. #31 • DALLAS, TEXAS • 75219-4398
PHONE: 214-521-9959 • FAX: 214-521-9960

crude oil on the Rock Queen Unit will also be taken for analysis. Northland would like to reiterate our willingness to pump additional water from this playa lake when TDS levels exceed 6000 ppm and to conduct periodic testing to ascertain when those levels are exceeded. We think it reasonable to expect that TDS levels will become elevated during periods of scarce rainfall when the playa water level is low. A guide to the use of saline water for livestock and poultry from the National Academy of Sciences is enclosed for your reference.

Questions or suggestions regarding this issue may be directed to the undersigned at 940-723-8511 (alpha pager 940-716-7822) or Mr. Ed Butler in Dallas. All correspondence should be sent to Mr. Butler in Dallas.

Respectfully,

John E. Rhoads
Agent

Enclosures

Cc: Mr. Wayne Price, OCD, Hobbs
Mr. Ed Butler, Northland Operating

District I - (505) 393-6161
P. O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 South First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

State of New Mexico
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Form C-141
Originated 2/13/97

Submit 2 copies to Appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name	Contact
Northland Operating Co.	Robert E. Mc Knight
Address	**Telephone No.**
3500 Oak Lawn, Suite 380, Dallas, Texas 75219	214-521-9959
Facility Name	**Facility Type**
Rock Queen Unit, Tract 20 Tank	214-521-9959

Surface Owner	Mineral Owner	Lease No.
State of New Mexico	State of New Mexico	E-35-1

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	30	13S	32E	3375	Sec. 30	2000	Sec. 30	Chaves

NATURE OF RELEASE

Type of Release	Volume of Release	Volume Recovered
Produced Saltwater	600 BSW, 2 Bbl Oil	2 Bbl Oil
Source of Release Ruptured water transfer line from tank battery to water injection station.	**Date and Hour of Occurrence** 3/6/97 0800	**Date and Hour of Discovery** 3/6/97 1400 Hrs.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	**If YES, To Whom?** National Response Center Rpt.# 380283	
By Whom? Robert E. Mc Knight	**Date and Hour** 3/11/97 1600 Hrs	
Was a Watercourse Reached? ☒ Yes ☐ No Isolated Playa Lake	**If YES, Volume Impacting the Watercourse.** 600 BSW, less than 3 Bbl Oil	

If a Watercourse was Impacted, Describe Fully:* Fiberglass water transfer line from Track 20 tank battery to water injection plant was ruptured when run over by a vehicle. The transfer line was broken in two (2) places. Saltwater with a trace of oil flowed out the break for approx. 4 hrs. into the Playa Lake.

Describe Cause of Problem and Remedial Action Taken:* Oil floating on the playa lake surface was removed with a vaccum truck. Oil on the lake rim was removed and cleaned up with a backhoe and by tilling the soil. The remaining volume of water in the lake, est. 10,000 Bbls is being pumped out of the Playa lake. The fiber glass pipeline has been removed and a new pipeline installed at a location away from the playa lake so that any future rupture of the water transfer line will not impact the lake.

Describe Area Affected and Cleanup Action Taken:*

Describe General Conditions Prevailing (Temperature, Precipitation, etc.):*

The weather was cool, clear and dry.

I hereby certify that the information given above is true and complete to the best of my knowledge and belief.
Signature: Robert E. Mc Knight
Printed Name: Robert E. Mc Knight
Title: Petroleum Engineer
Date: August 8, 1997 Phone: 214-521-9959

OIL CONSERVATION DIVISION

Approved by District Supervisor:
Approval Date: Expiration Date:
Conditions of Approval: Attached ☐

* Attach Additional Sheets If Necessary

NTCC
North Texas Chemical Consultants
Laboratory
Environmental & Analytical Services
2000 Old Burk Road Wichita Falls Texas 76304-1714
940-723-5868 / Fax 940-723-5886

Sample Submitted By: Northland Operating
719 Scott Suite 624
Wichita Falls, Texas 76301
Attention: John Rhodes

Report Date: December 9, 1997
Report Number: JR-003
Received Date: November 22, 1997
Received Time: 1401
Chain of Custody #: 2920

SAMPLE ID: Freshwater/Surfwater - November 20, 1997; 1250 Grab						
Parameter	*Method*	*Detection Limit mg/L*	*Analyst*	*Analyzed Date*	*Time*	*Results mg/L*
Dissolved Solids, Total	160.1	1.	JQ	12/02	1630	**9399.**
Chloride, as Cl^-	325.3	1.	JQ	12/02	1730	**5346.**

R.J. Williams, Ph.D.
President

Methods utilized are from "Methods for Chemical Analysis of Water and Wastes" EPA-600/4-79-020,"Test Methods for Evaluating Solid Waste EPA-SW846", and "Standard Methods for the Examination of Water and Wastewater" 18th Edition.

Intertek Testing Services
Environmental Laboratories

ANALYTICAL REPORT

DATE RECEIVED : 25-NOV-1997

REPORT NUMBER : D97-14250
REPORT DATE : 30-NOV-1997

ATTENTION : R.J. Williams
SAMPLE SUBMITTED BY : North Texas Chemical Consultants Laboratory,
ADDRESS : 2000 Old Burk Road
: Wichita Falls, Tx. 76304

PROJECT : JR-000

Included in this data package are the analytical results for the sample group which you have submitted to Intertek Testing Services for analysis. These results are representative of the samples as received by the laboratory.

The information contained herein has undergone extensive review and is deemed accurate and complete. Sample analysis and quality control were performed in accordance with all applicable protocols. Please refrain from reproducing this report except in its entirety.

If you have any questions regarding this report and its associated materials please call your Project Manager at (972) 238-5591.

We appreciate the opportunity to serve you and look forward to providing continued service in the future.

Martin Jeffus
General Manager

Intertek Testing Services NA Inc.
1089 East Collins Boulevard Richardson, TX 75081
Telephone (972) 238-5591 Fax (972) 238-5592

Intertek Testing Services
Environmental Laboratories

DATE RECEIVED : 25-NOV-1997

REPORT NUMBER : D97-14250-1
REPORT DATE : 30-NOV-1997

SAMPLE SUBMITTED BY : North Texas Chemical Consultants Laboratory,
ADDRESS : 2000 Old Burk Road
: Wichita Falls, Tx. 76304
ATTENTION : R.J. Williams

SAMPLE MATRIX : Water
ID MARKS : JR001
PROJECT : JR-000
DATE SAMPLED : 21-NOV-1997
ANALYSIS METHOD : EPA 8020B /1
ANALYZED BY : CNA
ANALYZED ON : 27-NOV-1997
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 34-112697

BTEX ANALYSIS					
TEST REQUESTED	DETECTION LIMIT		RESULTS		
Benzene	1.0	µg/L	<	1.0	µg/L
Toluene	1.0	µg/L	<	1.0	µg/L
Ethyl benzene	1.0	µg/L	<	1.0	µg/L
Xylenes	1.0	µg/L	<	1.0	µg/L
BTEX (total)			<	1.0	µg/L #

QUALITY CONTROL DATA		
SURROGATE COMPOUND		SPIKE RECOVERED
Bromofluorobenzene		99.6 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

Intertek Testing Services NA Inc.
1089 East Collins Boulevard Richardson, TX 75081
Telephone (972) 238-5591 Fax (972) 238-5592

Intertek Testing Services
Environmental Laboratories

DATE RECEIVED : 25-NOV-1997

REPORT NUMBER : D97-14250-2
REPORT DATE : 30-NOV-1997

SAMPLE SUBMITTED BY : North Texas Chemical Consultants Laboratory,
ADDRESS : 2000 Old Burk Road
: Wichita Falls, Tx. 76304
ATTENTION : R.J. Williams

SAMPLE MATRIX : Water
ID MARKS : JR002
PROJECT : JR-000
DATE SAMPLED : 21-NOV-1997
ANALYSIS METHOD : EPA 8020B /1
ANALYZED BY : CNA
ANALYZED ON : 27-NOV-1997
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 34-112697

BTEX ANALYSIS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Benzene	1.0 µg/L	< 1.0 µg/L
Toluene	1.0 µg/L	< 1.0 µg/L
Ethyl benzene	1.0 µg/L	< 1.0 µg/L
Xylenes	1.0 µg/L	< 1.0 µg/L
BTEX (total)		< 1.0 µg/L #

QUALITY CONTROL DATA		
SURROGATE COMPOUND		SPIKE RECOVERED
Bromofluorobenzene		99.1 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

Intertek Testing Services NA Inc.
1089 East Collins Boulevard Richardson, TX 75081
Telephone (972) 238-5591 Fax (972) 238-5592

Intertek Testing Services
Environmental Laboratories

DATE RECEIVED : 25-NOV-1997

REPORT NUMBER : D97-14250-3
REPORT DATE : 30-NOV-1997

SAMPLE SUBMITTED BY : North Texas Chemical Consultants Laboratory,
ADDRESS : 2000 Old Burk Road
: Wichita Falls, Tx. 76304
ATTENTION : R.J. Williams

SAMPLE MATRIX : Water
ID MARKS : JR003
PROJECT : JR-000
DATE SAMPLED : 21-NOV-1997
ANALYSIS METHOD : EPA 8020B /1
ANALYZED BY : CNA
ANALYZED ON : 27-NOV-1997
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 34-112697

BTEX ANALYSIS			
TEST REQUESTED	DETECTION LIMIT	RESULTS	
Benzene	1.0 µg/L	< 1.0 µg/L	
Toluene	1.0 µg/L	< 1.0 µg/L	
Ethyl benzene	1.0 µg/L	< 1.0 µg/L	
Xylenes	1.0 µg/L	< 1.0 µg/L	
BTEX (total)		< 1.0 µg/L	#

QUALITY CONTROL DATA		
SURROGATE COMPOUND		SPIKE RECOVERED
Bromofluorobenzene		101 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

Intertek Testing Services NA Inc.
1089 East Collins Boulevard Richardson, TX 75081
Telephone (972) 238-5591 Fax (972) 238-5592

Intertek Testing Services
Environmental Laboratories

REPORT DATE : 30-NOV-1997 REPORT NUMBER : D97-14250

SAMPLE SUBMITTED BY : North Texas Chemical Consultants Laboratory,
ATTENTION : R.J. Williams
PROJECT : JR-000

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Benzene	Ethylbenzene
BATCH NO.	34-112697	34-112697
LCS LOT NO.	AC033-85B	AC033-85B
PREP METHOD	---	---
PREPARED BY	---	---
ANALYSIS METHOD	EPA 8020B	EPA 8020B
ANALYZED BY	CNA	CNA
UNITS	µg/L	µg/L
METHOD BLANK	< 1.00	< 1.00
SPIKE LEVEL	500	500
SPK REC LIMITS	75.0 - 125	75.0 - 125
SPK RPD LIMITS	20.0	20.0
MS RESULT	530	537
MS RECOVERY %	106	107
MSD RESULT	513	518
MSD RECOVERY %	103	104
MS/MSD RPD %	3.26	3.60
BS RESULT	NA	NA
BS RECOVERY %	NA	NA
BSD RESULT	NA	NA
BSD RECOVERY %	NA	NA
BS/BSD RPD %	NA	NA
DUP RPD LIMITS	---	---
DUPLICATE RPD %	NA	NA
LCS LEVEL	50.0	50.0
LCS REC LIMITS	75.0 - 125	75.0 - 125
LCS RESULT	52.1	52.9
LCS RECOVERY %	104	106
SPIKE SAMPLE ID	14251-7	14251-7
SAMPLE VALUE	< 1.00	< 1.00
DUP SAMPLE ID	---	---
DUP SAMPLE VAL/1	---	---
DUP SAMPLE VAL/2	---	---

NA Not applicable

Intertek Testing Services NA Inc.
1089 East Collins Boulevard Richardson, TX 75081
Telephone (972) 238-5591 Fax (972) 238-5592

NTCC
North Texas Chemical Consultants
Laboratory
Environmental & Analytical Services
2000 Old Burk Road Wichita Falls Texas 76304-1714
817-723-5868

CHAIN OF CUSTODY RECORD

№ 2920

CUSTOMER INFORMATION

COMPANY: NORTHLAND OPERATING

SEND REPORT TO: JOHN RHODES

ADDRESS: 719 SCOTT - SUITE 624

CITY: WICHITA FALLS | STATE: TX | ZIP: 76301

TELEPHONE: (940) 723 8511 | FAX: 940 766-3089

BILLING INFORMATION

ADDRESS:

CITY: SAME | STATE: | ZIP:

PO NUMBER: | TERMS:

PROJECT INFORAMATION

LOCATION: | NUMBER: Pit Closures - Rock Queen Unit

CITY: | STATE: | ZIP:

SAMPLER: John Rhodes | SIGNATURE: John Rhodes

REQUIRED TURNAROUND TIME: ☒ NORMAL

* expedited service may require surcharge ☐ EXPEDITED *

SHIPMENT METHOD: UPS | DATE: 11/24/97

CUSTODY SEALED: Yes | DATE: 11/20/97

NTCC LABORATORY JOB NUMBER: JR-000

COMMENTS:

REQUESTED ANALYSES

NTCC LAB ID	SAMPLE ID AND FIELD DESCRIPTION	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	TYPE G	TYPE C	PRESERVATIVE	NUMBER OF CONTAINERS	HOLD	BTEX	Cl - TDS by NTCC	COMMENTS
JR-001	WINDMILL Water 0.4 MI N SEP 2	11/20/97	12:00	W	✓					X		ITS's
JR-002	WINDMILL Water 2.4 MI S - SEP 2	11/20/97	12:20	W	✓					X		Do BTEX
JR-003	Fresh Water Pkup Surface	11/20/97	12:50	W	✓					X	X	TESTING ONLY
JR-004	Crude Oil Sep	11/20/97	1:20	Oil	✓				X			

RELINQUISHED BY:	DATE: 11/22/97	TIME: 14:01	RECEIVED BY:	DATE:	TIME:
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
	RECEIVED IN LABORATORY BY:			DATE:	TIME:

NTCC
North Texas Chemical Consultants
Laboratory
Environmental & Analytical Services
2000 Old Burk Road Wichita Falls Texas 76304-1714
817-723-5868

CHAIN OF CUSTODY RECORD

№ 2921

CUSTOMER INFORMATION

COMPANY: NTCC LABORATORY
SEND REPORT TO: R.J. WILLIAMS
ADDRESS: 2000 OLD BURK RD
CITY: WICHITA FALLS | STATE: TX | ZIP: 76304
TELEPHONE: 940-723-5566 | FAX: 940-723-5660

BILLING INFORMATION

ADDRESS: (SAME)
CITY: | STATE: | ZIP:
PO NUMBER: | TERMS:

PROJECT INFORAMATION

LOCATION: NORTHLAND OPERATING | NUMBER:
CITY: WICHITA FALLS | STATE: | ZIP:
SAMPLER: JOHN RHODES | SIGNATURE:

REQUIRED TURNAROUND TIME: ☐ NORMAL
* expedited service may require surcharge ☐ EXPEDITED *
SHIPMENT METHOD: UPS | DATE: 11/24/97
CUSTODY SEALED: YES | DATE: 11/24/97
NTCC LABORATORY JOB NUMBER: JR-006
COMMENTS:

REQUESTED ANALYSES

NTCC LAB ID	SAMPLE ID AND FIELD DESCRIPTION	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	TYPE G	TYPE C	PRESERVATIVE	NUMBER OF CONTAINERS	BTEX	COMMENTS
JR001	WINDMILL WATER 0.4 MI N	11/24/97	12:10	W	X		4°C	2	X	14250-1
JR002	WINDMILL WATER 2.4 MI S	11/24/97	12:20	W	X		4°C	2	X	2
JR003	FRESH WATER	11/24/97	12:50	W	X		4°C	2	X	3

ORIGINAL

RELINQUISHED BY:	DATE: 11/24/97	TIME: 2:30	RECEIVED BY:	DATE:	TIME:
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
	RECEIVED IN LABORATORY BY: B. Wilson			DATE: 11-25-97	TIME: 1035

Table 1. A Guide to the Use of Saline Water for Livestock and Poultry

*Total dissolved solids (milligrams/liter or parts/million)**	*Comments*
Less than 1000	From the standpoint of its dissolved solids this water should be excellent for all classes of livestock.
1000 to 2999	This water should be satisfactory for all classes of livestock. Those waters approaching the upper limit may cause some watery droppings in poultry, but they should not adversely affect the health or production of the birds.
3000 to 4999	This water should be satisfactory for livestock. If not accustomed to it they may refuse to drink it for a few days, but they will in time adapt to it. If sulfate salts predominate, they may show temporary diarrhea, but this should not harm them. It is, however, a poor to unsatisfactory water for poultry. It may cause watery feces, and particularly near the upper limit it may cause increased mortality and decreased growth, especially in turkey poults.
5000 to 6999	This water can be used for livestock except those that are pregnant or lactating, without seriously affecting their health or productivity. It may have some laxative effects and be refused by the animals until they become accustomed to it. It is unsatisfactory for poultry.
7000 to 10,000	This is a poor livestock water that should not be used for poultry or swine. It can be used for older, low-producing ruminants or horses that are not pregnant or lactating with reasonable safety.
Over 10,000	This water is considered unsatisfactory for all classes of livestock.

*Electrical conductivity expressed in micromhos per centimeter at 25° C can be substituted directly for total dissolved solids without introducing a great error in interpretation.