



DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 377TH AIR BASE WING (AFMC)  
Certified 577 790 364

 ENTERED

19 May 00

MEMORANDUM FOR MS. JENNIFER PARKER  
GROUNDWATER QUALITY BUREAU  
ASSESSMENT AND ABATEMENT SECTION  
NEW MEXICO ENVIRONMENT DEPARTMENT  
PO BOX 26110  
SANTA FE NM 87502

FROM: 377 ABW/EM  
2050 Wyoming Blvd SE,  
Building 20685, Suite 125  
Kirtland AFB NM 87117-5270

SUBJECT: Stage I Abatement Plan for ST-106, Kirtland AFB Bulk Fuels Facility, 19  
April 2000

1. This memo confirms the conversation between you and Mr. Mark Holmes of my staff. The conversation concerned the New Mexico Environment Department (NMED) Groundwater Quality Bureau's (GWQB) conditional approval of the subject abatement plan.

2. The conditions of the approval and our response (in Italics) are as follows:

- The GWQB's review and approval of the subject abatement plan will be limited to the releases Kirtland AFB (KAFB) reported to the NMED in the 7 and 15-Day Notifications dated 19 Nov and 16 Dec 99 respectively.

*KAFB will limit the final Investigation Report submitted to the GWQB to the releases reported to the GWQB. Results of any additional investigation will be reported to the Hazardous and Radioactive Materials Bureau.*

- Volumes of the reported releases will be specified in the text of the abatement plan.

*See attachment 1.*

- The investigation of the reported release from lines 22 and 23, between the offloading rack and the pumphouse, will include the determination of the vertical and horizontal extent of any contamination discovered.

*See attachment 1.*

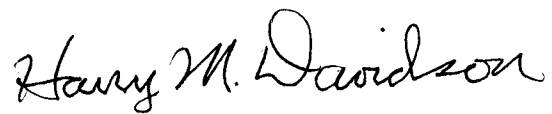
KAFB3561



3. Field work is scheduled for 5-12 Jun 00.

4. Additionally, as requested by the GWQB, we are submitting results from the 150 percent hydrostatic line testing at the Bulk Fuels Storage Facility. The lines tested include the two JP-8 product lines from the pumphouse (Building 1033) to the two aboveground storage tanks (Tanks 22 and 23) and the two lines from the pumphouse (Building 1033) to the JP-8 product fillstands (4, 5, 6 and 7). All of the lines passed. The test results confirm the preliminary test results. These lines are not included in the subject conditionally approved abatement workplan.

5. Please contact Mr. Mark Holmes at 505-846-9005 or me at 505-846-9002 if you have any questions on this matter.



HARRY M. DAVIDSON  
Acting Chief, Restoration Branch  
Environmental Management Division

Attachments:

1. Addendum to the Abatement Plan
2. Hydrostatic line test results

cc:

NMED-HRMB (Mr. Kieling) w/o atchs  
NMED-HRMB KAFB (Mr. R.Rocha) w/o atchs  
EPA Region 6 (Ms. Tellez) 2 copies w/o atchs  
HQ AFMC/CEVC (Mr. Fort) w/o atchs  
AFCEE (Mr. Arnold) w/o atchs  
CH2MHILL (Ms. Minchak) w/o atchs  
377 ABW/EMC (Mr. Montano) w/o atchs

**Addendum to Stage 1 Abatement Plan ST-106,  
Kirtland AFB Bulk Fuels Facility  
May 15, 2000**

The following additional information is being provided to supplement the final Stage 1 Abatement Plan submitted for ST-106, Kirtland AFB Bulk Fuels Facility on 19 April 2000.

1. As was indicated in the 7-day and 15-day notifications, submitted 19 November and 16 December 2000, respectively, the specific details of the three reported November 1999 releases at the Kirtland Air Force Base Bulk Fuels Facility are as follows:

*Per 20 NMAC 6.2 1203.A.1.c. the date, time, location, and duration of the discharge;*

Discharge #1:

11 Nov 99; 10:00 am; Kirtland Air Force Base Bulk Fuels Facility – JP-8 off-loading rack, 14” diameter underground pipeline #22 hydrostatic pressure test failure; duration of the discharge is unknown, duration of the test was 11 minutes

Discharge #2:

12 Nov 99; 11:45 am; Kirtland Air Force Base Bulk Fuels Facility – JP-8 off-loading rack, cam-lock coupling failure during 14” diameter underground pipeline #23 hydrostatic pressure test; duration of the discharge - 2 to 3 minutes

Discharge #3:

13 Nov 99; 10:00 am; Kirtland Air Force Base Bulk Fuels Facility – JP-8 off-loading rack, 14” diameter underground pipeline #23 hydrostatic pressure test failure; duration of the discharge – 30 seconds during the test

*Per 20 NMAC 6.2 1203.A.1.d. the source and cause of discharge;*

Discharge #1:

The source of the discharge was from the JP-8 off-loading rack, 14” diameter underground pipeline #22. The cause of the discharge was loss of pipeline integrity.

Discharge #2:

The source of the discharge was from the cam-lock coupling which failed during hydrostatic pressure testing of the JP-8 off-loading rack, 14” diameter underground pipeline #23. The cause of the discharge was a result of a faulty cam-lock coupling.

Discharge #3:

The source of the discharge was from the JP-8 off-loading rack, 14” diameter underground pipeline #23. The cause of the discharge was a result of loss of pipeline integrity.

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***Per 20 NMAC 6.2 1203.A.1.e. description of the discharge, including its chemical composition;***

**Discharge #1:**

On 11 Nov 99, KAFB fuels maintenance personnel conducted hydrostatic pressure testing of underground pipeline #22 which runs from the fuel off-loading rack to the pump house. The test failed, showing a loss of 70 PSI (100 PSI to 30 PSI in 30 seconds). It is not known how long this pipeline has been in a state of failure. The chemical composition of the discharge is JP-8 aircraft fuel.

**Discharge #2:**

On 12 Nov 99, following the failure of pipeline #22, KAFB fuels maintenance personnel conducted hydrostatic pressure testing of secondary underground pipeline #23 which runs from the fuel off-loading rack to the pump house. It is believed this line has not been used at the facility since the 1980s. During the test, fuel was observed flowing out of a cam-lock coupling onto the ground surface. Surface soils, in the immediate area of the off-loading rack, and an area north of the off-loading rack measuring approximately 25 ft. by 75 ft. were affected by the spill. The chemical composition of the discharge is JP-8 aircraft fuel.

**Discharge #3:**

On 13 Nov 99, following repair of the cam-lock coupling, KAFB fuels maintenance personnel again initiated hydrostatic pressure testing of underground pipeline #23. The test failed, showing a loss of 100 PSI (100 PSI to 0 PSI in 30 seconds). Fuel was observed flowing up through the ground surface adjacent to the off-loading rack. Testing was immediately discontinued. It is not known how long this pipeline has been in a state of failure, however, it is believed pipeline #23 has not been used since the 1980s. The chemical composition of the discharge is JP-8 aircraft fuel.

***Per 20 NMAC 6.2 1203.A.1.f. the estimated volume of the discharge;***

**Discharge #1:**

Unknown. Fuel inventory records indicate a loss of approximately 97,171 gallons (0.36% of total handled ) over the past 12 months. Some of the loss can be attributed to variation of fuel temperature and density readings during measurements, malfunctions of the automatic tank gauging system, line displacement occurrences during receipt and transfer operations, and vapor losses occurring during receipts and transfers through the floating roofs of the two large storage tanks.

**Discharge #2:**

Approximately 200 to 400 gallons

**Discharge #3:**

Approximately 30 gallons

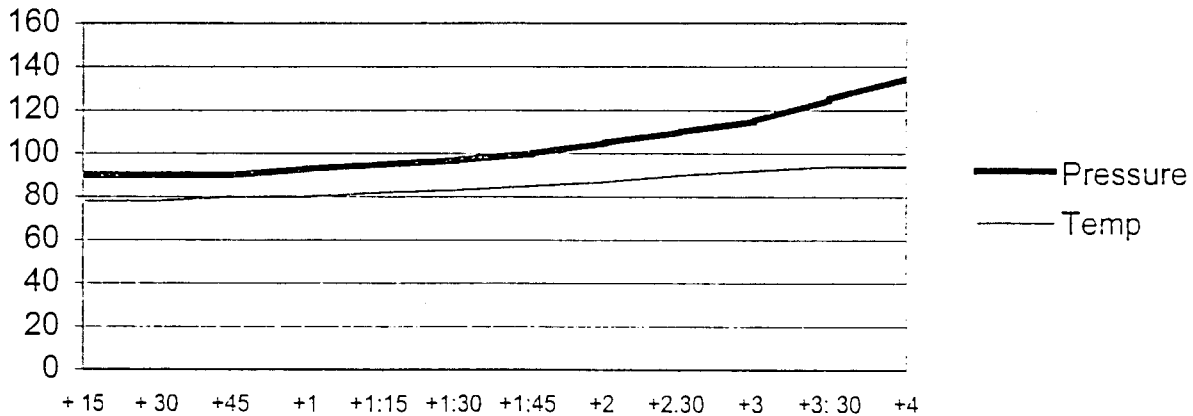
2. Further clarification was also requested by NMED on how the subsurface investigation of the failed 14-inch diameter belowground pipelines that transfer fuel from the offloading rack to the pump house at the ST-106 site will define the horizontal extent of any contamination encountered. The installation of seven borings, spaced at 50-ft intervals, along the 300-ft length of the belowground pipeline are proposed. If contamination is encountered in any of these proposed borings, additional borings, oriented perpendicular to the pipelines in the area of the identified contamination, will be installed to define the horizontal extent of contamination in that area. Also, if necessary, additional borings, at a spacing closer than 50 ft, will be installed parallel to the pipelines to further assist in the horizontal delineation. If a horizontal delineation boring indicates the presence of contamination in that area, additional borings will be installed in the given direction until the full lateral extent of contamination in that direction has been defined.

# Petroleum Line Hydrostatic Pressure Test

Date: 27-Aug-99  
 Pipeline Id: 1033 to Fillstand 4&5  
 Line Size: 6 inch  
 Ft Exposed: 24 ft  
 Start Time: 9:00  
 Gallons: 672  
 Product: JP-8  
 Line Length: 448 ft  
 Feet Buried: 424 ft  
 Test Press: 90 psi  
 Operations Pressure: 45 psi

	Pressure	Temp
+ 15	90	78
+ 30	90	78
+45	90	80
+1	93	80
+1:15	95	82
+1:30	97	83
+1:45	100	85
+2	105	87
+2.30	110	90
+3	115	92
+3: 30	125	94
+4	135	94

Results: Pass



*David E Beaty*

Certified By: David Beaty, SSgt USAF  
NCOIC Liquid Fuels Maintenance

*Joel B. Reinhard*  
Reviewed By: Joel B. Reinhard, CMSgt USAF  
Chief, Utility Infrastructure

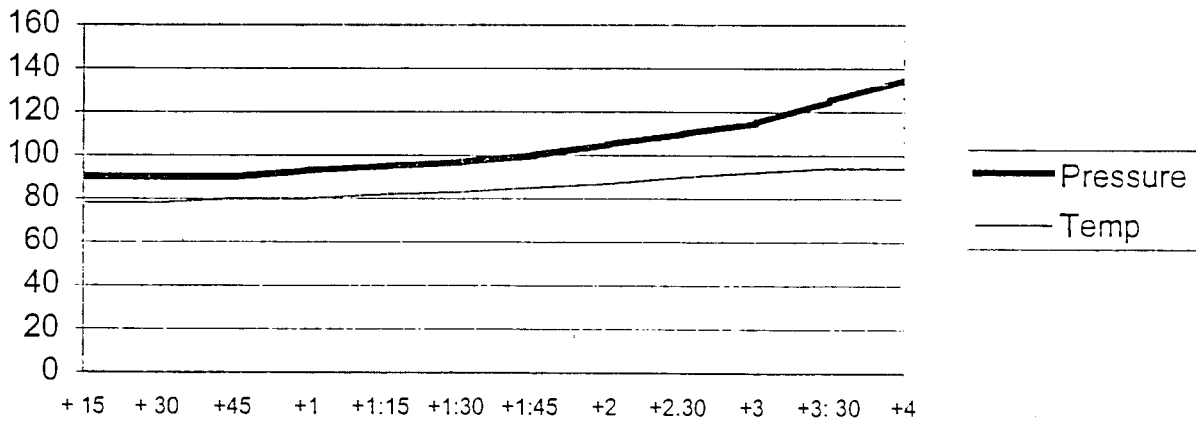
# Petroleum... Line Hydrostatic Pressure Test

Date: 27-Aug-99  
Pipeline Id 1033 to Fillstand 6&7  
Line Size: 6 inch  
Ft Exposed 12 ft  
Start Time: 9:00:00 AM  
Pressure

Gallons: 363      Product: JP-8  
Line Length: 242 ft  
Feet Buried 230 ft  
Test Press: 90 psi      Operations Pressure 45 psi  
Temp

	Pressure	Temp
+ 15	90	78
+ 30	90	78
+45	90	80
+1	93	80
+1:15	95	82
+1:30	97	83
+1:45	100	85
+2	105	87
+2.30	110	90
+3	115	92
+3: 30	125	94
+4	135	94

Results: Pass



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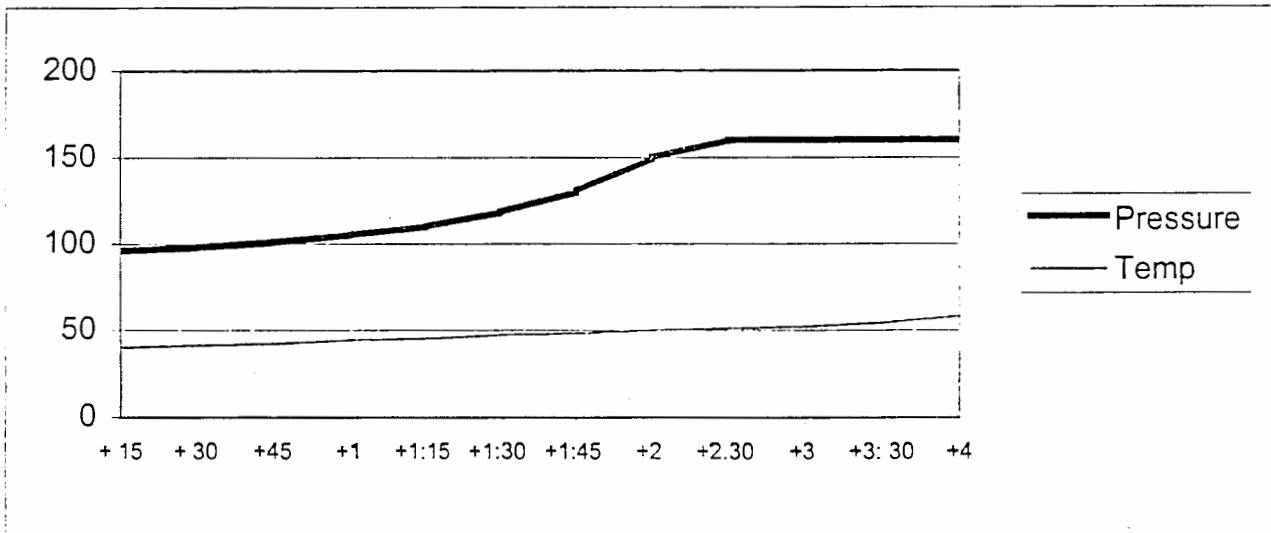
*Joel B. Reinhard*  
Reviewed By: Joel B. Reinhard, CMSgt USAF  
Chief, Utility Infrastructure

# Petroleum Line Hydrostatic Pressure Test

Date: 23-Feb-00  
 Pipeline Id: Tank 22 to Pumphouse 1033  
 Line Size: 16 inch  
 Ft Exposed: 841 Ft  
 Start Time: 9:00  
 Gallons: 13,112  
 Product: JP-8  
 Line Length: 1382 ft  
 Feet Buried: 541 ft  
 Test Press: 96 psi  
 Operations Pressure: 24 psi

	Pressure	Temp
+ 15	96	40
+ 30	98	41
+45	101	42
+1	105	44
+1:15	110	45
+1:30	118	47
+1:45	130	48
+2	150	50
+2.30	160	51
+3	160	52
+3: 30	160	54
+4	160	58

Results: Pass



*David E. Beaty*  
 Certified By: David Beaty, SSgt USAF  
 NCOIC Liquid Fuels Maintenance

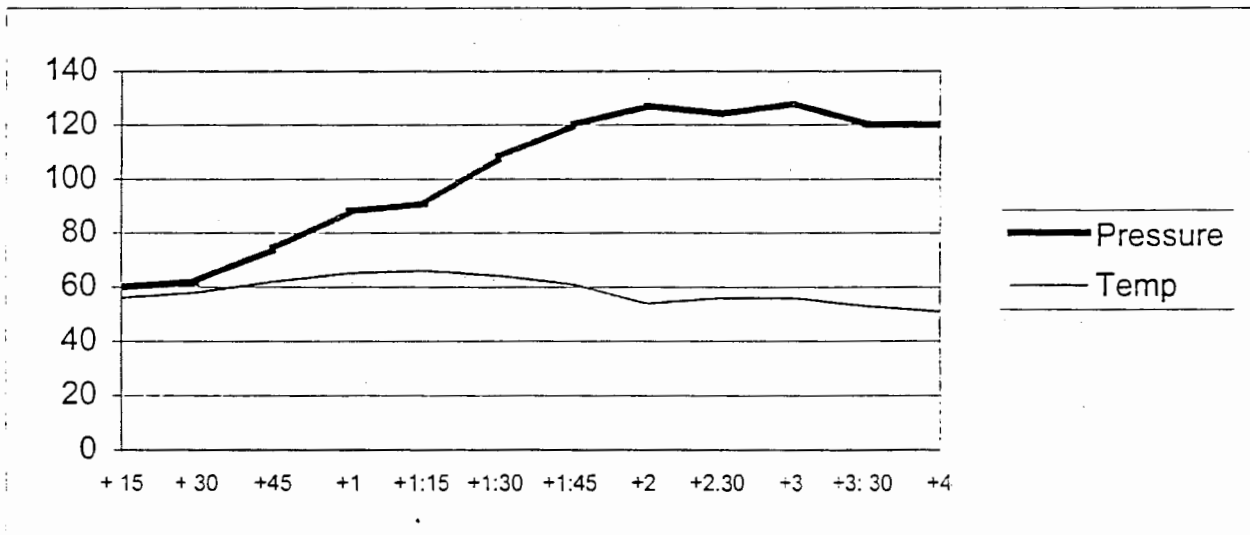
*Joel B. Reinherd*  
 Reviewed By: Joel B. Reinherd, CMSgt USAF  
 Chief, Utility Infrastructure

# Petroleum Line Hydrostatic Pressure Test

Date: 23-Feb-00  
Pipeline Id Tank 23 to Pumphouse 1033 Gallons: 7,808 Product: JP-8  
Line Size: 16 inch Line Length: 823 ft  
Ft Exposed: 678 Ft Feet Buried: 545 ft  
Start Time: 12:30 Test Press: 57 psi Operations Pressure: 24 psi  
Pressure Temp

Time	Pressure	Temp
+ 15	60	56
+ 30	62	58
+45	74	62
+1	88	65
+1:15	91	66
+1:30	108	64
+1:45	120	61
+2	127	54
+2:30	124	56
+3	128	56
+3:30	120	53
+4	120	51

Results: Pass



*David E*

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NCOIC Liquid Fuels Maintenance

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Chief, Utility Infrastructure