

AMERADA HESS CORPORATION

Drew Hall
OFFICE 432/758-6713
FAX 432/758-6768
EMAIL drewhall@hess.com

P.O. BOX 840
SEMINOLE, TEXAS 79360
432/758-6700

June 2, 2006

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
7701 1140 0001 6063 9975

Mr. Chris Williams
District 1 Supervisor
New Mexico Oil Conservation Division
1625 North French Drive
Hobbs, New Mexico 88240

RE: **ENV – STUDIES, SURVEYS & REPORTS**
Site Remediation
NMGSAU Battery No. 85
Closure Report



Dear Mr. Williams:

Enclosed is a closure report documenting remedial work recently completed at the abandoned NMGSAU No. 85 tank battery site. Work at the site began in October, 2005 and was completed in February, 2006.

The report contains documentation of analyses for TPH, BTEX and chloride concentrations run on soil samples collected at the site prior to backfilling the excavation of a suspected evaporation pit. The report also contains documentation of NORM decontamination efforts associated with the suspected pit.

Hess Corporation would appreciate written acknowledgement from the NMOCD that the remedial work at the site satisfies current NMOCD cleanup requirements. If you have any questions or require additional information, please contact me at 432-758-6713 or at the letterhead address.

DH/sws

Sincerely,

Drew Hall
Senior Environmental Specialist

Xc: PO Environmental File
Houston Environmental File

RP#23

CLOSURE REPORT

**NORTH MONUMENT GRAYBURG SAN ANDRES UNIT
ABANDONED BATTERY SITE NO. 85
AHC HUMBLE LAUGHLIN 2 & 3**

**NW ¼, SE ¼, SECTION 4, TOWNSHIP 20 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO**

**Samuel Small, PE
March, 2006**

INTRODUCTION

The North Monument Grayburg San Andres Unit (NMGSAU) abandoned tank battery site No. 85 is located in the NW ¼ of the SE ¼ of Section 4, Township 20 South, Range 37 East in Lea County, New Mexico. The tank battery was formerly known as the Humble Laughlin 2 & 3 Tank Battery and was operated by Amerada Hess Corporation prior to being incorporated into the NMGSAU in 1992. The site is approximately 2 miles southeast of the town of Monument, New Mexico.

There were two areas of potential surface and/or vadose zone contamination identified at the site, at the battery tank pad and at a suspected evaporation pit north of the tank pad. Naturally occurring radioactive material (NORM) was detected in the suspected pit area during a preliminary field scan of the site. A work plan and a form C-141 were submitted to, and approved by, the Oil Conservation Division District 1 office in July, 2005. After reviewing the State Engineer's water reports, it was determined that this project has a 20 point ranking for the NMOCD clean up guidelines, based on the average depth to groundwater in the vicinity of the project.

SUMMARY OF ACTIVITIES

In October, 2005 samples were collected from the suspected pit area and were analyzed for NORM concentration to determine if excavation and disposal of the pit material was required. Three of the samples exceeded the regulatory threshold of 30 Pico curies per gram of radium 226 for regulatory exemption. NORM Decon Services of Midland, Texas was contracted to remove and dispose of contaminated material from the site. During November approximately 360 yards of NORM contaminated material was removed from the pit area and taken to the Lotus NORM Disposal Facility in Andrews, Texas for disposal. A post NORM clean up survey was conducted at the site and the results are attached.

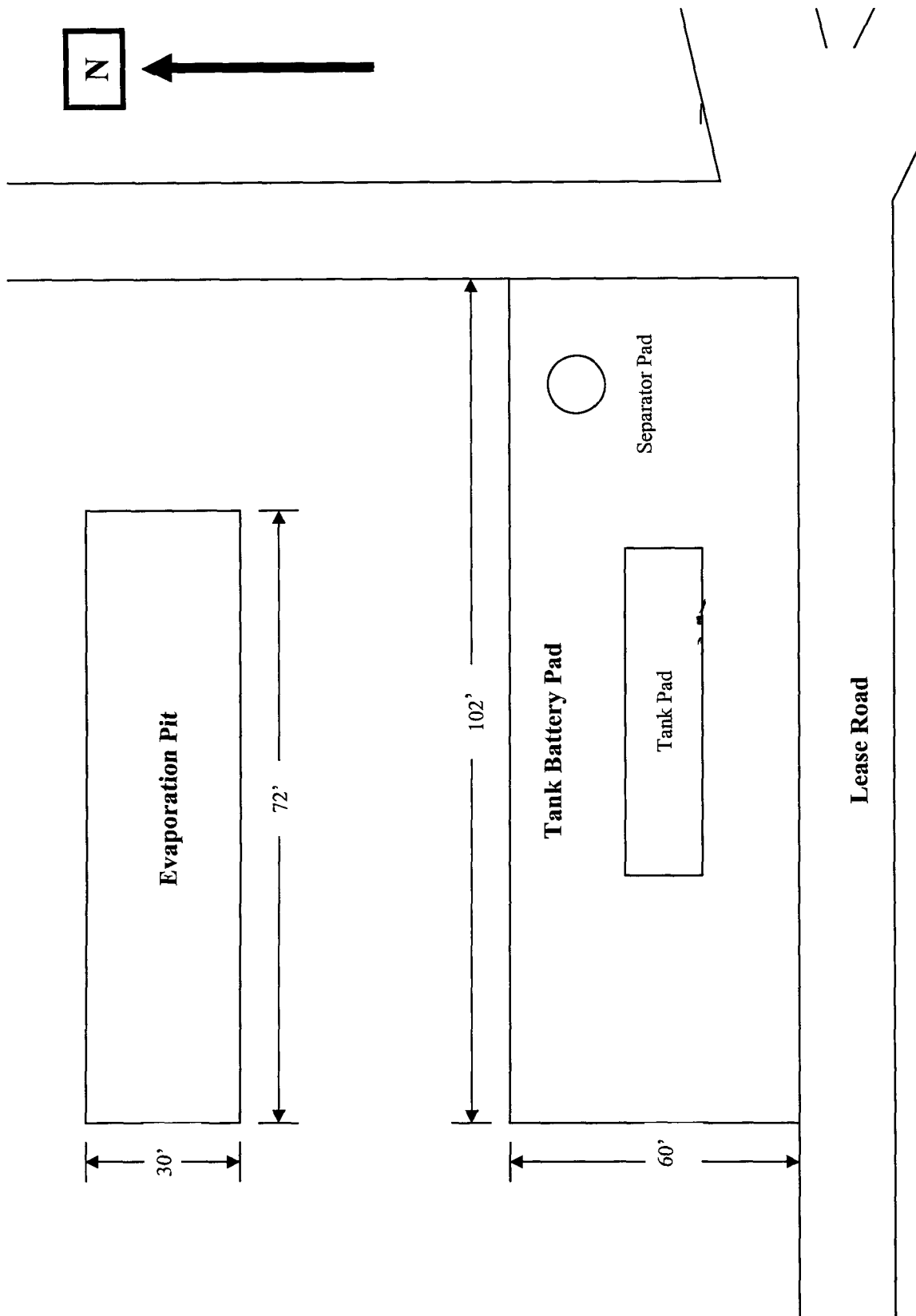
A composite sample of material from the pit area, collected off the bottom of the excavation at a maximum depth of 3 feet, was analyzed for hydrocarbon and chloride impacts. The analyses indicated that the hydrocarbon and chloride concentrations were below the OCD guideline thresholds.

Surface material from the battery pad area was removed to a depth of approximately one foot below grade. A composite sample collected from the pad area indicated a DRO concentration slightly above the OCD guideline threshold; all other hydrocarbon and chloride concentrations were below the guidelines. The surface material was blended with clean material acquired from the landowner and was used to fill the pit excavation. Clean material was then applied to the entire site. The site was seeded with native vegetation.

**SITE
MAP AND PLAT**

Change to Landscape

Terms of Use **Privacy Statement**



Amerada Hess Corporation
NMGSAU Abandoned Battery # 85
AHC Humble Laughlin 2 & 3

Not to Scale

3/1/06

WATER WELL INFORMATION

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: Range: Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) ☐ Non-Domestic ☐ Domestic ☒ All

Well/Surface Data Report Avg Depth to Water Report Water Column Report

Clear Form WATERS Menu Help

WATER COLUMN REPORT 10/18/2001

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are biggest to smallest)

Well Number	Tws	Rng	Sec	q	q	Zone	X	Y	Depth Well	Depth Water	Water Column	Water (in feet)
L 10069	20S	37E	04	1	1				39	22	17	
L 05980 DCL	20S	37E	04	3	4	1			95			

Record Count: 2

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: Range: Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) ☐ Non-Domestic ☐ Domestic ☒ All

Well / Surface Data Report

Avg Depth to Water Report

Water Column Report

Clear Form

WATERS Menu

Help

WATER COLUMN REPORT 10/18/2001

(quarters are 1=NW 2=NE 3=SW 4=SE)
 (quarters are biggest to smallest)

Well Number	Tws	Rng	Sec	q	q	Zone	X	Y	Depth Well	Depth Water	Water Column	Water (in feet)
L 04806	19S	37E	33	1	2	2			60	35	25	
L 10397	19S	37E	33	1	2	2			34	13	21	
L 06796	19S	37E	33	2	1				80			
L 04405 APPRO	19S	37E	33	3					45	37	8	
L 04929	19S	37E	33	3					55	27	28	
L 04405	19S	37E	33	3					45	37	8	
L 04809	19S	37E	33	3					60	35	25	
L 04842	19S	37E	33	3	3				60	35	25	
L 03993 APPRO	19S	37E	33	3	3				75	29	46	
L 03993	19S	37E	33	3	3				75	29	46	
L 09128	19S	37E	33	3	3	1			30	26	4	
L 04448 APPRO	19S	37E	33	3	3	3			46	36	10	
L 03988 APPRO	19S	37E	33	3	3	3			75	29	46	
L 03988	19S	37E	33	3	3	3			75	29	46	
L 04448	19S	37E	33	3	3	3			46	36	10	
L 09681	19S	37E	33	4	3				52	39	13	
L 09129	19S	37E	33	4	3				52	43	9	
L 08501	19S	37E	33	4	3	4			43	29	14	
L 03738	19S	37E	33	4	4				72	31	41	

L	03738	APPRO	19S	37E	33	4	4	72	31	41
L	09127		19S	37E	33	4	4	52	40	12
L	09768		19S	37E	34	1	1	39	24	15
L	10391		19S	37E	34	1	1	44	21	23
L	08803		19S	37E	34	1	1	41	25	16
L	10403		19S	37E	34	1	1	41	20	21
L	10386		19S	37E	34	1	2	34	21	13
L	10166		19S	37E	34	3	4	35		

Record Count: 27

SAMPLE ANALYSES DOCUMENTATION

SOIL ANALYSES

NMGSAU Battery Site No. 85

SAMPLE	SAMPLE DATE	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL - BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	CHLORIDE (mg/Kg)
Evaporation Pit (composite)	12/28/2005	< 0.005	< 0.005	< 0.005	< 0.015	< 10.0	18.6	48
Tank Battery Pad (composite)	12/28/2005	< 0.005	< 0.005	< 0.005	< 0.015	< 10.0	150	80
Blended Fill Material								
NW Corner of Pile	1/10/2006	< 0.005	< 0.005	< 0.005	< 0.015	< 10.0	72.2	
SW Corner of Pile	1/10/2006	< 0.005	< 0.005	< 0.005	< 0.015	< 10.0	38.5	
SE Corner of Pile	1/10/2006	< 0.005	< 0.005	< 0.005	< 0.015	< 10.0	40.2	
NE Corner of Pile	1/10/2006	< 0.005	< 0.005	< 0.005	< 0.015	< 10.0	26.2	



ARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
AMERADA HESS CORPORATION
ATTN: SAM SMALL
P.O. BOX 840
SEMINOLE, TX 79360-0840
FAX TO: (432) 758-6768 &

Receiving Date: 12/21/05
Reporting Date: 12/29/05
Project Number: NOT GIVEN
Project Name: NMGSAU BATTERY 85 SITE
Project Location: MONUMENT, NM

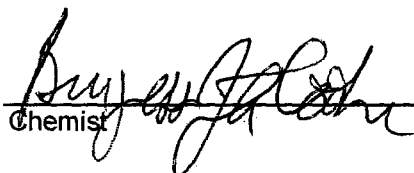
(505) 393-1927

Sampling Date: 12/21/05
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC/HM

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/Kg)	DRO (>C ₁₀ -C ₂₈) (mg/Kg)	Cl* (mg/Kg)
		12/28/05	12/28/05	12/22/05
H10530-1	BATTERY PAD	<10.0	150	80
H10530-2	EVAPORATION PIT AREA	<10.0	18.6	48
	Quality Control	774	741	990
	True Value QC	800	800	1000
	% Recovery	96.8	92.6	99.0
	Relative Percent Difference	5.2	4.2	0.0

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; Cl: Std. Methods 4500-ClB

*Analyses performed on 1:4 w:v aqueous extracts.


Chemist


Date

H10530A.XLS

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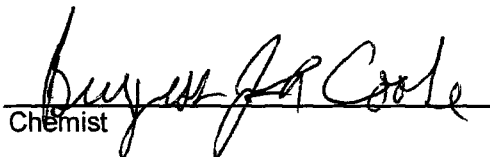
ANALYTICAL RESULTS FOR
AMERADA HESS CORPORATION
ATTN: SAM SMALL
P.O. BOX 840
SEMINOLE, TX 79360-0840
FAX TO: (432) 758-6768 &
(505) 393-1927

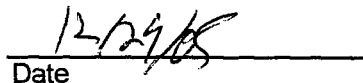
Receiving Date: 12/21/05
Reporting Date: 12/29/05
Project Number: NOT GIVEN
Project Name: NMGSAU BATTERY 85 SITE
Project Location: MONUMENT, NM

Sampling Date: 12/21/05
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC

LAB NUMBER	SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE		12/28/05	12/28/05	12/28/05	12/28/05
H10530-1	BATTERY PAD	<0.005	<0.005	<0.005	<0.015
H10530-2	EVAP. PIT AREA	<0.005	<0.005	<0.005	<0.015
Quality Control		0.090	0.096	0.102	0.314
True Value QC		0.100	0.100	0.100	0.300
% Recovery		89.7	96.2	102	105.0
Relative Percent Difference		8.8	1.7	1.7	2.3

METHOD: EPA SW-846 8260


Chemist


Date

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ANALYTICAL RESULTS FOR
AMERADA HESS CORP.
ATTN: RANDY BARNES
P.O. DRAWER D
MONUMENT, NM 88265
FAX TO: (505) 393-1927

Receiving Date: 12/15/05
Reporting Date: 12/19/05
Project Number: NOT GIVEN
Project Name: NSGAU #
Project Location: NOT GIVEN

& (505) 391-9895

Sampling Date: 12/15/05
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: NF
Analyzed By: BC/HM

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/Kg)	DRO (>C ₁₀ -C ₂₈) (mg/Kg)	Cl* (mg/Kg)
		12/17/05	12/17/05	12/16/05
H10509-1	TANK GRADE	<10.0	151	16
H10509-2	TANK GRADE	<10.0	47.1	16
H10509-3	TANK GRADE	<10.0	36.8	96
H10509-4	TANK GRADE 3' SEC	<10.0	43.5	128
H10509-5	TANK GRADE 3' C WEST	<10.0	27.5	32
H10509-6	TANK GRADE 3' N CENTER	<10.0	<10.0	16
H10509-7	BATTERY SEPARATOR	<10.0	63.7	80
Quality Control		827	806	1000
True Value QC		800	800	1000
% Recovery		103	101	100
Relative Percent Difference		12.4	1.6	1.0

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; Cl: Std. Methods 4500-ClB

*Analyses performed on 1:4 w:v aqueous extracts.

Chemist

Date

H10509.XLS

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PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240


ANALYTICAL RESULTS FOR
AMERADA HESS CORP.
ATTN: RANDY BARNES
P.O. DRAWER D
MONUMENT, NM 88265
FAX TO: (505) 393-1927

Receiving Date: 01/06/06
Reporting Date: 01/11/06
Project Number: NMGSAU
Project Name: BATTERY #85
Project Location: S-22 R37E LEA CO., NM

Sampling Date: 01/06/06
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/Kg)	DRO (>C ₁₀ -C ₂₈) (mg/Kg)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE:		01/10/06	01/10/06	01/10/06	01/10/06	01/10/06	01/10/06
H10571-1	NW CORNER	<10.0	72.2	<0.005	<0.005	<0.005	<0.015
H10571-2	SW CORNER	<10.0	38.5	<0.005	<0.005	<0.005	<0.015
H10571-3	SE CORNER	<10.0	40.2	<0.005	<0.005	<0.005	<0.015
H10571-4	NE CORNER	<10.0	26.2	<0.005	<0.005	<0.005	<0.015
Quality Control		766	789	0.102	0.095	0.095	0.287
True Value QC		800	800	0.100	0.100	0.100	0.300
% Recovery		95.8	98.7	102	94.7	95.0	95.7
Relative Percent Difference		2.0	1.7	2.2	5.6	5.2	4.5

METHODS: TPH GRO & DRO - EPA SW-846 8015 M; BTEX - SW-846 8260.


Burgess J. A. Copke, Ph. D.


Date

*Composite
of backfill*

H10571.XLS

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NORM CLEAN UP DOCUMENTTION



NORM DECON SERVICES, LLC

2809 S. County Rd. #1257 • Midland, Texas 79706 • 432-563-1123 • Fax 432-563-1823

April 30, 2005

Mr. Sam Small
Amerada Hess Corporation
P.O. Box 840
Seminole, TX 79630
Fax: (432) 758-6741

RE: Naturally Occurring Radioactive Materials (NORM) decontamination of equipment and soils at the Amerada Hess Corp yard in Monument, New Mexico.

Dear Mr. Small:

On October 24, 2005 NORM Decon Services, LLC (NDS) personnel began excavation of a former pit area on the north side of the Amerada Hess Corporation abandoned tank battery NMGSAU #85 located approximately 2 miles south of Monument in Lea County, New Mexico. All work was performed under our Texas Radioactive Materials License (No. L04917) with reciprocity from the New Mexico Environment.

- A 10' x 10' gridded survey was performed over the pit and adjacent area (Figure No. 1) prior to excavation.
- The soils were excavated to depth of 2-5 feet over an area approximately 70' x 40'. Continuous surveying was performed during the excavation.
- All soils were placed into approximately 25 yd³ stockpiles and composite samples collected and analyzed via Gamma-Spectroscopy to determine the waste volumes to be disposed of and disposal options. The laboratory analysis and disposal volumes are shown in Table Number 1 below.
- A total of 360 yds³ of NORM contaminated soil was transported to Lotus, LLC's licensed NORM disposal facility in Andrews County, TX.
- A total of 60 yds³ of Non-NORM contaminated soil was transported to Sundance Services, Inc. licensed disposal facility near Eunice, NM.
- The pit area was re-surveyed and composite confirmation samples were collected. Laboratory analysis is shown in Table Number 2 below.

Table Number 1

Sample ID	Radium-226 (pCi/gm)	Radium-228 (pCi/gm)	Total Activity (pCi/gm)
Stockpile #1	102.90	<1.33	295.16
Stockpile #2	80.50	<1.22	237.60

Stockpile #3	141.20	<1.62	408.73
Stockpile #4	86.27	<1.26	250.62
Stockpile #5	51.85	<0.92	149.01
Stockpile #6	70.01	<1.13	212.93
Stockpile #7	62.46	<1.08	184.92
Stockpile #8	59.15	<1.00	171.54
Stockpile #9	60.12	<1.15	209.76
Stockpile #10	115.60	<1.35	336.00
Stockpile #11	59.84	<1.03	175.20
Stockpile #12	66.30	<1.20	192.60
Stockpile #13	40.16	<0.87	119.76
Stockpile #14	45.26	<0.87	131.01
Stockpile #15	25.20	<0.70	51.22
Stockpile #16	24.60	<0.62	53.51

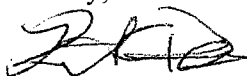
Table Number 2

Sample ID	Radium-226 (pCi/gm)	Radium-228 (pCi/gm)	Total Activity (pCi/gm)
Bttm-1	<4.12	<0.53	5.57
Bttm-2	16.74	<0.62	28.36
West wall	32.63	<0.74	72.48
North-1	32.24	<0.76	69.64
West wall-2	<4.32	<0.52	6.61
North-2	16.01	<0.56	27.37
North NE	21.45	<0.52	67.72

As shown in Table Number 2 above, samples West wall and North-1 exceeded the 30 pCi/gm of Radium-226 limits set forth by the NMED. Additional excavation was performed in those areas and the soils were surveyed and sampled again. After the additional excavation, all areas of the pit had Radium-226 and Radium-228 levels below 30 pCi/gm. The site may be released for unrestricted use. A copy of the survey and sample locations is attached as Figure Number 1.

If you have any questions or comments, please call me at (432) 563-1123.

Sincerely,



Robert C. Parten
President, Corp. RSO
NORM Decon Services, LLC



ENVIRONMENTAL LAB OF LTD.

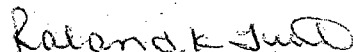
"Don't Treat Your Soil Like Dirt!"

NORM DECON
ATTN: Kit Parten
2809 SCR 1257
Midland, TX 79706
FAX: 432-563-1823

Sample Type: Soil
Sample Condition: Intact/ 30.0 deg C
ELT # 5J26008-16
Project Name: NMGSAU #85 Pit
Project # None Given
Project Location: Lea Co., NM

Sample Date: 10/25/05
Sample Time: 17:00
Receiving Date: 10/26/05
Analysis Date: 10/31/05
Analysis Time: 15:31
Field Code: Bttm- 1

Analysis Description	Analysis Results pCi/gm	Analysis Error $\pm 2\sigma$	Analysis Results Bq/gm	Analysis Error $\pm 2\sigma$	Analysis Test Method	Analysis Technician
Ra-226	<4.12	N/A	<0.15	N/A	EPA 901.1M	JM
Ra-228	<0.53	N/A	<0.02	N/A	EPA 901.1M	JM
Pb-210	<3.14	N/A	<0.12	N/A	EPA 901.1M	JM
Th-228	<4.08	N/A	<0.15	N/A	EPA 901.1M	JM
Total Activity	5.57	N/A	0.21	N/A	EPA 901.1M	JM
Notes:						


Quality Assurance Review

Environmental Lab of Texas I, LTD. Assumes no liability for the use or interpretation of any analytical results other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

ENVIRONMENTAL LAB OF LTD.

"Don't Treat Your Soil Like Dirt!"

NORM DECON
ATTN: Kit Parten
2809 SCR 1257
Midland, TX 79706
FAX: 432-563-1823

Sample Type: Soil
Sample Condition: Intact/ 30.0 deg C
ELT # 5J26008-17
Project Name: NMGSAU #85 Pit
Project # None Given
Project Location: Lea Co., NM

Sample Date: 10/25/05
Sample Time: 17:00
Receiving Date: 10/26/05
Analysis Date: 10/31/05
Analysis Time: 15:44
Field Code: Btm- 2

Analysis Description	Analysis Results pCi/gm	Analysis Error +/- 2σ	Analysis Results Bq/gm	Analysis Error +/- 2σ	Analysis Test Method	Analysis Technician
Ra-226	16.74	2.28	0.62	0.08	EPA 901.1M	JM
Ra-228	<0.62	N/A	<0.02	N/A	EPA 901.1M	JM
Pb-210	<4.22	N/A	<0.16	N/A	EPA 901.1M	JM
Th-228	<6.11	N/A	<0.23	N/A	EPA 901.1M	JM
Total Activity	28.36	N/A	1.05	N/A	EPA 901.1M	JM

Notes:


Quality Assurance Review

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ENVIRONMENTAL LAB OF LTD.

"Don't Treat Your Soil Like Dirt!"

NORM DECON
ATTN: Kit Parten
2809 SCR 1257
Midland, TX 79706
FAX: 432-563-1823

Sample Type: Soil
Sample Condition: Intact/ 30.0 deg C
ELT # 5J26008-18
Project Name: NMGSAU #85 Pit
Project # None Given
Project Location: Lea Co., NM

Sample Date: 10/25/05
Sample Time: 17:00
Receiving Date: 10/26/05
Analysis Date: 10/31/05
Analysis Time: 16:00
Field Code: Westwall

Analysis Description	Analysis Results pCi/gm	Analysis Error +/- 2σ	Analysis Results Bq/gm	Analysis Error +/- 2σ	Analysis Test Method	Analysis Technician
Ra-226	32.63	3.89	1.21	0.14	EPA 901.1M	JM
Ra-228	<0.74	N/A	<0.03	N/A	EPA 901.1M	JM
Pb-210	15.55	2.18	0.56	0.78	EPA 901.1M	JM
Th-228	<7.48	N/A	<0.28	N/A	EPA 901.1M	JM
Total Activity	72.48	N/A	2.68	N/A	EPA 901.1M	JM
Notes:						


Quality Assurance Review

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ENVIRONMENTAL LAB OF LTD.

"Don't Treat Your Soil Like Dirt!"

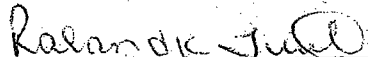
NORM DECON
ATTN: Kit Parten
2809 SCR 1257
Midland, TX 79706
FAX: 432-563-1823

Sample Type: Soil
Sample Condition: Intact/ 30.0 deg C
ELT # 5J26008-19
Project Name: NMGSAU #85 Pit
Project # None Given
Project Location: Lea Co., NM

Sample Date: 10/25/05
Sample Time: 17:00
Receiving Date: 10/26/05
Analysis Date: 10/31/05
Analysis Time: 16:36
Field Code: North- 1

Analysis Description	Analysis Results pCi/gm	Analysis Error +/- 2σ	Analysis Results Bq/gm	Analysis Error +/- 2σ	Analysis Test Method	Analysis Technician
Ra-226	32.24	3.89	1.19	0.14	EPA 901.1M	JM
Ra-228	<0.76	N/A	<0.03	N/A	EPA 901.1M	JM
Pb-210	14.34	2.32	0.53	0.08	EPA 901.1M	JM
Th-228	<7.80	N/A	<0.29	N/A	EPA 901.1M	JM
Total Activity	69.64	N/A	2.58	N/A	EPA 901.1M	JM

Notes:


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291

Phone: 432-563-1800
Fax: 432-563-1713

Project Name: NMCSA0 #85 Dif

Project Manager: Kit Darton

Company Name	<u>Norm Decon Services</u>
---------------------	----------------------------

Project #:

Project Loc: Lea Co, NM

PO#

City/State/Zip:

Telephone No: 563-1123 Fax No: 563-1823

Fax No:

Sampler Signature:

Email:

[illegible]

Special Instructions:

Sample Containers Intact?

Labels on container?

Custody Seals: Containers

Temperature Upon Receipt:

Relinquished by:

Received by:

Date	Time
------	------

Laboratory Comments:

Plastic

Received by EL0T:

Date _____ Time _____

Environmental Lab of Texas

Variance / Corrective Action Report – Sample Log-In

Client: NORM Decon

Date/Time: 10/26/05 14:00

Order #: 5826008

Initials: OK

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	30.0 C
Shipping container/cooler in good condition?	Yes	No	
Custody Seals intact on shipping container/cooler?	Yes	No	Not present
Custody Seals intact on sample bottles?	Yes	No	Not present
Chain of custody present?	Yes	No	
Sample Instructions complete on Chain of Custody?	Yes	No	
Chain of Custody signed when relinquished and received?	Yes	No	
Chain of custody agrees with sample label(s)	Yes	No	ID on bags
Container labels legible and intact?	Yes	No	n/a
Sample Matrix and properties same as on chain of custody?	Yes	No	
Samples in proper container/bottle?	Yes	No	
Samples properly preserved?	Yes	No	
Sample bottles intact?	Yes	No	
Preservations documented on Chain of Custody?	Yes	No	
Containers documented on Chain of Custody?	Yes	No	
Sufficient sample amount for indicated test?	Yes	No	
All samples received within sufficient hold time?	Yes	No	
GC samples have zero headspace?	Yes	No	Not Applicable

Other observations:

Variance Documentation:

Contact Person: - Kit Patten Date/Time: 10-31-05 @ 0923 Contacted by: Jeanne McKMurray
 Regarding: Th 226

Corrective Action Taken:

Client wants to run Th 228 and not Th 226

ENVIRONMENTAL LAB OF LTD.

"Don't Treat Your Soil Like Dirt!"

NORM DECON
ATTN: Kit Parten
2809 SCR 1257
Midland, TX 79706
FAX: 432-563-1823

Sample Type: Soil
Sample Condition: Intact/ 8.0 deg C
ELT # 5L08008-02
Project Name: Amerada Hess/ NMGSAU #85 Pit
Project # None Given
Project Location: None Given

Sample Date: 12/08/05
Sample Time: None Given
Receiving Date: 12/08/05
Analysis Date: 12/13/05
Analysis Time: 13:35
Field Code: West Wall #2

Analysis Description	Analysis Results pCi/gm	Analysis Error +/- 2σ	Analysis Results Bq/gm	Analysis Error +/- 2σ	Analysis Test Method	Analysis Technician
Ra-226	<4.32	N/A	<0.16	N/A	EPA 901.1M	JM
Ra-228	<0.52	N/A	<0.02	N/A	EPA 901.1M	JM
Pb-210	<3.22	N/A	<0.12	N/A	EPA 901.1M	JM
Th-228	<4.51	N/A	<0.17	N/A	EPA 901.1M	JM
Total Activity	6.61	N/A	0.24	N/A	EPA 901.1M	JM
Notes:						


Quality Assurance Review

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ENVIRONMENTAL LAB OF LTD.

"Don't Treat Your Soil Like Dirt!"

NORM DECON
ATTN: Kit Parten
2809 SCR 1257
Midland, TX 79706
FAX: 432-563-1823

Sample Type: Soil
Sample Condition: Intact/ 8.0 deg C
ELT # 5L08008-03
Project Name: Amerada Hess/ NMGSAU #85 Pit
Project # None Given
Project Location: None Given

Sample Date: 12/08/05
Sample Time: None Given
Receiving Date: 12/08/05
Analysis Date: 12/13/05
Analysis Time: 13:54
Field Code: North #2

Analysis Description	Analysis Results pCi/gm	Analysis Error +/- 2σ	Analysis Results Bq/gm	Analysis Error +/- 2σ	Analysis Test Method	Analysis Technician
Ra-226	16.01	2.23	0.59	0.08	EPA 901.1M	JM
Ra-228	<0.56	N/A	<0.02	N/A	EPA 901.1M	JM
Pb-210	<3.88	N/A	<0.14	N/A	EPA 901.1M	JM
Th-228	<5.82	N/A	<0.22	N/A	EPA 901.1M	JM
Total Activity	27.37	N/A	1.01	N/A	EPA 901.1M	JM

Notes:



Quality Assurance Review

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ENVIRONMENTAL LAB OF LTD.

"Don't Treat Your Soil Like Dirt!"

NORM DECON
ATTN: Kit Parten
2809 SCR 1257
Midland, TX 79706
FAX: 432-563-1823

Sample Type: Soil
Sample Condition: Intact/ 8.0 deg C
ELT # 5L08008-04
Project Name: Amerada Hess/ NMGSAU #85 Pit
Project # None Given
Project Location: None Given

Sample Date: 12/08/05
Sample Time: None Given
Receiving Date: 12/08/05
Analysis Date: 12/13/05
Analysis Time: 14:07
Field Code: North NE

Analysis Description	Analysis Results pCi/gm	Analysis Error +/- 2σ	Analysis Results Bq/gm	Analysis Error +/- 2σ	Analysis Test Method	Analysis Technician
Ra-226	21.45	2.63	0.79	0.10	EPA 901.1M	JM
Ra-228	<0.52	N/A	<0.02	N/A	EPA 901.1M	JM
Pb-210	9.28	1.40	0.34	0.05	EPA 901.1M	JM
Th-228	<5.42	N/A	<0.20	N/A	EPA 901.1M	JM
Total Activity	67.72	N/A	2.51	N/A	EPA 901.1M	JM

Notes:



Quality Assurance Review

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Notes:

Comments:

1. Soil and Sludge analysis results are reported on a wet basis or as received basis unless otherwise indicated.
2. The data in this report are within the limits of uncertainty specified in the reference method unless otherwise specified.
3. Modified analysis procedures are procedures that are modified to meet certain specifications. An example would be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4. Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B.
5. Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring decay chains and other prominent radioactive isotopes. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of isotopes that emit solely alpha or beta radiation.
6. Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7. U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only).
8. All Gamma Spectroscopy was performed using high purity germanium detectors (HPGE).

Method References:

1. EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980, Standard Methods for the Examination of Water and Waste Water, 18th, 1992.
2. EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
3. EPA 600/4-79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
4. HASL 300

Definitions:

- | | |
|--------------------|---|
| 1. BDL | Analyte not detected because the value was below the detection limit. |
| 2. ND | Not detected above the detection limit. |
| 3. Detection Limit | The minimum amount of the analyte that can be detected utilizing the specific analysis. |
| 4. B | Method Blank |
| 5. D | Method Duplicate |
| 6. MS | Matrix Spike |
| 7. S | Spike |
| 8. RS | Reference Spike |
| 9. SC | Subcontracted to qualified laboratory |
| 10. NR | Not Referenced |
| 11. N/A | Not applicable |
| 12. MDA | Minimum detectable activity |

Environmental Lab of Texas

Variance / Corrective Action Report – Sample Log-In

Client: NORM Decon

Date/Time: 12/8/05 2:15

Order #: 5208008

Initials: CK

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	80 C
Shipping container/cooler in good condition?	Yes	No	
Custody Seals intact on shipping container/cooler?	Yes	No	Not present
Custody Seals intact on sample bottles?	Yes	No	Not present
Chain of custody present?	Yes	No	
Sample Instructions complete on Chain of Custody?	Yes	No	
Chain of Custody signed when relinquished and received?	Yes	No	
Chain of custody agrees with sample label(s)	Yes	No	TD on bag
Container labels legible and intact?	Yes	No	n/a
Sample Matrix and properties same as on chain of custody?	Yes	No	
Samples in proper container/bottle?	Yes	No	
Samples properly preserved?	Yes	No	
Sample bottles intact?	Yes	No	
Preservations documented on Chain of Custody?	Yes	No	
Containers documented on Chain of Custody?	Yes	No	
Sufficient sample amount for indicated test?	Yes	No	
Samples received within sufficient hold time?	Yes	No	
VOC samples have zero headspace?	Yes	No	Not Applicable

Other observations:

Variance Documentation:

Contact Person: - _____ Date/Time: _____ Contacted by: _____
Regarding: _____

Corrective Action Taken:



2809 S. County Rd. #1257 • Midland, TX 79706 • 432-563-1123 • Fax 432-563-1823

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Page _____ of _____

Pink: Project Manager

ENVIRONMENTAL LAB OF LTD.

"Don't Treat Your Soil Like Dirt!"

NORM DECON
ATTN: Kit Parten
2809 SCR 1257
Midland, TX 79706
FAX: 432-563-1823

Sample Type: Soil
Sample Condition: Intact/ 30.0 deg C
ELT # 5J26008-01
Project Name: NMGSAU #85 Pit
Project # None Given
Project Location: Lea Co., NM

Sample Date: 10/25/05
Sample Time: 16:00
Receiving Date: 10/26/05
Analysis Date: 10/31/05
Analysis Time: 09:07
Field Code: Stockpile #1

Analysis Description	Analysis Results pCi/gm	Analysis Error +/- 2σ	Analysis Results Bq/gm	Analysis Error +/- 2σ	Analysis Test Method	Analysis Technician
Ra-226	102.90	11.08	3.81	0.41	EPA 901.1M	JM
Ra-228	<1.33	N/A	<0.05	N/A	EPA 901.1M	JM
Pb-210	39.60	5.08	1.46	0.19	EPA 901.1M	JM
Th-228	<13.78	N/A	<0.51	N/A	EPA 901.1M	JM
Total Activity	295.16	N/A	10.92	N/A	EPA 901.1M	JM
Notes:						


Quality Assurance Review

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ENVIRONMENTAL LAB OF LTD.

"Don't Treat Your Soil Like Dirt!"

NORM DECON
ATTN: Kit Parten
2809 SCR 1257
Midland, TX 79706
FAX: 432-563-1823

Sample Type: Soil
Sample Condition: Intact/ 30.0 deg C
ELT # 5J26008-02
Project Name: NMGSAU #85 Pit
Project # None Given
Project Location: Lea Co., NM

Sample Date: 10/25/05
Sample Time: 16:00
Receiving Date: 10/26/05
Analysis Date: 10/31/05
Analysis Time: 10:00
Field Code: Stockpile #2

Analysis Description	Analysis Results pCi/gm	Analysis Error +/- 2σ	Analysis Results Bq/gm	Analysis Error +/- 2σ	Analysis Test Method	Analysis Technician
Ra-226	80.50	8.85	2.98	0.33	EPA 901.1M	JM
Ra-228	<1.22	N/A	<0.04	N/A	EPA 901.1M	JM
Pb-210	32.64	4.26	1.21	0.16	EPA 901.1M	JM
Th-228	<12.38	N/A	<0.46	N/A	EPA 901.1M	JM
Total Activity	237.60	N/A	8.79	N/A	EPA 901.1M	JM
Notes:						


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ENVIRONMENTAL LAB OF LTD.

"Don't Treat Your Soil Like Dirt!"

NORM DECON
ATTN: Kit Parten
2809 SCR 1257
Midland, TX 79706
FAX: 432-563-1823

Sample Type: Soil
Sample Condition: Intact/ 30.0 deg C
ELT # 5J26008-03
Project Name: NMGSAU #85 Pit
Project # None Given
Project Location: Lea Co., NM

Sample Date: 10/25/05
Sample Time: 16:00
Receiving Date: 10/26/05
Analysis Date: 10/31/05
Analysis Time: 10:18
Field Code: Stockpile #3

Analysis Description	Analysis Results pCi/gm	Analysis Error +/- 2σ	Analysis Results Bq/gm	Analysis Error +/- 2σ	Analysis Test Method	Analysis Technician
Ra-226	141.20	14.86	5.22	0.55	EPA 901.1M	JM
Ra-228	<1.62	N/A	<0.06	N/A	EPA 901.1M	JM
Pb-210	46.53	5.84	1.72	0.22	EPA 901.1M	JM
Th-228	<15.84	N/A	<0.59	N/A	EPA 901.1M	JM
Total Activity	408.73	N/A	15.12	N/A	EPA 901.1M	JM
Notes:						


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"Don't Treat Your Soil Like Dirt!"

NORM DECON
ATTN: Kit Parten
2809 SCR 1257
Midland, TX 79706
FAX: 432-563-1823

Sample Type: Soil
Sample Condition: Intact/ 30.0 deg C
ELT # 5J26008-04
Project Name: NMGSAU #85 Pit
Project # None Given
Project Location: Lea Co., NM

Sample Date: 10/25/05
Sample Time: 16:00
Receiving Date: 10/26/05
Analysis Date: 10/31/05
Analysis Time: 11:03
Field Code: Stockpile #4

Analysis Description	Analysis Results pCi/gm	Analysis Error +/- 2σ	Analysis Results Bq/gm	Analysis Error +/- 2σ	Analysis Test Method	Analysis Technician
Ra-226	86.27	9.40	3.19	0.35	EPA 901.1M	JM
Ra-228	<1.26	N/A	<0.05	N/A	EPA 901.1M	JM
Pb-210	35.34	4.43	1.31	0.16	EPA 901.1M	JM
Th-228	<13.11	N/A	<0.49	N/A	EPA 901.1M	JM
Total Activity	250.62	N/A	9.27	N/A	EPA 901.1M	JM
Notes:						


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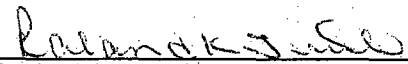
"Don't Treat Your Soil Like Dirt!"

NORM DECON
ATTN: Kit Parten
2809 SCR 1257
Midland, TX 79706
FAX: 432-563-1823

Sample Type: Soil
Sample Condition: Intact/ 30.0 deg C
ELT # 5J26008-05
Project Name: NMGSAU #85 Pit
Project # None Given
Project Location: Lea Co., NM

Sample Date: 10/25/05
Sample Time: 16:00
Receiving Date: 10/26/05
Analysis Date: 10/31/05
Analysis Time: 11:15
Field Code: Stockpile #5

Analysis Description	Analysis Results pCi/gm	Analysis Error +/- 2σ	Analysis Results Bq/gm	Analysis Error +/- 2σ	Analysis Test Method	Analysis Technician
Ra-226	51.85	5.99	1.92	0.22	EPA 901.1M	JM
Ra-228	<0.92	N/A	<0.03	N/A	EPA 901.1M	JM
Pb-210	25.04	3.38	0.93	0.12	EPA 901.1M	JM
Th-228	<10.01	N/A	<0.37	N/A	EPA 901.1M	JM
Total Activity	149.01	N/A	5.51	N/A	EPA 901.1M	JM
Notes:						


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"Don't Treat Your Soil Like Dirt!"

NORM DECON
ATTN: Kit Parten
2809 SCR 1257
Midland, TX 79706
FAX: 432-563-1823

Sample Type: Soil
Sample Condition: Intact/ 30.0 deg C
ELT # 5J26008-06
Project Name: NMGSAU #85 Pit
Project # None Given
Project Location: Lea Co., NM

Sample Date: 10/25/05
Sample Time: 16:00
Receiving Date: 10/26/05
Analysis Date: 10/31/05
Analysis Time: 11:35
Field Code: Stockpile #6

Analysis Description	Analysis Results pCi/gm	Analysis Error +/- 2σ	Analysis Results Bq/gm	Analysis Error +/- 2σ	Analysis Test Method	Analysis Technician
Ra-226	70.01	7.87	2.59	0.29	EPA 901.1M	JM
Ra-228	<1.13	N/A	<0.04	N/A	EPA 901.1M	JM
Pb-210	33.61	4.17	1.24	0.15	EPA 901.1M	JM
Th-228	<12.07	N/A	<0.45	N/A	EPA 901.1M	JM
Total Activity	212.93	N/A	7.88	N/A	EPA 901.1M	JM
Notes:						


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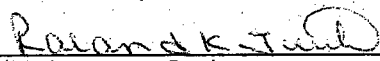
"Don't Treat Your Soil Like Dirt!"

NORM DECON
ATTN: Kit Parten
2809 SCR 1257
Midland, TX 79706
FAX: 432-563-1823

Sample Type: Soil
Sample Condition: Intact/ 30.0 deg C
ELT # 5J26008-07
Project Name: NMGSAU #85 Pit
Project # None Given
Project Location: Lea Co., NM

Sample Date: 10/25/05
Sample Time: 16:00
Receiving Date: 10/26/05
Analysis Date: 10/31/05
Analysis Time: 12:03
Field Code: Stockpile #7

Analysis Description	Analysis Results pCi/gm	Analysis Error +/- 2σ	Analysis Results Bq/gm	Analysis Error +/- 2σ	Analysis Test Method	Analysis Technician
Ra-226	62.46	7.06	2.31	0.26	EPA 901.1M	JM
Ra-228	<1.08	N/A	<0.04	N/A	EPA 901.1M	JM
Pb-210	26.04	3.48	0.96	0.13	EPA 901.1M	JM
Th-228	<11.13	N/A	<0.41	N/A	EPA 901.1M	JM
Total Activity	184.92	N/A	6.84	N/A	EPA 901.1M	JM
Notes:						


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ENVIRONMENTAL LAB OF LTD.

"Don't Treat Your Soil Like Dirt!"

NORM DECON
ATTN: Kit Parten
2809 SCR 1257
Midland, TX 79706
FAX: 432-563-1823

Sample Type: Soil
Sample Condition: Intact/ 30.0 deg C
ELT # 5J26008-08
Project Name: NMGSAU #85 Pit
Project # None Given
Project Location: Lea Co., NM

Sample Date: 10/25/05
Sample Time: 16:00
Receiving Date: 10/26/05
Analysis Date: 10/31/05
Analysis Time: 12:25
Field Code: Stockpile #8

Analysis Description	Analysis Results pCi/gm	Analysis Error +/- 2σ	Analysis Results Bq/gm	Analysis Error +/- 2σ	Analysis Test Method	Analysis Technician
Ra-226	59.15	6.65	2.19	0.25	EPA 901.1M	JM
Ra-228	<1.00	N/A	<0.04	N/A	EPA 901.1M	JM
Pb-210	24.30	3.49	0.90	0.13	EPA 901.1M	JM
Th-228	<10.76	N/A	<0.40	N/A	EPA 901.1M	JM
Total Activity	171.54	N/A	6.35	N/A	EPA 901.1M	JM
Notes:						


Quality Assurance Review

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ENVIRONMENTAL LAB OF LTD.

"Don't Treat Your Soil Like Dirt!"

NORM DECON
ATTN: Kit Parten
2809 SCR 1257
Midland, TX 79706
FAX: 432-563-1823

Sample Type: Soil
Sample Condition: Intact/ 30.0 deg C
ELT # 5J26008-09
Project Name: NMGSAU #85 Pit
Project # None Given
Project Location: Lea Co., NM

Sample Date: 10/25/05
Sample Time: 16:00
Receiving Date: 10/26/05
Analysis Date: 10/31/05
Analysis Time: 12:44
Field Code: Stockpile #9

Analysis Description	Analysis Results pCi/gm	Analysis Error +/- 2σ	Analysis Results Bq/gm	Analysis Error +/- 2σ	Analysis Test Method	Analysis Technician
Ra-226	60.12	6.90	2.22	0.26	EPA 901.1M	JM
Ra-228	<1.15	N/A	<0.04	N/A	EPA 901.1M	JM
Pb-210	27.98	3.78	1.04	0.14	EPA 901.1M	JM
Th-228	<10.97	N/A	<0.41	N/A	EPA 901.1M	JM
Total Activity	209.76	N/A	7.76	N/A	EPA 901.1M	JM
Notes:						


Quality Assurance Review

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ENVIRONMENTAL LAB OF LTD.

"Don't Treat Your Soil Like Dirt!"

NORM DECON
ATTN: Kit Parten
2809 SCR 1257
Midland, TX 79706
FAX: 432-563-1823

Sample Type: Soil
Sample Condition: Intact/ 30.0 deg C
ELT # 5J26008-10
Project Name: NMGSAU #85 Pit
Project # None Given
Project Location: Lea Co., NM

Sample Date: 10/25/05
Sample Time: 16:00
Receiving Date: 10/26/05
Analysis Date: 10/31/05
Analysis Time: 13:12
Field Code: Stockpile #10

Analysis Description	Analysis Results pCi/gm	Analysis Error +/- 2σ	Analysis Results Bq/gm	Analysis Error +/- 2σ	Analysis Test Method	Analysis Technician
Ra-226	115.60	12.31	4.28	0.46	EPA 901.1M	JM
Ra-228	<1.35	N/A	<0.05	N/A	EPA 901.1M	JM
Pb-210	46.93	5.71	1.74	0.21	EPA 901.1M	JM
Th-228	<14.49	N/A	<0.54	N/A	EPA 901.1M	JM
Total Activity	336.00	N/A	12.43	N/A	EPA 901.1M	JM

Notes:


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ENVIRONMENTAL LAB OF LTD.

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NORM DECON
ATTN: Kit Parten
2809 SCR 1257
Midland, TX 79706
FAX: 432-563-1823

Sample Type: Soil
Sample Condition: Intact/ 30.0 deg C
ELT # 5J26008-11
Project Name: NMGSAU #85 Pit
Project # None Given
Project Location: Lea Co., NM

Sample Date: 10/25/05
Sample Time: 17:00
Receiving Date: 10/26/05
Analysis Date: 10/31/05
Analysis Time: 13:26
Field Code: Stockpile #11

Analysis Description	Analysis Results pCi/gm	Analysis Error +/- 2σ	Analysis Results Bq/gm	Analysis Error +/- 2σ	Analysis Test Method	Analysis Technician
Ra-226	59.84	6.80	2.21	0.25	EPA 901.1M	JM
Ra-228	<1.03	N/A	<0.04	N/A	EPA 901.1M	JM
Pb-210	26.67	3.68	0.99	0.14	EPA 901.1M	JM
Th-228	<10.76	N/A	<0.40	N/A	EPA 901.1M	JM
Total Activity	175.20	N/A	6.48	N/A	EPA 901.1M	JM
Notes:						

Ralanda S. S. S.
Quality Assurance Review

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ENVIRONMENTAL LAB OF LTD.

"Don't Treat Your Soil Like Dirt!"

NORM DECON
ATTN: Kit Parten
2809 SCR 1257
Midland, TX 79706
FAX: 432-563-1823

Sample Type: Soil
Sample Condition: Intact/ 30.0 deg C
ELT # 5J26008-12
Project Name: NMGSAU #85 Pit
Project # None Given
Project Location: Lea Co., NM

Sample Date: 10/25/05
Sample Time: 17:00
Receiving Date: 10/26/05
Analysis Date: 10/31/05
Analysis Time: 13:40
Field Code: Stockpile #12

Analysis Description	Analysis Results pCi/gm	Analysis Error +/- 2σ	Analysis Results Bq/gm	Analysis Error +/- 2σ	Analysis Test Method	Analysis Technician
Ra-226	66.30	7.38	2.45	0.27	EPA 901.1M	JM
Ra-228	<1.20	N/A	<0.04	N/A	EPA 901.1M	JM
Pb-210	28.66	3.83	1.06	0.14	EPA 901.1M	JM
Th-228	<11.34	N/A	<0.42	N/A	EPA 901.1M	JM
Total Activity	192.60	N/A	7.13	N/A	EPA 901.1M	JM
Notes:						


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ENVIRONMENTAL LAB OF LTD.

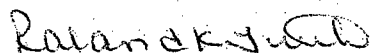
"Don't Treat Your Soil Like Dirt!"

NORM DECON
ATTN: Kit Parten
2809 SCR 1257
Midland, TX 79706
FAX: 432-563-1823

Sample Type: Soil
Sample Condition: Intact/ 30.0 deg C
ELT # 5J26008-13
Project Name: NMGS AU #85 Pit
Project # None Given
Project Location: Lea Co., NM

Sample Date: 10/25/05
Sample Time: 17:00
Receiving Date: 10/26/05
Analysis Date: 10/31/05
Analysis Time: 14:09
Field Code: Stockpile #13

Analysis Description	Analysis Results pCi/gm	Analysis Error +/- 2σ	Analysis Results Bq/gm	Analysis Error +/- 2σ	Analysis Test Method	Analysis Technician
Ra-226	40.16	4.78	1.48	0.18	EPA 901.1M	JM
Ra-228	<0.87	N/A	<0.03	N/A	EPA 901.1M	JM
Pb-210	19.64	2.75	0.73	0.10	EPA 901.1M	JM
Th-228	<8.60	N/A	<0.32	N/A	EPA 901.1M	JM
Total Activity	119.76	N/A	4.43	N/A	EPA 901.1M	JM
Notes:						


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NORM DECON
ATTN: Kit Parten
2809 SCR 1257
Midland, TX 79706
FAX: 432-563-1823

Sample Type: Soil
Sample Condition: Intact/ 30.0 deg C
ELT # 5J26008-14
Project Name: NMGSAU #85 Pit
Project # None Given
Project Location: Lea Co., NM

Sample Date: 10/25/05
Sample Time: 17:00
Receiving Date: 10/26/05
Analysis Date: 10/31/05
Analysis Time: 14:28
Field Code: Stockpile #14

Analysis Description	Analysis Results pCi/gm	Analysis Error +/- 2σ	Analysis Results Bq/gm	Analysis Error +/- 2σ	Analysis Test Method	Analysis Technician
Ra-226	45.26	5.21	1.67	0.19	EPA 901.1M	JM
Ra-228	<0.87	N/A	<0.03	N/A	EPA 901.1M	JM
Pb-210	20.56	2.90	0.76	0.11	EPA 901.1M	JM
Th-228	<9.41	N/A	<0.35	N/A	EPA 901.1M	JM
Total Activity	131.01	N/A	4.84	N/A	EPA 901.1M	JM
Notes:						


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"Don't Treat Your Soil Like Dirt!"

NORM DECON
ATTN: Kit Parten
2809 SCR 1257
Midland, TX 79706
FAX: 432-563-1823

Sample Type: Soil
Sample Condition: Intact/ 30.0 deg C
ELT # 5J26008-15
Project Name: NMGSAU #85 Pit
Project # None Given
Project Location: Lea Co., NM

Sample Date: 10/25/05
Sample Time: 17:00
Receiving Date: 10/26/05
Analysis Date: 10/31/05
Analysis Time: 14:49
Field Code: Stockpile #15

Analysis Description	Analysis Results pCi/gm	Analysis Error +/- 2σ	Analysis Results Bq/gm	Analysis Error +/- 2σ	Analysis Test Method	Analysis Technician
Ra-226	25.20	3.08	0.93	0.11	EPA 901.1M	JM
Ra-228	<0.70	N/A	<0.02	N/A	EPA 901.1M	JM
Pb-210	10.46	1.74	0.39	0.06	EPA 901.1M	JM
Th-228	<6.63	N/A	<0.24	N/A	EPA 901.1M	JM
Total Activity	51.22	N/A	1.89	N/A	EPA 901.1M	JM
Notes:						


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ENVIRONMENTAL LAB OF LTD.

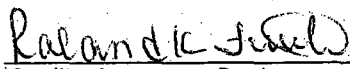
"Don't Treat Your Soil Like Dirt!"

NORM DECON
ATTN: Kit Parten
2809 SCR 1257
Midland, TX 79706
FAX: 432-563-1823

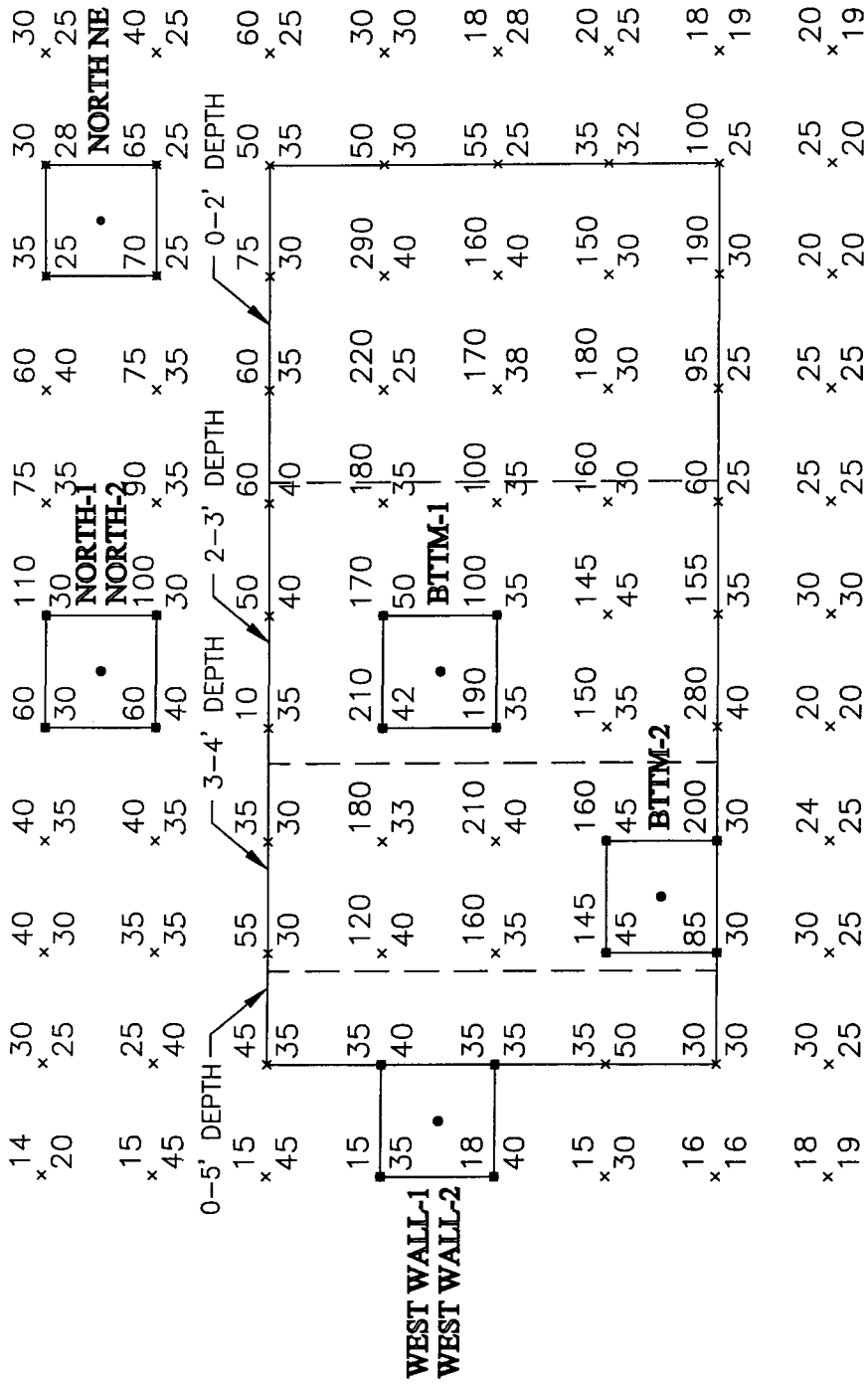
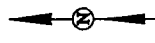
Sample Type: Soil
Sample Condition: Intact/ 8.0 deg C
ELT # 5L08008-01
Project Name: Amerada Hess/ NMGSAU #85 Pit
Project # None Given
Project Location: None Given

Sample Date: 12/08/05
Sample Time: None Given
Receiving Date: 12/08/05
Analysis Date: 12/13/05
Analysis Time: 12:59
Field Code: Stockpile #16

Analysis Description	Analysis Results pCi/gm	Analysis Error +/- 2σ	Analysis Results Bq/gm	Analysis Error +/- 2σ	Analysis Test Method	Analysis Technician
Ra-226	24.60	3.10	0.91	0.11	EPA 901.1M	JM
Ra-228	<0.62	N/A	<0.02	N/A	EPA 901.1M	JM
Pb-210	10.88	1.70	0.40	0.06	EPA 901.1M	JM
Th-228	<6.57	N/A	<0.24	N/A	EPA 901.1M	JM
Total Activity	53.51	N/A	1.98	N/A	EPA 901.1M	JM
Notes:						


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Sample ID	Ra-226*	Ra-228*	Total Activity*
BTM-1	<4.12	<0.53	5.57
BTM-2	16.74	<0.62	28.36
WEST WALL	32.63	<0.74	72.48
NORTH-1	32.24	<0.76	69.64
WEST WALL-2	<4.32	<0.52	6.61
NORTH-2	16.61	<0.56	27.37
NORTH NE	21.45	<0.52	67.62

* pCi/gm

10 x 10
PRE-JOB SURVEY
POST-JOB SURVEY

Figure No. 1

Lea County, New Mexico

Amerada Hess Corporation

NMGS AU #85 Pit Area

Pre and Post Job NORM Surveys

NORM Decon Service- LLC

NOTE: ALL READINGS ARE RECORDED IN uR/HR
ON A 10' GRID
BACKGROUND: 14 uR/HR

P.O. Box 1277
Andrews, Texas 79714
(432) 523-3320 Office
(432) 524-4993 Fax
gcooley@lotusllc.com



December 13, 2005

Amerada Hess
PO Box 840
Seminole, TX 79630

Re: ***Certification of Disposal Compliance***

I hereby certify that the Lotus Disposal Facility received 1964 bbls of NORM/NOW, a non-hazardous oil field waste, designated as an exempt waste stream under the Resource Conservation and Recovery Act, containing naturally occurring radioactive materials. This material was generated from NORM contaminated soil removed from NMGSAU # 85. The material met the criteria for disposal by injection under RRC Permit Nos. 10799, 11239 and 11240, in accordance with the Railroad Commission of Texas.

A handwritten signature in cursive script that reads 'Geri Cooley for Lotus'. The signature is written in black ink and is positioned above the printed name and title of the signatory.

Geri Cooley, MS, REM, RSO
Regulatory Affairs & HES Manager / Corporate RSO

P.O. Box 1277
Andrews, Texas 79714
(432) 523-3320 Office
(432) 524-4993 Fax
gcooley@lotusllc.com



January 13, 2006

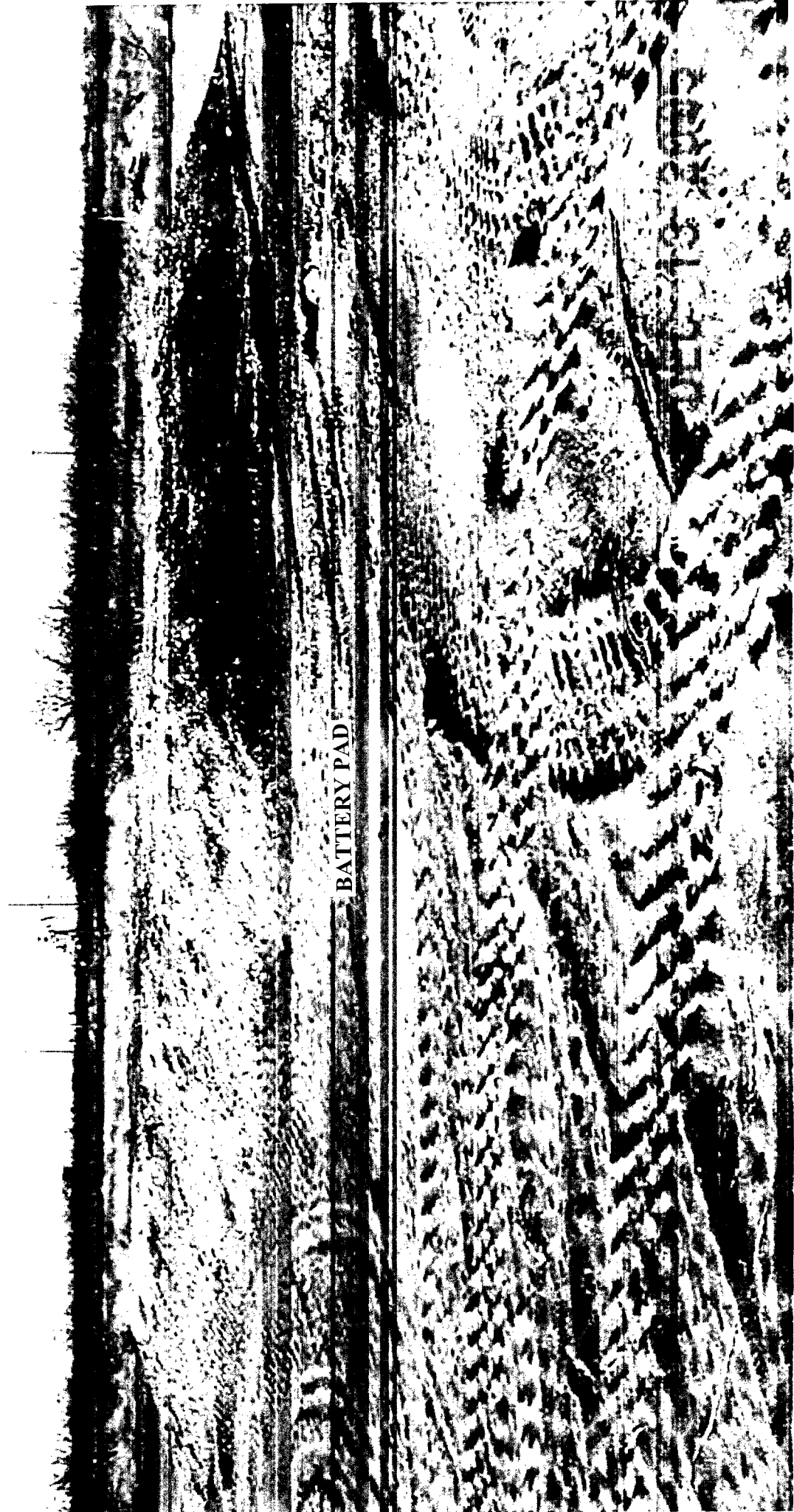
Amerada Hess Corp.
PO Box 840
Seminole, TX 79630

Re: ***Certification of Disposal Compliance***

I hereby certify that the Lotus Disposal Facility received 77 bbls of NORM/NOW, a non-hazardous oil field waste, designated as an exempt waste stream under the Resource Conservation and Recovery Act, containing naturally occurring radioactive materials. This material was generated from NORM contaminated soil and scale removed from the Monument Yard. The material met the criteria for disposal by injection under RRC Permit Nos. 10799, 11239 and 11240, in accordance with the Railroad Commission of Texas.

Geri Cooley, MS, REM, RSO
Regulatory Affairs & HES Manager / Corporate RSO

PHOTOGRAPHS



BATTERY PAD

UNIT IS OK



SEPARATOR PAD

EVAPORATION PIT AFTER NORM CLEAN UP

5005

REMEDiated BATTERY PAD



REMEDIATED EVAPORATION PIT

