

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Refined Plume OK

more  
than one  
well

Submit 1 copy to  
appropriate  
District Office  
and 1 copy to  
the Santa Fe Office

(Revised 3/9/94)

culled extraneous well

PIT REMEDIATION AND CLOSURE REPORT

BO-045-20965

Operator: Amoco by EPFS Telephone \_\_\_\_\_

Address: \_\_\_\_\_

Facility Or W.D. Heath A#11, Meter 87476

Well Name KWO well TNL

Location: Unit or Qtr/Qtr Sec L Sec 9 T 29 R 9 County San Juan

Pit Type: Separator \_\_\_\_\_ Dehydrator \_\_\_\_\_ Other Drip

Land Type: BLM X, State \_\_\_\_\_, Fee \_\_\_\_\_ Other \_\_\_\_\_

Pit Location: Pit dimensions: length 18', width 17, depth 2'

(Attach diagram)

Reference: wellhead X, other \_\_\_\_\_

Footage from reference: 90'

Direction from reference: 266 Degrees X East North \_\_\_\_\_  
of  
\_\_\_\_\_ West South \_\_\_\_\_

Depth To Ground Water	Less than 50 feet	(20 points)
(Vertical distance from	50 feet to 99 feet	(10 points)
contaminants to seasonal	Greater than 100 feet	( 0 points) <u>10</u>
high water elevation of		
ground water.)		

Wellhead Protection Area:	Yes (20 points)
(Less than 200 feet from a private	No ( 0 points) <u>0</u>
domestic water source, or; less than	
1000 feet from all other water sources.)	

Distance To Surface Water:	Less than 200 feet	(20 points)
(Horizontal distance to perennial	200 feet to 1000 feet	(10 points)
lakes, ponds, rivers, streams, creeks,	Greater than 1000 feet	( 0 points) <u>0</u>
irrigation canals and ditches.)		

RANKING SCORE (TOTAL POINTS): 10

Date Remediation Started: 05/17/94 Date completed: 05/17/94

Remediation Method: Excavation X Approx. cubic yards 60

(Check all appropriate sections.)

Landfarmed \_\_\_\_\_ Insitu Bioremediation \_\_\_\_\_

Other \_\_\_\_\_

Remediation Location: Onsite \_\_\_\_\_ Offsite Tierra  
(i.e. landfarmed onsite,  
name and location of  
offsite facility)

General Description of Remedial Action: Some line markers. Pit looks dry. Started remediating 12', soil looks gray.  
Sandy. Bottom pit still gray and sandy. PID 156.

Ground Water Encountered: No X Yes \_\_\_\_\_ Depth \_\_\_\_\_

Final Pit:

Closure Sampling:  
(if multiple samples,  
attach sample results  
and diagram of sample  
locations and depths)

Sample location Four walls and center of pit composite

Sample depth 12'

Sample Date 05/17/94 Sample time 12:43

Sample Results

Benzene(ppm) <1.2

Total BTEX(ppm) 267

Field headspace(ppm) 156

TPH 2730

Ground Water Sample: Yes \_\_\_\_\_ No X (If yes, attach sample results)

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Date 1/8/03

Signature

Scott T. Pope

Printed Name  
and Title

Scott T. Pope  
Senior Env. Scientist



## PIT CLOSURE REQUEST

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W.D. Heath A #11  
Meter/Line ID 87476

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### SITE DETAILS

Legals - Twn: 29N

Rng: 9W

Sec: 9

Unit: L

NMOCD Hazard Ranking: 10

Land Type: BLM

Operator: Amoco Production Company

Pit Closure Date: 5/17/94

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### RATIONALE FOR RISK-BASED CLOSURE

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The pit noted above was assessed and ranked according to the criteria in the New Mexico Oil Conservation Division's (NMOCD) Unlined Surface Impoundment Closure Guidelines.

A test pit was excavated to 12 feet (ft) below ground surface (bgs) and a soil sample was collected for field headspace and laboratory analysis for TPH and BTEX. Groundwater was not encountered in the test pit. Headspace analysis indicated an organic vapor content of 156 ppm; laboratory analysis indicated a benzene concentration of <1.2 mg/kg, a total BTEX concentration of 267 mg/kg, and a TPH concentration of 2,730 mg/kg. The total BTEX and TPH measurements exceeded recommended remediation levels for the Hazard Ranking Score of 10.

Approximately 60 cubic yards of soil were excavated and hauled to Tierra, a commercial landfarm, for treatment and disposal. The pit was backfilled with clean soil and graded in a manner to direct surface runoff away from the pit area.

A Phase II boring was completed to 30.5 ft bgs. No groundwater was encountered in the soil boring. One laboratory sample was collected at 28.5-30.5 ft bgs. Headspace analysis indicated an organic vapor content of 3 ppm; laboratory analysis indicated a benzene concentration of <0.025 mg/kg, a total BTEX concentration of <0.10 mg/kg, and a TPH concentration of 47.5 mg/kg. The benzene, total BTEX and TPH concentrations were below recommended remediation levels for the Hazard Ranking Score.

No Phase III activities were conducted.

El Paso Field Services requests closure of the above mentioned pit location for the following reasons:

- The primary source, discharge to the pit, has been removed for over eight years.
- The impacted soils were excavated to the practical extent of the equipment and disposed of at an off-site location.
- The test pit was backfilled and the former pit area graded to direct surface runoff away from the former pit.
- Backfilling the pit with clean soil eliminated the potential for direct contact with hazardous constituents by livestock or the public; i.e., direct contact exposure pathways are incomplete.
- There are no water supply wells or other sources of fresh water extraction within 1,000 feet of the site.
- Groundwater was not encountered in the soil boring to 30 ft bgs.

# FIELD PIT SITE ASSESSMENT FORM

GENERAL	<p>Meter: <u>87476</u> Location: <u>W.D. HEATH A #11</u></p> <p>Operator #: <u>D203</u> Operator Name: <u>Amoco</u> P/L District: <u>BLOOMFIELD</u></p> <p>Coordinates: Letter: <u>L</u> Section <u>9</u> Township: <u>29</u> Range: <u>9</u></p> <p>Or Latitude _____ Longitude _____</p> <p>Pit Type: Dehydrator _____ Location Drip: <u>X</u> Line Drip: _____ Other: _____</p> <p>Site Assessment Date: <u>5.7.94</u> Area: <u>10</u> Run: <u>53</u></p>
SITE ASSESSMENT	<p><b>NMOCD Zone:</b> (From NMOCD Maps)</p> <p>Inside <input checked="" type="checkbox"/> (1) Outside <input type="checkbox"/> (2)</p> <p><b>Land Type:</b> BLM <input checked="" type="checkbox"/> (1) State <input type="checkbox"/> (2) Fee <input type="checkbox"/> (3) Indian _____</p> <p><b>Depth to Groundwater</b></p> <p>Less Than 50 Feet (20 points) <input checked="" type="checkbox"/> (1) 50 Ft to 99 Ft (10 points) <input type="checkbox"/> (2) Greater Than 100 Ft (0 points) <input type="checkbox"/> (3)</p> <p><b>Wellhead Protection Area :</b></p> <p>Is it less than 1000 ft from wells, springs, or other sources of fresh water extraction? , or ; Is it less than 200 ft from a private domestic water source? <input type="checkbox"/> (1) YES (20 points) <input checked="" type="checkbox"/> (2) NO (0 points)</p> <p><b>Horizontal Distance to Surface Water Body</b></p> <p>Less Than 200 Ft (20 points) <input type="checkbox"/> (1) 200 Ft to 1000 Ft (10 points) <input checked="" type="checkbox"/> (2) Greater Than 1000 Ft (0 points) <input type="checkbox"/> (3)</p> <p>Name of Surface Water Body <u>MANZANARES CANYON</u></p> <p>(Surface Water Body : Perennial Rivers, Major Wash, Streams, Creeks, Irrigation Canals, Ditches, Lakes, Ponds)</p> <p>Distance to Nearest Ephemeral Stream <input type="checkbox"/> (1) &lt; 100' (Navajo Pits Only) <input type="checkbox"/> (2) &gt; 100'</p> <p><b>TOTAL HAZARD RANKING SCORE:</b> <u>30</u> POINTS</p>
REMARKS	<p>Remarks : <u>THREE PITS ON LOCATION. WILL CLOSE ONLY ONE. PIT IS DRY. LOCATION IS ON A HILL JUST WEST OF MANZANARES CANYON. REDUNE AND TOPO CONFIRMED LOCATION TO BE INSIDE THE V.I.E.</u></p> <p style="text-align: right;"><u>DIG &amp; HALL</u></p>

**REVISED**  
**FIELD PIT SITE ASSESSMENT FORM**

GENERAL

Meter: 87476 Location: W.D. HEATH A #11  
Operator #: 0203 Operator Name: AMCO P/L District: Bloomfield  
Coordinates: Letter L Section 9 Township: 29 Range: 9  
or Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
Pit Type: Dehydrator \_\_\_\_\_ Location Drip: X Line Drip: \_\_\_\_\_ Other: \_\_\_\_\_  
Site Assessment Date: 5/7/94 Area: 10 Run: 53  
Revised Date: 12/10/02

SITE ASSESSMENT

**NMOCD Zone:**

(from NMCOD Maps)

**Land Type:**

Inside ☒ (1)  
Outside ☐ (2)

BLM ☒ (1)  
State ☐ (2)  
Fee ☐ (3)  
Indian \_\_\_\_\_

**Depth to Groundwater**

Less than 50 Feet (20 points) ☐ (1)  
50 Feet to 99 Feet (10 Points) ☒ (2)  
Greater than 100 Feet (0 Points) ☐ (3)

**Well Protection Area**

Is it less than 1000 feet from well, spring or other source of fresh water extraction?  
or; Is it less than 200 feet from a private domestic water source?

☐ YES (20 Points) ☒ NO (0 Points)

**Horizontal Distance to Surface Water Body**

Less than 200 Feet (20 points) ☐ (1)  
200 Feet to 1000 Feet (10 Points) ☐ (2)  
Greater than 1000 Feet (0 Points) ☒ (3)

Name of Surface Water Body MANZANARES CANYON

(Surface Water Body: Perennial River, Stream, Creek, Irrigation Canal, Ditch, Lake, Pond)

Distance to Nearest Ephemeral Stream ☐ (1) < 100 feet (Navajo Pits Only)  
☐ (2) > 100 feet

**TOTAL HAZARD RANKING SCORE** 10 **POINTS**

REMARKS

Remarks: Decision based on re-assessment of both  
depth to groundwater & distance to surface  
water body.

# FIELD PIT SITE ASSESSMENT FORM

GENERAL

Meter: 87476 Location: W.D. Heath A-11  
 Operator #: 0203 Operator Name: Amoco P/L District: Bloomfield  
 Coordinates: Letter: K Section 9 Township: 29 Range: 9  
 Or Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
 Pit Type: Dehydrator ☒ Location Drip: \_\_\_\_\_ Line Drip: \_\_\_\_\_ Other: \_\_\_\_\_  
 Site Assessment Date: 1/4/94 Area: 10 Run: 53

SITE ASSESSMENT

## NMOCD Zone:

(From NMOCD  
Maps)

Inside

Outside

## Land Type:

BLM ☒ (1)

State ☐ (2)

Fee ☐ (3)

Indian \_\_\_\_\_

## Depth to Groundwater

Less Than 50 Feet (20 points) ☒ (1)

50 Ft to 99 Ft (10 points) ☐ (2)

Greater Than 100 Ft (0 points) ☐ (3)

## Wellhead Protection Area :

Is it less than 1000 ft from wells, springs, or other sources of fresh water extraction? , or ; Is it less than 200 ft from a private domestic water source? ☐ (1) YES (20 points) ☒ (2) NO (0 points)

## Horizontal Distance to Surface Water Body

Less Than 200 Ft (20 points) ☒ (1)

200 Ft to 1000 Ft (10 points) ☐ (2)

Greater Than 1000 Ft (0 points) ☐ (3)

Name of Surface Water Body Manzanares Canyon

(Surface Water Body : Perennial Rivers, Major Wash, Streams, Creeks, Irrigation Canals, Ditches, Lakes, Ponds)

Distance to Nearest Ephemeral Stream ☐ (1) < 100' (Navajo Pits Only)  
☐ (2) > 100'

TOTAL HAZARD RANKING SCORE: 40 POINTS

REMARKS

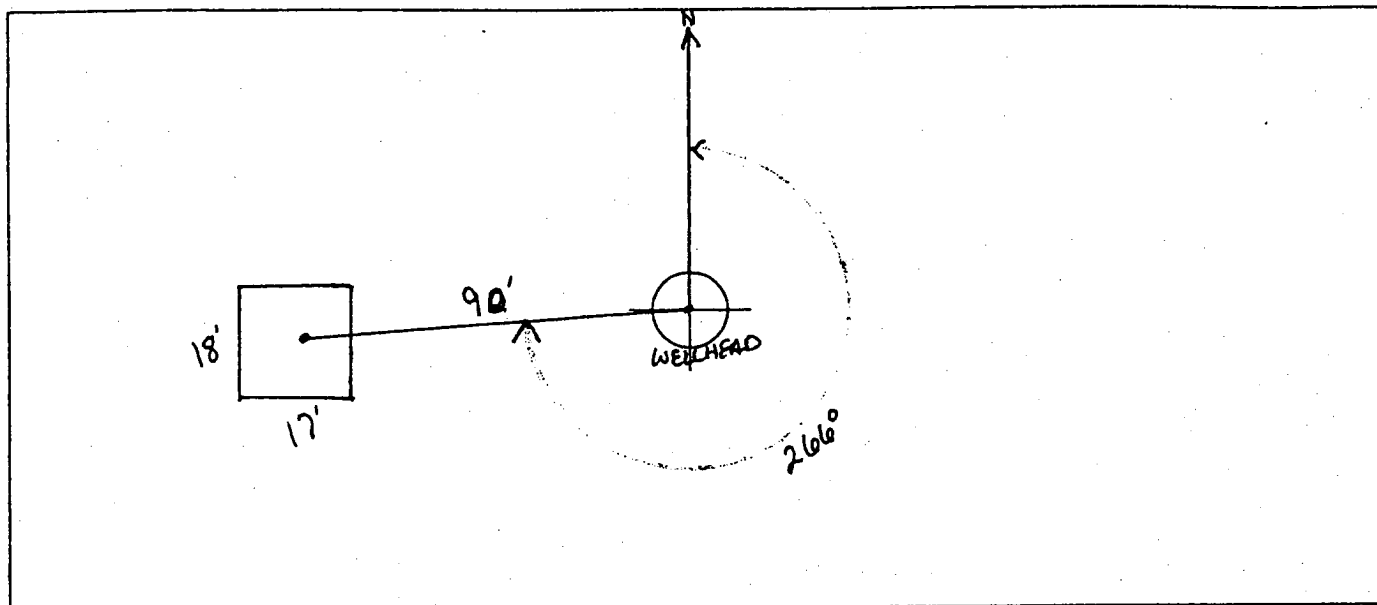
Remarks : Redline Book - Inside Vulnerable Zone Type - Inside  
2 pits Will close. Pit dry. 2nd pit has tank in it. No dehy on pit to be  
closed. 2nd pit belongs to Amoco now BP - America

DTC 11111

ORIGINAL PIT LOCATION

## ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 266° Footage from Wellhead 90'  
b) Length : 18' Width : 17' Depth : 2'



REMARKS

## Remarks :

TOOK PICTURES AT 1:59 P.M.

END DUMP

Completed By:

Bobt Thompson

Signature

5-7-94

Date



FIELD SERVICES LABORATORY  
ANALYTICAL REPORT  
PIT CLOSURE PROJECT - Soil

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	KP55	945193
MTR CODE   SITE NAME:	87476	N/A
SAMPLE DATE   TIME (Hrs):	5-17-94	1243
SAMPLED BY:	N/A	
DATE OF TPH EXT.   ANAL.:	5-18-94	5/18/94
DATE OF BTEX EXT.   ANAL.:	5/23/94	5/26/94
TYPE   DESCRIPTION:	VC	Grey coarse sand

REMARKS:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	<1.2	MG/KG	50			
TOLUENE	43	MG/KG	50			
ETHYL BENZENE	13	MG/KG	50			
TOTAL XYLENES	210	MG/KG	50			
TOTAL BTEX	267	MG/KG				
TPH (418.1)	2730	MG/KG			1.67	28
HEADSPACE PID	154	PPM				
PERCENT SOLIDS	94.0	%				

-- TPH is by EPA Method 418.1 and BTEX is by EPA Method 8020 --

The Surrogate Recovery was at N/A % for this sample All QA/QC was acceptable.

Active:

ALL results attached. Surrogate recovery not obtainable due to sample dilution.

DF = Dilution Factor Used

Approved By:

John Fatch

Date:

7/14/94

# GAS CHROMATOGRAPHY RESULTS

TEST : BTEX (EPA 8020)  
 CLIENT : EL PASO NATURAL GAS CO. ATI I.D.: 405389  
 PROJECT # : 24324  
 PROJECT NAME : PIT CLOSURE

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	945192	NON-AQ	05/17/94	05/23/94	05/26/94	1
02	945193	NON-AQ	05/17/94	05/23/94	05/26/94	50
03	945194	NON-AQ	05/17/94	05/23/94	05/26/94	50
PARAMETER			UNITS	01	02	03
BENZENE			MG/KG	<0.025	<1.2	<1.2
TOLUENE			MG/KG	<0.025	43	4.3
ETHYLBENZENE			MG/KG	<0.025	13	3.9
TOTAL XYLENES			MG/KG	0.40	210	89

## SURROGATE:

BROMOFLUOROBENZENE (%) 94 NA\* NA\*

\*SURROGATE RECOVERY NOT OBTAINABLE DUE TO SAMPLE DILUTION

## GENERAL

Meter: 87476 Location: W.D. HEATH A #11  
Coordinates: Letter: L Section 9 Township: 29 Range: 9  
Or Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
Date Started : 5-17-94 Area: 10 Run: 53

## FIELD OBSERVATIONS

Sample Number(s): KP #55  
Sample Depth: 12' Feet  
Final PID Reading 156 PID Reading Depth 12' Feet  
Yes No  
Groundwater Encountered ☐ (1) ☒ (2) Approximate Depth \_\_\_\_\_ Feet

## CLOSURE

## Remediation Method :

Excavation ☒ (1) Approx. Cubic Yards 60  
Onsite Bioremediation ☐ (2)  
Backfill Pit Without Excavation ☐ (3)

## Soil Disposition:

Envirotech ☐ (1) ☒ (3) Tierra  
Other Facility ☐ (2) Name: \_\_\_\_\_

Pit Closure Date: 5-17-94

Pit Closed By: B.E.F

## REMARKS

Remarks : SOME LINE MARKERS PIT LOOKES DRY  
STARTED REMEDIATING 12' SOIL LOOKES GRAY - SANDY  
BOTTOM PIT STILL GRAY AND SANDY. P.D 156

Signature of Specialist: Kelly Padilla

# RECORD OF SUBSURFACE EXPLORATION

Philip Environmental Services Corp.

4000 Monroe Road

Farmington, New Mexico 87401

(505) 326-2262 FAX (505) 326-2388

Borehole # BH-1  
Well # \_\_\_\_\_  
Page 1 of \_\_\_\_\_

Project Name EPNG Pits  
Project Number 14509 Phase 601  
Project Location W.D. Heath A #11, 87476

Elevation \_\_\_\_\_  
Borehole Location \_\_\_\_\_  
GWL Depth \_\_\_\_\_  
Logged By S. Kelly  
Drilled By M. Donohue  
Date/Time Started 6/19/95, 1400  
Date/Time Completed 6/19/95, 1450

Well Logged By S. Kelly  
Personnel On-Site M. Donohue, J. O'Keefe  
Contractors On-Site \_\_\_\_\_  
Client Personnel On-Site \_\_\_\_\_  
Drilling Method 4 1/4" HSA (ID)  
Air Monitoring Method CGI, PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU <u>S/H/S</u> BZ BH S			Drilling Conditions & Blow Counts
0				Backfill to 12'						
5										
10										
15				silty SAND, tan, fine sand, loose, dry						
20	1	19.5- 20.5	1.1'				0	139	235 240	- 2:25pm
25	2	23.5- 25.5	1.1'						3 13	1433
30	3	28.5- 30.5	.9'	SAND - fine to coarse, tan, 10-15% fine gravel loose, dry.		27			0 3	1440
35				BoH - 30.5						
40										

Comments:

28.5-30.5 sample (SEK14) sent to 126 (BTEX & TPH)  
BH grouted to surface.

Geologist Signature

Sarah Kelly



Phase II  
w/v. Health in #11

FIELD SERVICES LABORATORY  
ANALYTICAL REPORT  
PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	SEX13	946913
MTR CODE   SITE NAME:	87476	N/A
SAMPLE DATE   TIME (Hrs):	6-19-95	1440
SAMPLED BY:	N/A	
DATE OF TPH EXT.   ANAL:	6-21-95	6-21-95
DATE OF BTEX EXT.   ANAL:	6-22-95	6-22-95
TYPE   DESCRIPTION:	VG	Red/Brown fine sand

REMARKS:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	<0.025	MG/KG	1			
TOLUENE	<0.025	MG/KG	1			
ETHYL BENZENE	<0.025	MG/KG	1			
TOTAL XYLENES	<0.025	MG/KG	1			
TOTAL BTEX	<0.10	MG/KG				
TPH (418.1)	47.5	MG/KG			1.96	28
HEADSPACE PID	3	PPM				
PERCENT SOLIDS	94.8	%				

- TPH is by EPA Method 418.1 and BTEX is by EPA Method 8020 -

Surrogate Recovery was at 93 % for this sample All QA/QC was acceptable.  
Narrative:

DF = Dilution Factor Used

7/11/95

# GAS CHROMATOGRAPHY RESULTS

TEST : BTEX (EPA 8020)  
 CLIENT : EL PASO NATURAL GAS CO. ATI I.D.: 506401  
 PROJECT # : 24324  
 PROJECT NAME : PIT CLOSURE/PHASE II

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	946912	NON-AQ	06/19/95	06/22/95	06/22/95	1
02	946913	NON-AQ	06/19/95	06/22/95	06/22/95	1
03	946914	NON-AQ	06/19/95	06/22/95	06/22/95	1

PARAMETER	UNITS	01	02	03
BENZENE	MG/KG	<0.025	<0.025	<0.025
TOLUENE	MG/KG	<0.025	<0.025	<0.025
ETHYLBENZENE	MG/KG	<0.025	<0.025	<0.025
TOTAL XYLENES	MG/KG	<0.025	<0.025	<0.025

## SURROGATE:

BROMOFLUOROBENZENE (%) 98 93 96