# HIP - \_\_\_112\_

# GENERAL CORRESPONDENCE

YEAR(S): 2008-2009



#### 2008 OCT 6 PM 3 38

October 2, 2008

#### CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Mr. Brad Jones New Mexico Oil Conservation Division 1220 South St. Francis Drive Santa Fe, New Mexico 87505

Re: FEF – WATER DISCHARGE PERMIT

HIP-112 PUBLIC NOTICE AFFIDAVITS PIPELINE HYDROSTATIC TEST CO2 TRANSMISSION LINE WEST BRAVO DOME

#### Dear Mr. Jones:

In compliance with NMAC 20.6.2.3108, Hess Corporation is submitting proof of public notice for the Hydrostatic Discharge Permit HIP-112. Enclosed is:

- 1. An affidavit of mailings to underlying and adjacent landowners,
- 2. Proof of publication in the Union County Léader, and
- 3. An affidavit of the posting of two (2) signs at the project site and the Mosquero Post Office including pictures of the signs.

#### Mailings to adjacent and underlying landowners

Notification letters with a copy of the public notice was sent via certified mail, return receipt to underlying and adjacent landowners on September 24, 2008 to:

Mr. Joe Culbertson – W. O. Culbertson & Son's, Inc. (Exhibit A)

Ms. Mary Libby Campbell - Yesterday's Valley Ranch, Inc. (Exhibit B)

Mr. John Bemis – New Mexico State Land Office (Exhibit C)

The certified mail receipts are included with each Exhibit along with copies of the letters sent.

#### Proof of Publication in the Union County Leader

Attached are copies of pages from the newspaper and an affidavit from the Union County Leader.

An affidavit of the posting of two (2) signs at the project site and the Mosquero Post Office

Attached is an affidavit from Daniel Holcomb addressing posting of the signs. Pictures of the signs are attached.

Mr. Brad Jones New Mexico Oil Conservation Division October 2, 2008

If you should have any questions or require additional information, please feel free to contact me at (713) 609-4204.

Sincerely,

Michael D. Ford Environmental Advisor

MDF:WBDPUBLICNOTICEFILINGSLT.DOC

Attachments

#### AFFIDAVIT OF MAILINGS

STATE OF TEXAS	)
•	·)ss
COUNTY OF HARRIS	)

BEFORE ME, the undersigned authority, personally appeared JAMES HUGHART ("Affiant") on the date written below, who having been first duly sworn according to law, deposes and says:

- 1. I am over the age of eighteen and competent to testify concerning the matters stated herein based on my own personal knowledge, education and experience.
- 2. I am a LAND MANAGER employed by Hess Corporation, a Delaware corporation, in its Exploration and Production Americas Technical Group.
- 3. I have personal knowledge of Hess Corporation's West Bravo Dome Carbon Dioxide Transmission Line Project.

FURTHER AFFIANT SAYETH NAUGHT.

ames Hughart

The foregoing was sworn to before me by <u>Tames S: Higher</u> fon this <u>24 th</u> day of

September, 2008.

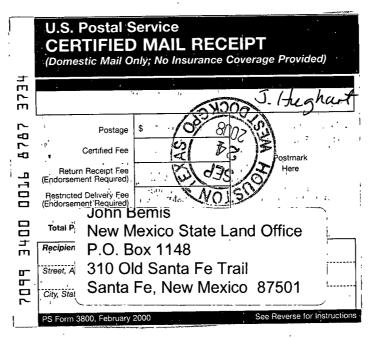
My Commission Expires: November 21, 2011 (Seal)

Notary Public











James S. Hughart Land Manager (713) 609-5517 FAX: (713) 609-5670

## VIA CERTIFIED MAIL RETURN RECEIPT REQUESTED

September 24, 2008

Joe Culbertson W. O. Culbertson & Son's, Inc. 1101 Liberal St. Dalhart, TX. 79002

Re:

Hydrostatic Test Discharge Permit

Water Retention Pond

W. O. Culbertson & Son's, Inc. Harding County, New Mexico

Dear Joe,

Hess Corporation (Hess) is preparing to hydrostatically test the West Bravo Dome CO2 transmission line we have constructed partly on W. O. Culbertson & Son's, Inc. (Culbertson) property in Sec. 31, T19N, R32E. Pursuant to the July 29, 2008 Letter Agreement between Hess and Culbertson, we will construct a water retention pond on the property to store the water for the test, and we will ultimately discharge the water on the property in the manner provided for in the Agreement. To satisfy the New Mexico Water Quality Control Commission regulations regarding public notice requirements for a Hydrostatic Test permit, Hess Corporation is required to submit to Culbertson, an underlying and adjacent landowner of the discharge location, a copy of the public notice. Enclosed, please find a copy of this notice.

If you have any questions or concerns, please call me at 713-609-5517.

Yours very truly,

 $^{\prime}\!\mathsf{James}$  S. Hughart

Cc. Mike Ford

Encl.

#### NOTICE OF PUBLICATION

Hess Corporation, 244 Bueyeros Highway, Mosquero, New Mexico, 87733 has submitted an application for an Individual Hydrostatic Test Discharge Permit to the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division (OCD) for the West Bravo Dome Carbon Dioxide Transmission Line. Approximately 11.5 miles of new 12-inch carbon steel pipe will be hydrostatically tested using water from the Girard Well. Upon completion of the test, Hess Corporation will transfer the water from the pipeline into a nearby lined temporary holding pond. The water will remain in the lined temporary holding pond while water analyses are completed. Once water analyses are completed and approved, the water will be pumped from the pond onto the surrounding land within Section 31, T19N, R32E. The pond liner will be removed and the area reclaimed once the pond is empty. Driving directions to the discharge site follow: From the intersection of State Highway 102 and Highway 420 in Harding County, go east on Highway 420 (caliche highway) for 6 miles, turn right into Oxy's Sheep Mountain Pipeline Station on the edge of the road. The temporary pond and the discharge point is in an area just southwest of and adjacent to Oxy's site. Approximately 362,000 gallons of wastewater will be generated from the hydrostatic test. The water is expected to meet Water Quality Control Commission (WQCC) water quality standards. If WOCC water quality standards are not met, the test water will be hauled from the temporary storage pond to an approved disposal location, or treated to OCD specifications for discharge. The depth of groundwater potentially affected by the discharge is about 50 feet below the surface. The total dissolved solids concentration of the groundwater in the area is less than 500 parts per million. Any interested person may obtain information, submit comments, and request to be placed on a facility-specific mailing list for future notice by contacting Brad Jones at the New Mexico OCD at 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, Telephone (505) 476-3487. The OCD will accept comments and statements of interest regarding the permit application and will create a facility-specific mailing list of persons who wish to receive future notices.

#### **AVISO PARA PUBLICACION**

La Corporación de Hess, 244 Carretera de Bueyeros, Mosquero, Nuevo México, 87733 ha sometido una aplicación para un Permiso Hidrostático Individual de la Descarga de la Prueba a la Energía de Nuevo México, los Minerales y el Departamento Natural de Recursos, la Conservación del Petróleo División (OCD) para el Oeste Bravo la Línea de la Transmisión de Bióxido de carbono de Cúpula. Aproximadamente 11.5 millas de nuevo tubo de 12 pulgadas de acero serán probadas hidrostáticamente utilizando agua del Girard Bien. Sobre la terminación de la prueba, la Corporación de Hess transferirá el agua de la tubería en una cerca de forró temporario teniendo charça. El agua se quedará en el forró temporario teniendo charça mientras agua analizada es completada. Una vez que el agua se analiza es completada y es aprobada, el agua será bombeada de la charca en la tierra circundante dentro de la Sección 31, T19N, R32E. El paquebote de la charca será quitado y el área recuperó una vez la charca es vacía. Las direcciones de conducir al sitio de la descarga siguen: Del cruce de carretera nacional 102 y la Carretera 420 en el Condado de Harding, van al este en Carretera 420 (carretera de caliche) para 6 millas, gira a la derecha en la Estación de Tubería de Montaña de la Oveja de Oxy al borde del camino. La charca temporaria y el punto de la descarga están en un área justo suroeste de y adyacente al sitio del Oxy. Aproximadamente 362,000 galones de wastewater serán engendrados de la prueba hidrostática. El agua es esperada encontrar Comisión de Control de calidad de Agua (WQCC) los estándares de la calidad de agua. Si los estándares de la calidad de agua de WQCC no son encontrados, el agua del prueba será acarreada de la charca del almacenamiento temporal a una ubicación aprobada de la disposición, o tratado a especificaciones de OCD para la descarga. La profundidad de agua subterránea potencialmente afectado por la descarga está acerca de 50 pies debajo de la superficie. El suma se disolvió la concentración de sólidos de la agua subterránea en el área es menos de 500 partes por millón, Alguna persona interesada puede obtener información, se somete los comentarios, y petición para ser colocada en una lista de envío facilidad-específico para futura nota contactando a Brad Jones en el Nuevo México OCD en 1220 S. del sur. Francis Conduce, Santa Fe, Nuevo México 87505, el Teléfono (505) 476-3487. El OCD aceptará que los comentarios y las declaraciones del interés con respecto a la aplicación del permiso y creará una lista de envío facilidad-específico de personas que desea recibir futuras notas.



James S. Hughart Land Manager (713) 609-5517 FAX: (713) 609-5670

## VIA CERTIFIED MAIL RETURN RECEIPT REQUESTED

September 24, 2008

Mary Libby Campbell Yesterday's Valley Ranch, Inc. 250 Bravo Dome Hwy. Bueyeros, New Mexico 88415

Re: Hydrostatic Test Discharge Permit

NW/4 Sec. 31, T19N, R32E

Land Owned by W. O. Culbertson & Son's, Inc.

Harding County, New Mexico

Dear Mary,

Hess Corporation (Hess) is preparing to hydrostatically test the West Bravo Dome CO2 transmission line originating in Sec. 5, T18N, R30E and terminating in Sec. 31, T19N, R32E on property owned by W. O. Culbertson & Sons, Inc. (Culbertson). Hess has arranged with Culbertson to construct a water retention pond adjacent to the terminus of the line and near the Sheep Mountain Pipeline Station to store water for the test, and we will ultimately discharge the water on the Culbertson property at the conclusion of the test. To satisfy the New Mexico Water Quality Control Commission regulations regarding public notice requirements for a Hydrostatic Test permit, Hess Corporation is required to submit to Yesterday's Valley Ranch, Inc., an adjacent landowner of the discharge location, a copy of the public notice. Enclosed, please find a copy of this notice.

If you have any questions or concerns, please call me at 713-609-5517.

Yours very truly,

James S. Hughart

Cc. Mike Ford

Encl.

#### NOTICE OF PUBLICATION

Hess Corporation, 244 Bueyeros Highway, Mosquero, New Mexico, 87733 has submitted an application for an Individual Hydrostatic Test Discharge Permit to the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division (OCD) for the West Bravo Dome Carbon Dioxide Transmission Line. Approximately 11.5 miles of new 12-inch carbon steel pipe will be hydrostatically tested using water from the Girard Well. Upon completion of the test, Hess Corporation will transfer the water from the pipeline into a nearby lined temporary holding pond. The water will remain in the lined temporary holding pond while water analyses are completed. Once water analyses are completed and approved, the water will be pumped from the pond onto the surrounding land within Section 31, T19N, R32E. The pond liner will be removed and the area reclaimed once the pond is empty. Driving directions to the discharge site follow: From the intersection of State Highway 102 and Highway 420 in Harding County, go east on Highway 420 (caliche highway) for 6 miles, turn right into Oxy's Sheep Mountain Pipeline Station on the edge of the road. The temporary pond and the discharge point is in an area just southwest of and adjacent to Oxy's site. Approximately 362,000 gallons of wastewater will be generated from the hydrostatic test. The water is expected to meet Water Quality Control Commission (WQCC) water quality standards. If WQCC water quality standards are not met, the test water will be hauled from the temporary storage pond to an approved disposal location, or treated to OCD specifications for discharge. The depth of groundwater potentially affected by the discharge is about 50 feet below the surface. The total dissolved solids concentration of the groundwater in the area is less than 500 parts per million. Any interested person may obtain information, submit comments, and request to be placed on a facility-specific mailing list for future notice by contacting Brad Jones at the New Mexico OCD at 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, Telephone (505) 476-3487. The OCD will accept comments and statements of interest regarding the permit application and will create a facility-specific mailing list of persons who wish to receive future notices.

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James S. Hughart (713) 609-5517 FAX: (713) 609-5670

## VIA CERTIFIED MAIL RETURN RECEIPT REQUESTED

**September 24, 2008** 

John Bernis New Mexico State Land Office P.O. Box 1148 310 Old Santa Fe Trail Santa Fe, New Mexico 87501

Re: I

Hydrostatic Test Discharge Permit

NW/4 Sec. 31, T19N, R32E

Land Owned by W. O. Culbertson & Son's, Inc.

Harding County, New Mexico

Dear Mr. Bemis,

Hess Corporation (Hess) is preparing to hydrostatically test the West Bravo Dome CO2 transmission line originating in Sec. 5, T18N, R30E and terminating in Sec. 31, T19N, R32E on property owned by W. O. Culbertson & Sons, Inc. (Culbertson). Hess has arranged with Culbertson to construct a water retention pond adjacent to the terminus of the line and near the Sheep Mountain Pipeline Station, to store water for the test, and we will ultimately discharge the water on the property. To satisfy the New Mexico Water Quality Control Commission regulations regarding public notice requirements for a Hydrostatic Test permit, Hess Corporation is required to submit to the New Mexico State land Office (SLO), an adjacent landowner in Sec. 36, T19N, R32 E of the discharge location, a copy of the public notice. Enclosed, please find a copy of this notice.

For your information, a similar letter was sent to Mary Libby Campbell, President of Yesterday's Valley Ranch, Inc., which leases the Sec. 36 lands from the SLO.

If you have any questions or concerns, please call me at 713-609-5517.

Yours very truly,

James S. Hughart

Cc. Mike Ford

Encl.

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State of New Mexico County of Union

SS.

The undersigned, being first duly sworn according to law, on her oath deposes and says that she is the office manager of the newspaper named the Union County Leader and that she has personal knowledge of the facts stated herein: That the said Union County Leader is a weekly newspaper of general paid circulation in Union and Harding Counties published in the County of Union and State of New Mexico; entered under the second class privilege at the U.S. Post Office at Clayton, Union County, New Mexico, and having been uninterruptedly and continuously so printed and published during a period of more than six months next to the date of the printing of the first publication concerning which this affidavit is made and a copy of which is hereto attached; that the said publication, a printed copy of which is hereto attached and made a part of this affidavit, was published in said newspaper once each-week for successive weeks; and that payment for said publication has been made or assessed as part of the court costs to which it relates; said publications having been made on the following dates, to wit:

1st publication: the 3rd day of Saphan, 2058 2nd publication: the day of \_\_\_\_\_\_, 20\_\_\_/

3rd publication: the day of 4th publication: the day of Union County Leader Patricia Herrera, Office Manager Subscribed and sworn to before me this 4 September Mary Sue "Brandy" Payton / Notary Public Union County, New Mexico My commission expires December 13, 2011 Publisher's Bill: 別(lines, ONE time \$ 1470 ınches, display

Received payment:

NOTICE OF

PUBLICATION \*\*\* Hess Corporation, 244 Bueyeros Highway, Mosquero, New Mexico, 877333 has submitted an applica tion for an Individual Hydrostatic Test Discharge Permit to the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division (OCD) for the West Bravo Dome Carbon Dioxide Transmission Line. Approximately 1 1.5 miles of new 12-inch carbon steel pipe will be hydrostatically tested using water from the Girard Well. Upon completion of the test, Hess Corporation will transfer the water from the pipeline into a nearby lined temporary holding pond. The water will remain in the lined temporary holding pond while water analyses are completed. Once water analyses are completed and approved, the water will be pumped from the pond onto the surrounding land within Section 31, T19N, R32E. removed and the area reclaimed once the pond is empty. Driving directions to the discharge site follow: From the intersection way 420 (caliche highway) for 6 miles, turnright into Oxy's Sheep Mountain Pipeline Station on the

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> AVISO PARA PUBLICACIÓN

edge of the road. The Hess, 244 Carretera de mino. La charca tempotemporary pond and the Bueyeros. Mosquero, raria y el punto de la discharge point is in an Nuevo México, 87733 hat descarga están en un área area just southwest of and sometido una aplicación justo surceste de y adya-

adjacent to Oxy's site para un Permiso Hidro- cente al sitio del Oxy Approximately 362,000 stitico Individual de la ter is expected to meet Departamento Natural de El agua es esperada endel Petróleo División (OCD) para el Oeste Bravo la Línea de la Transmisión de Bióxido de carbono de Cúpula. Aproximadamente 11.5 millas de nuevo tubo de 12 pulgadas 'de acero serán probadas hidrostáticamente utilizando agua del Girard Bien. Sobre la terminación de la prueba; la Corporación de Hess transferirá el agua de la tubería en una cerca de forró temporario teniendo charca. El agua se quedará en el forró temporario teniendo charca mientras agua análizada es completada. Una vez que el agua se analiza es completada y es aprobada, el agua será bombeada de la charca en la tierra circundante dentro de la Sección 31, T19N, R32E. -El paquebote de la charca Drive, Santa Fe, New será quitado y el área rees vacía. Las dijecciones de conducir al sitio de la descarga siguen: Del cruce de carretera nacional 102 y la Carretera 420 en el Condado de Harding, van al este en Carretera 420 (carretera de caliche) para 6 millas, gira a la derecha en la Estación de Tubería de Montaña de la Oveja La Corporación de de Oxy al borde del ca-

Aproximadamente be generated from the la Energía de Nuevo Mé water serán engendrados hydrostatic test. The wa- xico loss Minerales y el de la prueba hidrostatica: contrar Comisión de Control de calidad de Agua (WQCC) 10s estándares de la calidad de agua. Si los estándares de la calidad de agua de WQCC no son encontrados, el agua del prueba será acarreada de la charca del almacenamiento temporal a una ubicación aprobada de la disposición, o tratado a especificaciones de OCD para la descarga. La profundidad de agua subterránea potencialmente afectado por la descarga está acerca de 50 pies debajo de la superficie. El suma se disolvió la concentración de sólidos de la agua subterránea en el área es menos de 500 partes por millón. Alguna persona interesada puede obtener información, se somete los comentarios, v petición para ser colocada en una lista de envio facilidad-específico para futura nota contactando a Brad Jones en el Nuevo México OCD en 1220 S. del sur. Francis Conduce, Santa Fe, Nuevo México 87505, el Teléfono (505)-476-3487. El OCD aceptará que los comentarios y las declaraciones del inaplicación del permiso y creará una lista de envío facilidad-específico de personas que desea recibir. futuras notas.

، ميره : ۱۰

#### AFFIDAVIT OF PUBLICATION

State of New Mexico County of Union

SS

4.194

The undersigned, being first duly sworn according to law, on her oath deposes and says that she is the office manager of the newspaper named the Union County Leader and that she has personal knowledge of the facts stated herein: That the said Union County Leader is a weekly newspaper of general paid circulation in Union and Harding Counties published in the County of Union and State of New Mexico; entered under the second class privilege at the U.S. Post Office at Clayton, Union County, New Mexico, and having been uninterruptedly and continuously so printed and published during a period of more than six months next to the date of the printing of the first publication concerning which this affidavit is made and a copy of which is hereto attached; that the said publication, a printed copy of which is hereto attached and made a part of this affidavit, was published in said newspaper once each week for successive weeks. and that payment for said publication has been made or assessed as part of the court costs to which it relates; said publications having been made on the following dates, to wit:

1st publication: the 31 day of Soplandar, 2008
2nd publication: the / day of // ,20
Brd publication: the day of,20
1th publication: the day of,20
Union County Leader
tatricia Fibrila
Patricia Herrera, Office Manager
•
Subscribed and sworn to before me this 19th
lay of Septenber , 2008
Marke Rh Part
Mary Sue Brandy Payton
Notary Public, Union County, New Mexico
My commission expires December 13, 2011
Publisher's Bill:
lines,times \$
1434 inches, display <u>ONE</u> time \$ 142.31

Received payment:

NOTICE OF PUBLICATION

Hess Corporation, 244 Bueyeros Highway Mosquero New Mexico, 87733 has submitted an application for an Individual Hydrostatic Test, Discharge Permit to the New Mexico, Energy, Minerals and Natural Resources Department, Oil Conservation Division (OCD) for the West Bravo Dome Carbon Dioxide Transmission Line. Approximately, 1: 15 miles of new 12-inch carbon steels pipe will be hydrostatically tested using water from the Girard Well. Upon completion of the test, Hess Corporation will transfer the water from the pipeline into a nearby lined temporary holding pond The water will be removed and while water analyses are completed. Once water, analyses are completed and approved, the water will be pumped from the pond onto the surrounding land within Section 31, T19N-R32E. The pond liner will be removed and the area reclaimed once the pond is empty. Diving directions to the discharge site follow. From the intersection of State Highway 102 and Highway 420 in Harding County, go east on Highway 420 (caliche highway) for 6 miles, turnright into Oxy's Sheep Mountain Ripcling Station on the edge of the road, The temporary pond and the discharge point is in an area just southwest of and adjacent to Oxy's site expected to meet Water Quality Control Commission (WQCC) water quality standards. If WQCC water quality standards are not met, the test water will be generated from the hydrostatic test. The water is expected to meet Water Quality Control Commission (WQCC) water quality standards. If WQCC water quality standards are not met, the test water will be hauled from the temporary storage pond to an approved disposal location, or treated to OCD specifications for discharge. The depth of groundwater potentially affected by the discharge is about 50 feet below the surface. The total dissolved solids concentration of the groundwater in the area is less than 500 parts per million. Any interested person may obtain information, submit comments, and request to be placed on a facility specific mailing list for future notice by contacting

AVISO PARA PUBLICACIÓN

Las Corporación de Hess, 244 Carretera de Bueyeros, Mosqueros, Nuevo México, 87733 ha sometido una aplicación para un Permiso Hidrostifico Individual de la Descarga de la Prueba a la Energía de Nuevo México, los Minerales y el Departamento Natural de Recursos, la Conservación del Petróleo División (OCD) para el Oeste Bravo la Línea de la Transmisión de Bióxido de castono de Cúpula. Aproximadamente 115 millas de nuevo tubó de 12 pulgadas de acero serán probadas hidrostáticamente utilizando agua del Girard Bien Sobre la terminación de la prueba, la Corporación de Hess transferirá el agua de la tubería en una cerca de forró, temporario teniendo charca. El agua se quedara en el forró temporario teniendo charca mientras agua analizada es completada. Una vez que el agua se analiza es completada y es aprobada, el agua será bombeada de la charca en la tierra circundante dentró de la Sección 31, T19N, R32E. El paquebote de la charca será quitado y el área recuperó una vez la charca es vacía. Las diiecciones de conducir al sitio de la descarga siguen: Del cruce de carretera nacional 102 y la Carretera 420 en el Condado de Harding, van al este en Carretera 420 (carretera de caliche) para 6 millas, gira a la derecha en la Estación de Tubería de Montaña de la Oveja de Oxy al borde del camino. La charca temporaria y el punto de la descarga están en un área justo suroeste de y adyacente al sitio del Oxy. Aproximadamente 362,000 galones de wastewater serán engendrados de la prueba hidrostática. El agua es esperada encontrar Comisión de Control de calidad de Agua (WQCC) 10s estándares de la calidad de agua Si los estándares de la calidad de agua de WQCC nó son encontrados, el agua del prueba sera acarreada de la charca del almacenamiento temporal a una ubicación aprobada de la disposición, o tratado a especificaciones de OCD para la descarga. La profundidad de agua subterránea potencialmente afectado por la descarga está acerca de 50 pies debajo de la superficie. El suma se disolvió la concentración de sólidos de la agua subterránea en el área es menos de 500 partes por millón. Alguna persona interesada puede obtener información, se somete los comentarios, y petición para ser colocada en una lista de envío facilidad-específico para futura nota contactando a Brad Jones en el Nuevo México OCD en 1220 S. del sur. Francis Conduce, Santa Fe, Nuevo México 87505, el Telefono (505)-476:3487. El OCD aceptará que los comentarios y las declaraciones del interés con respecto a la aplicación del permiso y creara una lista de envío facilidad-específico de personas que desea recibir futuras notas Dr. Date of the second Transport of the

#### AFFIDAVIT OF SIGN POSTING

STATE OF NEW MEXICO	)
	)s
COUNTY OF HARDING	Ś

BEFORE ME, the undersigned authority, personally appeared DANIEL HOLCOMB ("Affiant") on the date written below, who having been first duly sworn according to law, deposes and says:

- 1. I am over the age of eighteen and competent to testify concerning the matters stated herein based on my own personal knowledge, education and experience.
- 2. I am a OPERATIONS TEAM LEADER employed by Hess Corporation, a Delaware corporation, in its Exploration and Production Americas Developments Group.
- 3. I have personal knowledge of Hess Corporation's West Bravo Dome Carbon Dioxide Transmission Line Project.
- 4. As part of the permitting process for Hess Corporation's West Bravo Dome Carbon Dioxide Transmission Line, Hess Corporation filed an application for an Individual Hydrostatic Test Discharge Permit ("IHTD Permit") with the New Mexico Energy, Minerals and Natural Resources Department – Oil Conservation Division. As part of the public notice requirement for the IHTD Permit, on September 2<sup>nd</sup> and 3<sup>rd</sup>, 2008, two (2) signs, each measuring 2' x 3', were placed at the following locations:
  - a. The Mosquero, New Mexico Post Office located in Mosquero, New Mexico; and
  - Occidental Petroleum's (Oxy's) Sheep Mountain Pipeline Station, the proposed discharge site, located on Highway 420 approximately 6 miles east of the intersection of State Highway 102 and Highway 420 in Harding County, New Mexico.

FURTHER AFFIANT SAYETH NAUGHT.

Daniel Holcomb

The foregoing was sworn to before me by <u>Daniel Holcomb</u> on this <u>36 \( \frac{\mathcal{H}}{2} \) day of \( \frac{\mathcal{H}}{2} \)</u>

2008.

My Commission Expires: \_

(Seal)

Dalu K- & March 24, 2010

> Bulen J. Fran Notary Public









REULIVED

INVOICE

2008 HJG 29 PM 12 35

FREEDOM NEWSPAPERS OF NEW MEXICO QUAY COUNTY SUN BOX 848 PORTALES, NM 88130 505-356-4481 August 27,2008

NM Oil Conservation Division c/o Brad A Jones 1220 S. St. Francis Dr.. Santa Fe, NM 87505

**ACCT NO** 

60010

LEGAL#

7946

PO 52100-000005120

Permit Notice - Hess HI-112

DATES RUN ·	# OF LINES	RATE	CHARGE
	# OF LINES	RAIE	
August 27, 2008	240	0 560	134.40
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TEAR SHEET FEE	0	1.00	0.00
SALES TAX			11.56
TOTAL		TOTAL	166.96

ADVERTISING DUE AND PAYABLE 15 DAYS AFTER BILLING DATE A 1 1/2% FINANCE CHARGE WILL BE ADDED ON ALL BALANCES OVER 30 DAYS

ac to la

LEGAL#

7946

STATE OF NEW MEXICO COUNTY OF CURRY:

Vickie Ferguson, being duly sworn, says That she is the Legal Clerk of The Quay County Sun, a daily Newspaper of general circulation, published in English at Clovis, said county and state, and that the hereto attached

Permit Notice - Hess HI-112

was published in said Quay County Sun. a daily newspaper duly qualified for that purpose within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico for consecutive days/weeks on the same days as follows:

First Publication: Second Publication. Third Publication: Fourth Publication:

August 27,2008

Subscribed and sworn to before me August 27, 2008

Notary Public/

My Commission Expires APRIL 14, 2009

#### Copy of Publication

August 27, 2008 NOTICE OF PUBLICATION STATE OF NEW MEX-ICO ENERGY MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION Notice 45 hereby given that pursuant to New that pursuant to New Mexico Water Quality Control Commission Regulations (2016-23-106 NMAC) the following discharge permit application(s) has been submitted to the Director of the New Mexico Olivesion (NMOCD)) (220 Sam Francis Drive Santa Fé New Mexico 87505 (505)

Legal 7946

(HIP-112) Corporation, 244 (HIP:11/2) Corporation, Highway, Mexico, Bueyeros Highway, Mosquero New Mexico Mosquero, New Mexico 87733 has filed an appli-cation for an Individual Hydrostatic Discharge Permit for the proposed Markwest New Mexico L.P. Hobbs New mexico E.F., modba Pipeline a new for sec-tion of the West Bravo Dome Carbon Dioxide Transmission Line. Approximately 115 miles of new 12 inch-carbon steel pipe will be hydrostatically tested using water from the Girard Well: Upon completion of the test. Hess Corporation will transter the water from the pipeline into a nearby lined temporary holding pond. The water will remain in the lined temremain in the lineu temporary holding pond while water, analyses are completed. Once water, analyses, are completed. approved, the water will be pumped from the pond onto the surrounding land within Section 31 Township 19 North: Range 32 East, NMPM Harding County, New Mexico: The pond liner will be removed and the area reclaimed

once the pond is empty. Driving directions to the discharge site follow:

From the intersection of State Highway 102 and State Highway 102 and Highway 420 in Harding County, go east on Highway 420 (caliche highway) for 6 miles turn right into Oxy's Sheep Mountain Pipeline Station on the edge of the road Approximately 362,000 galloris of discharge water will be generated from the hydrostatic test and tested prior to disposal Due to the new pipe and water to be used during the testing, the discharge water is expected to meet Water Quality standards and will be discharged onto private property surrounding the pondult WQCC water quality standards are not met the test wastewater will be nauled to an Highway 420 in Harding the test wastewater will be hauled to an approved disposal locaapproved disposal location of treated on site for an approved discharge. Groundwater most likely to be affected by an accidental discharge is at a depth of approximately 50 feet below ground surface with a total dissolved solids concentration of approximately 500 mg// approximately 500 mg/l. The plan consists of a description of the method and location for retention, and testing of water and solids including how spills leaks; and other acci-dental discharges to the surface will be man-aged in order to protect fresh water.

The NMOCD has deter-mined that the application is administratively complete and has prepared a draft permit. The NMOCD will accept comments and statements of interest regarding this application and will create a racility specific mailing list for persons who wish to receive future notices. Persons interested in obtaining turnler information, submitting a comments or requesting to be on a facility specific mailing list for future notices may contact the Environmental Bureau Chief of the Oil Conservation Division at the address given above draft-permit! The NMOCD the address given above. The administrative completeness determination

and draft permit may, be viewed at the above address between 8 00 a.m. and 4 00 p.m. Monday through Friday, or may also be viewed at the MOO p. Web steel in the MOO p. Web steel in mus/ocd/ mous/ocd/ mous/ocd/ Persons intermus/ocd/ Persons intermus/ocd/ Persons intermy viewed at the mous/ocd/ Persons intermus/ocd/ Persons intermus/ocd/ Persons intermy viewed at the mous/ocd/ Persons intermus/ocd/ Persons intermy viewed at the mous/ocd/ Persons intermy viewed at the mous/ocd/ Persons intermy viewed at the mous ocd/ Persons intermy viewed at the province of the mous ocd/ Persons intermy viewed at the province of the mous ocd/ Persons intermy viewed at the province of the mous ocd/ Persons intermy viewed at the province of the mous ocd/ Persons intermy viewed at the province of the province ocd/ Persons intermy viewed at the province occording viewed at the province occo

http://www.emrrd.state.in.m.us/ocd/ Persons interested in optaining a copy of the applications and draft permit may contact the NMOCD at the saddress given above Prior to ruling on any prosposed discharge permit or mador modification, the Director shall allow a pendod of at least thirty (30) days after the date of publication of this notice during which interested bersonsimally submit comments of equest that NMOCD mod a public hearing should be held a hearing should be held a hearing will be held if the Director determines that there is stanting to blick. Director determines that there is significant public interest.

Interest

If ano public hearing is held, the Director will approve or disapprove the proposed permit based on information available including all comments precised if a public hearing is held the director will approve or disapprove the proposed permit based on information in the permit application, and information submitted at the hearing.

Para obtener mas informacion sobre esta solicitud en Jespanol sirvase Conuncarse por favor New Mexico Energy Minerals and Natural Resources Department (Depto Del Energia Minerals y Recursos Naturales de Nuevo México) Oli Conservation Division (Depto Conservacion Del Retroleo) 1220 South Si Francis Drive Santa Fe

Retroleo) 1220 South St. Francis Drive Santa Fe. New México (Contactor Dorothy Phillips 505 476. 3461)

GIVEN junder the Seal of New Mexico Oil Conservation Commission at Santa Fe. New Mexico, on this 21st day of August, 2008.

STATE OF NEW MEXI-CO. OIL CONSERVATION DIVISION: Mark-Fesmire: Director

# NEW MEXICAN

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REVEIVED

2008 SEP 5 PM 2 19

NM EMNRD Oil Cons.
Brad Jones
1220 S. St. Francis Drive
Santa Fe, NM 87505

ALTERNATE ACCOUNT: 56689

AD NUMBER: 00265933 ACCOUNT: 00002212

LEGAL NO: 85879 P.O. #: 52100-00000137

251 LINES 1 TIME(S) 218.40

AFFIDAVIT: 7.00

TAX: 17.89

TOTAL: 243.29

AFFIDAVIT OF PUBLICATION

NOTICE OF PUBLICATION

STATE OF NEW MEXICO. ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations (20.6.2.3106 NMAC), the following discharge permit application(s) has been submitted to the Director of the New Mexico Oil Conservation Division ("NMOCD"), 1220 S. Sainta Francis Drive, Santa Fe, New Mexico 87505, Telephone (505):476-3440:

(HIP-112) Hess Corporation, 244' Bueyeros Highway, Mosquero, New Mexico, 87733 has filed an application for an Individual Hydrostatic Test Discharge Permit for the proposed MarkWest New Mexico LP, Hobbs Pipeline a new for section of the West Bravo Dome Carbon Dioxide Transmission Line, Approximately 11.5 miles of new 12-inch carbon steel pipe will be hydrostatically tested using water from the Girard Well Upon completion of the test, Hess Corporation will transfer the water from the pipeline into a nearby lined temporary holding pond. The water will be pumped from the lined temporary holding pond while water analyses are completed and approved, the water will be pumped from the pond onto the surrounding land within Section 31, Township 19 North, Range 32 East, NMPM, Harding County, New Mexico. The pond liner will be removed and the area reclaimed once the pond is empty. Driving directions to the discharge site follow: From the intersection of State Highway 102

and Highway 420 in

### STATE OF NEW MEXICO COUNTY OF SANTA FE

I, L.Paquin, being first duly sworn declare and say that I am Legal Advertising Representative of THE SANTA FE NEW MEXICAN, a daily newspaper published in the English language, and having a general circulation in the Counties of Santa Fe and Los Alamos, State of New Mexico and being a newspaper duly qualified to publish legal notices and advertisements under the provisions of Chapter 167 on Session Laws of 1937; that the publication # 85879 a copy of which is hereto attached was published in said newspaper 1 day(s) between 08/27/2008 and 08/27/2008 and that the notice was published in the newspaper proper and not in any supplement; the first date of publication being on the 27th day of August, 2008 and that the undersigned has personal knowledge of the matter and things set forth in this affidavit.

LEGAL ADVERTISEMENT REPRESENTATIVE

Subscribed and sworn to before me on this 27th day of August, 2008

Notary Jamela Une Bla

Commission Expires: Nan 3/

OFFICIAL SEAL
Pamela Anne Beact

NOTARY PUBLIC STATE OF NEW MEXIC

Aly Commission Expires: 53/-/

www.santafenewmexican.com

(Caliche highway 420 6 miles highway) for 6 miles, turn right into Oxy's Sheep Moun-tain Pipeline Station on the edge of the on the edge of the road. Approximately 362,000 gallons of discharge water will be generated from the hydrostatic test, and tested prior to disposal. Due to the new used during the tester is expected to meet water Quality Control Commission (WQCC) water quality Control Commission (WQCC) water quality standards and will be discharged onto private property surrounding the pond. If
WQCC water quality
standards are not
met the test wastewater will be hauled
to an approved disposal location or
treated on-site for an to an approved posal location or treated on-site for an approved discharge. Groundwater most the beautiful to be affected approveu discharge, Groundwater most likely to be affected by an accidental dis-charge is at a depth of annenvimatoly to of approximately feet below gro feet below ground surface with a total dissolved solids concentration of approximately 500 mg/l. The mately 500 mg/l. The plan consists of a description of the method and location testing of water and solids, including how other accidental discharges to the surcharges to the sur-face will be managed in order to fresh water. protect

The NMOCD has determined that the application is administratively complete and has prepared a prepared a supplication will comment and state-garding this application and will create a facility-specific mailing list for persons future notices on a future notices on a future notices on a facility-specific mailing list for future notices may contact the chief of the oil contact the address given trative completeness determination and viewed at the above address between 8:00 Monday through Friday, or may also be web at he NMOCD wiewed at the NMOCD http://www.emnrit may be application and draft permit may be attended to the NMOCD http://www.emnrit.st ate.nm.us/ocd/. Persons interested in oday application and draft the NMOCD at the adoptication and draft the sons interested in oday of the permit may contact the NMOCD at the adoptication and draft the NMOCD at

420 shall allow a period of at least thirty (30) for at least thirty (30) to days after the date of the publication of this notice, during which interested persons may request that NMOCD hold a public hearing shall set forth hearing shall set forth hearing should be held if the Director determines that there insignificant public interest.

If no public hearing is held, the Director will held, the Director will prove or disapprove the proposed on including all compublic hearing is the director will appear the proposed permit by the proposed permit in the permit application and information the permit application and information and information hearing.

Para obtener más información sobre esta

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ico Energy, Minerals
sources Department
w Minerals y Recursos
de Nuevo
Máxico), Oil Conservation Oil Conserloon Del Petróleo),
Drive, Santa Fe, New
Dorothy Phillips,

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, 21st day of August,

STATE OF NEW MEX-OIL CONSERVATION

S E A L Mark Fesmire, Director Legal No. 85879 Pub. Aug. 27, 2008

# New Mexico Energy, Minerals and Natural Resources Department

#### **Bill Richardson**

Governor

Joanna Prukop Cabinet Secretary Reese Fullerton Deputy Cabinet Secretary Mark Fesmire
Division Director
Oil Conservation Division



August 21, 2008

Mr. Michael D. Ford Hess Corporation 500 Dallas Street Houston, Texas 77002

**Ré:** Hydrostatic Test Discharge Permit HIP-112

**Hess Corporation** 

Section 31, Township 19 North, Range 32 East, NMPM,

Harding County, New Mexico

Dear Mr. Ford:

The New Mexico Oil Conservation Division (OCD) has received Hess Corporation's (Hess) request, dated July 16, 2008, revised notice of intent (NOI), emailed August 6, 2008, for authorization to discharge approximately 362,000 gallons of wastewater from a hydrostatic test of approximately 11.5 miles of a new 12-inch carbon dioxide (CO<sub>2</sub>) transmission pipeline, approximately 6 miles northwest of Rosebud, New Mexico. The proposed discharge site is in the West Brave Dome field located within Section 31, Township 19 North, Range 32 East, NMPM, Harding County, New Mexico. The submittal provided the required information in order to deem the application "administratively" complete. The OCD approves the Quay County Sun as the newspaper of general circulation for the published notice and the discharge location and the post office or grocery store in Mosquero, New Mexico as proposed posting locations.

Therefore, the July 2006 New Mexico Water Quality Control Commission (WQCC) regulations notice requirements (20.6.2.3108 NMAC) must be satisfied and demonstrated to the OCD. The hydrostatic test event shall not be initiated until the OCD notice period passes, the permit is issued, and the additional permit fee is paid.

If there are any questions regarding this matter, please do not hesitate to contact me at (505) 476-3487 or brad.a jones@state.nm.us:

Sincerety

Brad A. Jones

Environmental Engineer

BAJ/baj

cc: OCD District IV Office, Santa Fe

#### Jones, Brad A., EMNRD

From:

Ford, Michael [MFord@hess.com]

Sent:

Monday, August 18, 2008 4:12 PM

To:

Jones, Brad A., EMNRD

Subject:

Land Ownership Maps - WBD Transmission Line

Attachments: Land Ownership.pdf; Land Ownership North Offsets.pdf

Brad,

Per our phone conversation this afternoon, the attached PDF files contain the land ownership maps for Hess Corporation's proposed temporary lined pond and discharge location for the hydrostatic test of the new carbon dioxide transmission line. The proposed pond and discharge site are located within Section 31, T-19-N, R-32-E.

You should be able to zoom in on the map using the features in the PDF file.

Let me know if you have any questions.

Mike Ford Environmental Advisor Hess Corporation Phone: 713-609-4204

<<Land Ownership.pdf>> <<Land Ownership North Offsets.pdf>>

This inbound email has been scanned by the MessageLabs Email Security System.

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#### Jones, Brad A., EMNRD

From:

Ford, Michael [MFord@hess.com]

Sent:

Tuesday, August 19, 2008 12:54 PM

To:

Jones, Brad A., EMNRD

Subject:

Landowner Agreements - CO2 Transmission Line Hydrostatic Test

Attachments: Surface Use Agreement.pdf; Pond Agreement.pdf

Brad,

The attached PDF files contain copies of the signed surface use and water retention pond agreements with the land owner for the proposed storage and discharge of our West Bravo Dome CO2 transmission line hydrostatic test water.

Please contact me if you have any questions regarding this information.

Mike Ford Environmental Advisor Hess Corporation Phone: 713-609-4204

<<Surface Use Agreement.pdf>> <<Pond Agreement.pdf>>

This inbound email has been scanned by the MessageLabs Email Security System.

8/21/2008



James S. Hughart Land Manager (713) 609-5517 FAX: (713) 609-5670

July 7, 2008

David and Cathy Whatley 233 Highwell Rd. Nara Visa, New Mexico 88430

Re:

Right-of-Way and Surface Use Agreements

W. O. Culbertson & Sons, Inc. Harding County, New Mexico

Dear David and Cathy,

Thank you for your prompt handling of the execution of the right-of-way and surface use agreements last week.

Enclosed for your files is a fully executed copy of the Surface Use Agreement. I am sending this off for recording in Harding County and I will provide you the recording information when available.

If you have any questions or concerns, please call anytime.

Yours very truly,

James S. Hughart

2008-017

#### SURFACE USE AGREEMENT

This Surface Use Agreement ("Agreement") is dated and made effective May 1, 2008 ("Effective Date"), by and between W. O. Culbertson & Sons, Inc., ("WOC"), whose address is 1101 Liberal St., Dalhart, Texas, 79022 and Hess Corporation ("Hess"), a Delaware corporation with an office at 500 Dallas St., Level 2, Houston, Texas 77002. WOC and Hess are hereinafter individually referred to as "Party" and collectively as the "Parties".

WHEREAS, Hess is constructing a carbon dioxide gas processing plant (the Plant) located in Section 5, Township 18 North, Range 30 East, Harding County, New Mexico for the purpose of processing carbon dioxide gas to be produced from the nearby West Bravo Dome Carbon Dioxide Gas Unit and other leases and lands; and

WHEREAS, Hess intends to construct an approximate twelve (12) mile carbon dioxide steel transport line ("the Transport Line") from the Plant through portions of Township 18 North, Range 30 East and Township 19 North, Ranges 30-32 East and ending in Section 31, Township 19 North, Range 32 East at the interconnect with the Sheep Mountain Pipeline located near Rosebud, New Mexico; and

WHEREAS, Portions of the Transport Line shall cross lands owned in fee simple or leased from the State of New Mexico by WOC located in Section 31, Township 19 North, Range 32 East ("the WOC Lands").

NOW THEREFORE, in consideration of the foregoing and the mutual covenants and agreements contained herein, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

#### ARTICLE I.

Unless otherwise agreed to in writing by the Parties hereto, Hess, with respect to all operations within the confines of the WOC Lands, shall:

- Bury pipelines to a minimum depth of 42 inches from the surface except (a) cathodic protection (CP) test stations and road crossing signs, which in the judgement of Hess should be installed or left at or above ground level, need not be buried. In the event that rock or other subsoil conditions do not permit a pipeline to be constructed at or below this depth by normal construction methods, each pipeline constructed hereunder shall be constructed at the lowest depth above the 42-inch minimum depth specified above that normal construction methods will permit. Grantee shall remove the top soil and set it aside from the excavation of the ditch. Upon completion of the construction and installation of the pipeline the topsoil will be replaced on top of the ditch and the right-of-way will be reseeded with a mixture of native grass species. Restoration of the pipeline route surface and any roads constructed will be according to good surface management practices involving water harvesting. Furthermore, any subsequent damage to property offsetting the pipeline route surface resulting from erosion of the route will be reclaimed, in a timely manner, to its historical range condition. WOC will be consulted in road placement. and restoration decisions.
- (b) Conduct no operations within 500 feet of a house or barn in existence as of the date of this Agreement.
- (c) Use no chemicals or apply manufactured chemical substances on roads.

- (d) Pay WOC for actual damages to improvements and personal property situated on the WOC Lands that may be caused by Hess' operations conducted thereon.
- (e) Utilize lands having a width of no more than 50 feet (30 feet of right-of-way, where a right of way is granted, and 20 feet extra of workspace) for pipelines across the WOC Lands and, for ingress thereto or egress therefrom, use only existing roads and the 30 foot pipeline right-of-way plus 20 feet extra workspace itself.
- (f) Take all reasonable steps to prevent the contamination, which may result from Hess' operations, of any and all waters in surface tanks or storage tanks and any and all surface and subsurface water bearing strata situated on the premises and further endeavor to prevent the contamination of the surface of the premises from substances used by Hess.
- (g) As soon as feasible, ditch all buried pipelines so as to replace the original top soil at the surface as reasonably close as practicable to original land contours and soil condition.
- (h) When laying pipelines, make no cuts in the grass turf on WOC Lands, except as may be necessary to enable pipeline laying machinery to operate, and, with respect to such pipelines, promptly fill and restore all sinkholes as may develop from Hess' operations.
- (i) While using roads for pipeline laying operations, keep the portion of the road so used adequately watered down to prevent the excessive raising of dust.
- (j) Keep all creek and gully crossings traversed by Hess both graded and passable.
- (k) For all work, construction, and maintenance activities conducted on WOC Lands, prevent soil washing and erosion whenever reasonably possible to do so and promptly repair all such washing and erosion that may occur from Hess' operations.
- (I) Permit no firearms on WOC Lands, permit no discharging of firearms, and permit no hunting thereon by Hess or any of its contractors or subcontractors.
- (m) Promptly pick up and remove all trash introduced onto WOC Lands by Hess or its contractors or their subcontractors.

- (n) Permit no consumption of alcoholic beverages on WOC Lands by Hess or its contractors or their subcontractors.
- (o) Permit no fires on WOC Lands.
- (p) Promptly close and secure all gates opened by Hess or its contractors or their subcontractors. Any gates left open for extended periods of time will be manned at the gate.
- (q) Whenever possible, maintain metal trash containers at all work sites while such work is in progress.
- (r) Permit no dumping of trash or harmful fluids of any sort.

7-52-5

- (s) Maintain and enforce a speed limit for all vehicles on WOC Lands, for vehicles of Hess and its contractors or their subcontractors, not to exceed 30 miles per hour, or such lesser speed as necessary to prevent road damage or the raising of excess dust.
- (t) Provide portable toilets at all work sites while pipeline installation or maintenance operations are being conducted, and otherwise use or dig latrines no deeper than 15 feet beneath the surface.
- (u) Use no part of WOC Lands to store machinery, equipment, pipe or other property, not being promptly used by Hess.
- (v) Within one hundred eighty (180) days after the Transport Line placed on WOC Lands ceases to be used for its intended purpose, remove any portion that has not been buried below ordinary plow depth, unless previously agreed upon by WOC and Hess to be left for the express use and disposition by WOC.

#### ARTICLE II.

For the rights and privileges herein granted, including rights of ingress and egress to lands owned by WOC, Hess agrees to pay to WOC the following sums as liquidated surface damages for those portions of pipeline to be laid or replaced within the confines of WOC Lands:

- (a) \$70 per linear rod for the pipeline having a nominal diameter in excess of eight inches and less than 20 inches. The aforementioned payments shall cover both Hess' right-of-way and associated surface damages but expressly excludes damages contemplated under Article I (d). Payment shall be tendered to WOC prior to Hess' commencement of work on WOC Lands. WOC shall simultaneously provide Hess an executed and recordable right-of-way covering such lands upon its receipt of payment for surface damage to lands that WOC holds in fee.
- (b) All actual damages for breach of the covenants herein contained, which payment shall become due and payable no more than sixty (60) days from the date that such damage occurs.

#### ARTICLE III.

Hess shall not, either directly or indirectly, compete with WOC to acquire grazing leases within the confines of WOC.

#### ARTICLE IV.

This Agreement will be for a term of two (2) years from the effective date hereof and for so long thereafter as the pipeline contemplated in this agreement, if constructed, remains in continuous use.

#### ARTICLE V.

The rights and duties of Hess under this Agreement shall be binding upon and shall inure to the benefit of Hess and its successors and to its assignees. An assignment of this agreement by Hess, either in whole or in part, shall not discharge Hess of its obligations under this Agreement with respect to the rights assigned, but, by acceptance of such assignment, the assignee shall be deemed to have assumed all of the duties and obligations of Hess with respect to the rights assigned. This Agreement shall be binding upon and shall inure to the benefit of WOC, its successors and assigns.

IN WITNESS WHEREOF, the PARTIES have, by the execution of this Assignment Agreement by their duly authorized representatives, caused this Assignment Agreement to become effective as of the date first set forth above.

STATE OF NEW MEXICO)

CULBERTSON & SONS, INC., on behalf of said company.

**COUNTY OF HARDING** 

	W. O. CULBERTSON & SONS, I	NC.
	By: Naved Whatley V.P. Beard	,
	HESS CORPORATE	ION
, ·	By: Sarbling	East
	Rahdy J. Pharr, Attorney-in-f	-acı
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,		
E OF NEW MEXICO) ) ITY OF HARDING )	SS:	
The foregoing instrument	was acknowledged before me this/st day	y of

. 2008, by David Whotley, Vice President of W. O.

Darbur J. Skew Notary Public

My commission expires:

March 24, 2010

STATE OF TEXAS

SS:

COUNTY OF HARRIS

On this 21the day of 101, 2008, before me appeared Randy J. Pharr, to me personally known, who, being by me duly sworn, did say that he is the Attorney-in-Fact of Hess Corporation, and that said instrument was signed on behalf of said corporation by authority of its Board of Directors, and said Randy J. Pharr acknowledged said instrument to be the free act and deed of said corporation.

WITNESS my hand and official seal the day and year first above written.

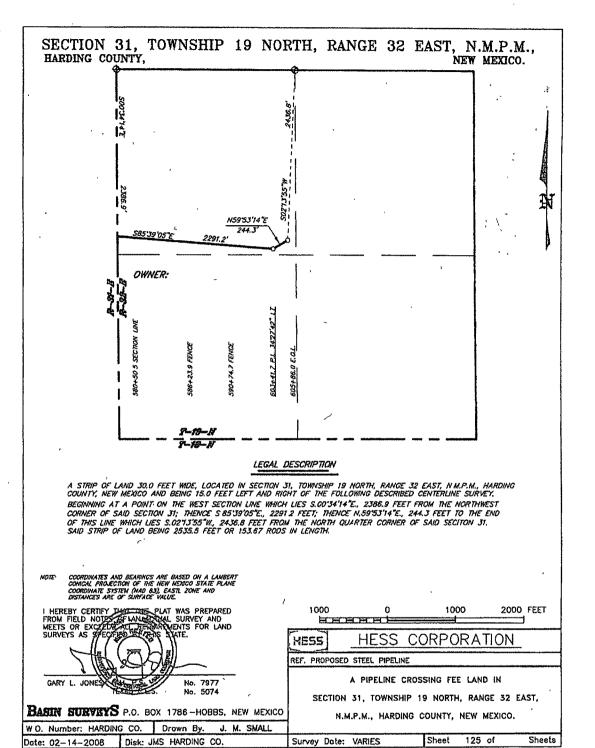
My commission expires:

11/24/11

ASHLEY HURLEY
MY COMMISSION EXPIRES
November 26, 2011

WELL NAME         SECTION-TOWNSHIP-RANGE         DESC         SURFACE OWNER         Y/N         COMMENTS         ROW LENGTH (FT)         PIPE SIZE         CostRod         Rod Ft         Total Rods         ROW Cost           Transmission         31-19N-32E         NWSE         (W.O. Culbertson & Sons, Inc.         Y         2291.2         12"         \$70.00         16.50         138.86         \$9,72           Transmission         31-19N-32E         NWSE         (W.O. Culbertson & Sons, Inc.         Y         244.3         12"         \$70.00         16.50         14.81         \$1,03
Transmission 31-19N-32E NWSE W.O. Culbertson & Sons, Inc. Y 244.3 12" \$70.00 16.50 14,81 \$1,03
Transmission 31-19N-32E   NWSE   W.O. Culbertson & Sons, Inc.   Y   244.3  12"   \$70.00   16.50   14,81; \$1,03
TOTAL ROW LENGTH   2,535.50  153.67; \$10,75

. . . .







James S. Hughart Land Manager (713) 609-5517 FAX: (713) 609-5670

July 31, 2008

رويين

Joe Culbertson W. O. Culbertson & Sons, Inc. 1101 Liberal St. Dalhart, TX. 79002

Re: Letter Agreement

Water Retention Pond

W. O. Culbertson & Son's, Inc. Harding County, New Mexico

Dear Joe,

This letter agreement shall serve as the understanding between Hess Corporation (Hess) and W. O. Culbertson & Sons, Inc. (Culbertson) concerning Hess' intention to build a water retention pond (the Pond) on land owned by Culbertson in Sec. 31, T19N, R32E (Land). Culbertson hereby grants entry to Hess upon the Land for the construction of the Pond. The Pond will be used by Hess to store water to hydrostatically test a CO2 transmission line presently being constructed, in part, on Culbertson and terminating at the Oxy Interconnect Site with the Sheep Mountain Pipeline. A sketch of the area is attached for reference.

As consideration for this agreement, the receipt and sufficiency of which are hereby acknowledged, Hess agrees to pay Culbertson \$10,000.00 USD within ten (10) days following receipt of an executed copy of this letter agreement.

This letter agreement will be subject to the following terms and conditions:

- On or before November 1, 2008, Hess will construct the Pond at a mutually agreeable location adjacent to the Oxy Interconnect Site by bulldozing the interior of the pond area to create dyke walls. A plastic pit liner will be laid down to completely cover the interior of the pit. The liner will be removed during reclamation work and will not be buried on site.
- A fence will be built around the reclamation site and will not be removed following reclamation until instructed by Culbertson.
- The impacted area along the western edge of the Oxy site is for ingress/egress access to the pipeline ROW and for pond dewatering operations.

- Pond dewatering operations will be conducted through hay bales to avoid creating any erosion
  from the water discharge. Rate of dewatering operations will be conducted at a pace not to
  cause new erosion. Dewatering will occur in the low area southwest of Oxy's pipeline station
- No new driveways will be built off of Hwy 420. Hess will utilize the existing driveway into the Oxy site.
- Hess will conduct the water retention and dewatering operations within the guidelines of the State permit.
- The existing two track road heading SW of the Oxy site will be flagged off during pipeline construction to deter its use by construction personnel.
- Hess will be responsible for reclaiming and reseeding the impacted area. Culbertson will be consulted on the seed mixture to be used. Hess will re-seed as many times as necessary to obtain grass stand on this reclamation area.

If this letter agreement meets with your understanding, please sign and return one (1) copy to my attention.

If you have any questions or concerns, please call me at 713-609-5517 or Danny Holcomb at 575-650-0316 (cell).

Yours very truly,

Mames S. Hughart

Agreed and accepted to this \_\_\_ day of Aug., 2008

W. O. Culbertson & Sons, Inc.

Cc. Patrick Dunn

Ву:

Danny Holcomb

1367/11

#### Jones, Brad A., EMNRD

From:

Ford, Michael [MFord@hess.com]

Sent:

Friday, August 01, 2008 12:50 PM

To:

Jones, Brad A., EMNRD

Subject:

Topographic Map - Proposed Discharge Location

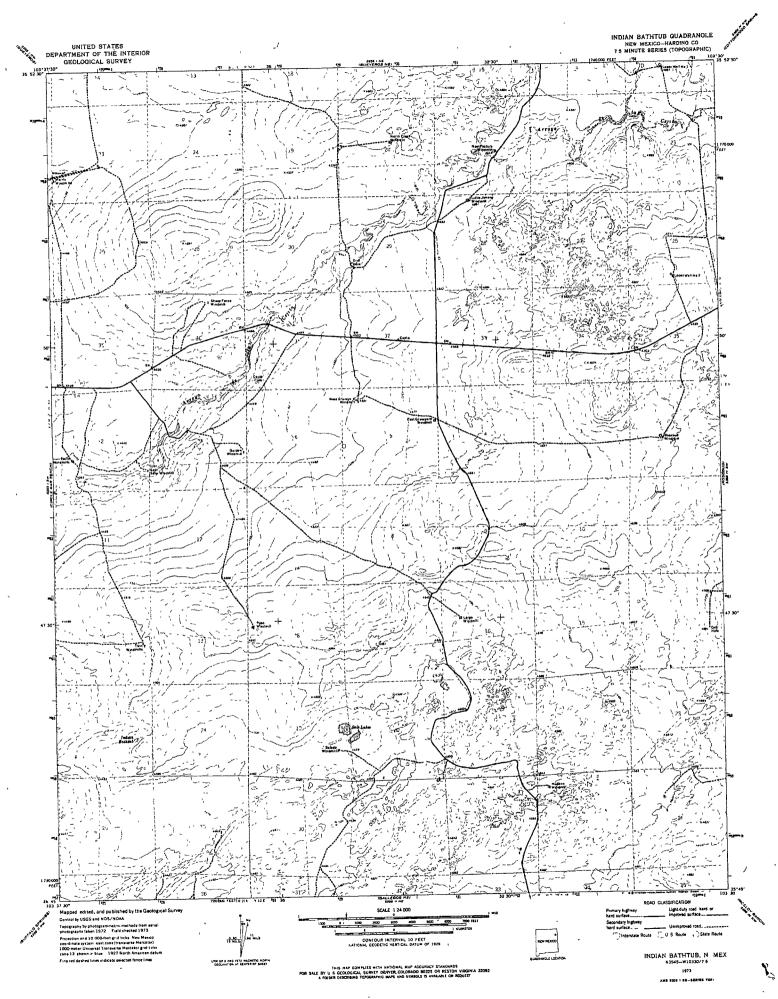
Attachments: Indian Bathtub Topo.pdf

Brad,

The attached PDF file contains an electronic copy of the Indian Bathtub Quadrangle USGS topographic map. Our proposed discharge is located within Section 31, T-19-N, R-32-E. I will be sending you a copy of a portion of the topo map identifying the discharge site within Section 31, with the additional information you requested, early next week.

Mike Ford Environmental Advisor Hess Corporation Phone; 713-609-4204 Mobile: 713-829-6076

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#### Jones, Brad A., EMNRD

From:

Ford, Michael [MFord@hess.com]

Sent:

Monday, August 04, 2008 3:44 PM

To:

Jones, Brad A., EMNRD

Subject:

Draft Public Notice - Discharge Permit Application

\_ (

Attachments: WBD Public Notice.DOC

Brad,

The attached Word file contains a draft public notice for the transmission line hydrostatic test water discharge permit. Please review and let me have your comments. I will have this translated into Spanish following any wording revisions and will have you review the final versions before we go to public notice.

Mike Ford Hess Corporation

<<WBD Public Notice.DOC>>

This inbound email has been scanned by the MessageLabs Email Security System.

#### **Draft Public Notice**

#### **Hess Corporation**

#### West Bravo Dome CO2 Transmission Line Water Discharge Permit

#### NOTICE OF PUBLICATION

Hess Corporation, 244 Bueyeros Highway, Mosquero, New Mexico, 87733 has submitted an application for an Individual Hydrostatic Test Discharge Permit to the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division (OCD) for the West Bravo Dome Carbon Dioxide Transmission Line. Approximately 11.5 miles of new 12-inch carbon steel pipe will be hydrostatically tested using water from the Girard Well. Upon completion of the test, Hess Corporation will transfer the water from the pipeline into a nearby lined temporary holding pond. The water will remain in the lined temporary holding pond while water analyses are completed. Once water analyses are completed and approved, the water will be pumped from the pond onto the surrounding land within Section 31, T19N, R32E. The pond liner will be removed and the area reclaimed once the pond is empty. Driving directions to the discharge site follow: From the intersection of State Highway 102 and Highway 420 in Harding County, go east on Highway 420 (caliche highway) for 6 miles, turn right into Oxy's Sheep Mountain Pipeline Station on the edge of the road. The temporary pond and the discharge point is in an area just southwest of and adjacent to Oxy's site. Approximately 362,000 gallons of wastewater will be generated from the hydrostatic test. The water is expected to meet Water Quality Control Commission (WQCC) water quality standards. If WQCC water quality standards are not met, the test water will be hauled from the temporary storage pond to an approved disposal location, or treated to OCD specifications for discharge. The depth of groundwater potentially affected by the discharge is about 50 feet below the surface. The total dissolved solids concentration of the groundwater in the area is less than 500 parts per million. Any interested person may obtain information, submit comments, and request to be placed on a facility-specific mailing list for future notice by contacting Brad Jones at the New Mexico OCD at 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, Telephone (505) 476-3487. The OCD will accept comments and statements of interest regarding the permit application and will create a facility-specific mailing list of persons who wish to receive future notices.

#### Jones, Brad A., EMNRD

From:

Ford, Michael [MFord@hess.com] 🛷

Sent:

Wednesday, August 06, 2008 12:27 PM

To:

Jones, Brad A., EMNRD

Subject:

Notice of Intent - West Bravo Dome Transmission Line Hydrostatic Test

Attachments: WBD Add Perm Info.DOC

Brad,

The attached Word file contains the additional information we discussed last week regarding the construction and use of the temporary holding pond for the West Bravo Dome CO2 transmission line hydrostatic test.

Please contact me if you have any questions regarding this information.

Mike Ford Hess Corporation

<<WBD Add Perm Info.DOC>>

This inbound email has been scanned by the MessageLabs Email Security System.

#### West Bravo Dome Discharge Permit

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#### Additional Information

#### Description of Activities

The new CO2 transmission line will be hydrostatically tested using approximately 362,000 gallons of water from the Girard Well. The line will be tested for at least eight continuous hours at a pressure of 3000 psi. Following completion of the hydrostatic test, the water will be pressured from the pipeline to the fenced and lined temporary holding pond through a 200 foot length of polyethylene pipe. It will take approximately 24 hours to transfer the water from the transmission line into the temporary holding pond.

Once the transmission line is empty, the water in the temporary holding pond will be sampled and analyzed for the constituents identified in NMAC 20.6.2.3103 (A)(B)(C). Upon receipt of the analytical results, Hess will submit them to the OCD for approval to discharge.

Once OCD has approved to discharge, water will be pumped at the rate of 1,500 gallons per hour to empty the pond. The water will be pumped from the pond onto the surrounding land through hay bales to prevent erosion. The water should be completely removed from the temporary pond within 20 days of the approval to discharge. Solids, if any, remaining in the pond will be drummed up for disposal in a state approved landfill. The pond liner will be removed within 7 days after the pond is emptied. The pond liner will be disposed of at the BFI landfill facility near Canyon, Texas. The pond area will be filled in after the liner is removed. The area will be reseeded as many times as necessary to obtain a grass stand. The landowner will be consulted on the seed mixture to be used. The landowner will approve when the perimeter barbed wire fence will be removed.

#### Method & Location for Collection and Retention of Fluids

A lined temporary holding pond will be used to contain the test water prior to discharge. The pond will be constructed by bulldozing the interior of the temporary pond area to create the dike walls above the existing ground level. The pond's inside dimensions will be 125 feet by 150 feet by 4 feet, with a capacity of 9,500 barrels. The pond's liner will be constructed of 20-mil low density polyethylene (LLDPE) with factory welded seams. The slopes will be no steeper than two horizontal feet to one vertical foot (2H:1V). The sub-grade material for the pond liner will be native soil. This should prevent cuts or tears in the liner during construction and use. The edges of the liner will be anchored in the bottom of a compacted earth-filled trench with a minimum depth of 18 inches. The liner will be protected from fluid forces and mechanical damage at the points of discharge into or suction from the temporary pond. The pond's construction utilizing dike walls higher than the existing land surface will prevent run-on of surface water. The temporary pond will be fenced with a four foot fence that has at least four strands of barbed wire evenly spaced. The pipeline construction contractor will use drip trays under hose and valve connections to collect drips and leaks when transferring the post-test water.

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May 19, 2008

MAY 23 AM 10 09

#### CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Mr. Brad Jones New Mexico Oil Conservation Division 1220 South St. Francis Drive Santa Fe, New Mexico 87505

Re: FEF - WATER DISCHARGE PERMIT

PERMIT APPLICATIONS FEE PAYMENT PIPELINE HYDROSTATIC TESTS WEST BRAVO DOME PIPELINES

Dear Mr. Jones:

Attached please find Hess Corporation check #0001680101 in the amount of \$300.00 to address payment of two pipeline hydrostatic test water discharge permit applications and one annual permission to discharge request filing fees.

The check is made out to the New Mexico Water Quality Management Fund as required.

If you should have any questions or require additional information, please feel free to contact me at (713) 609-4204.

Sincerely,

Michael D. Ford

Environmental Advisor

MDF WBDPIPETESTFEELT DOO

Attachment



May 14, 2008

#### CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Brad Jones New Mexico Oil Conservation Division 1220 South St. Francis Drive Santa Fe, New Mexico 87505

Re: FEF – WATER DISCHARGE PERMIT

NOTICE OF INTENT
PIPELINE HYDROSTATIC TEST
CO2 TRANSMISSION LINE
WEST BRAVO DOME

Dear Mr. Jones:

This is to provide notice of intent to discharge pipeline hydrostatic test water for Hess Corporation's new carbon dioxide (CO2) transmission line in the West Bravo Dome field located in northeast New Mexico. Information addressing the specific requirements for issuing the discharge permit is contained in the attached document. A map showing the location of the proposed discharge is also included.

A check in the amount of \$100.00 will be sent under separate letter to the Water Quality Management Fund for payment of the required notice of intent to discharge filing fee.

If you should have any questions or require additional information, please feel free to contact me at (713) 609-4204.

Sincerely,

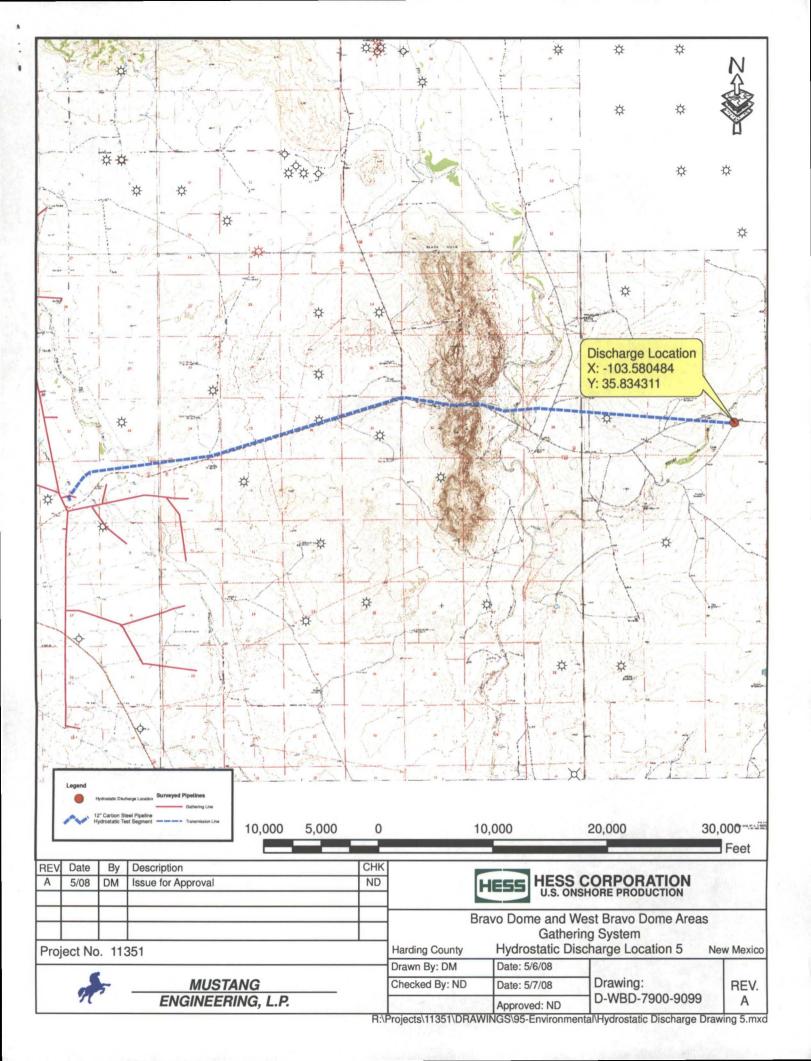
Michael D. Ford

Environmental Advisor

MDF WBDPIPETEST1LT DOC

Attachment

Information Required	CO2 Transmission Line
Pipe ID :	12 09
Туре	Steel '
Footage	60720
Gallons	362,113
BBL	8,622
(a) and address of the proposed discharges	Hess Corporation
(a) name and address of the proposed discharger	HCR 72, Box 30 Mosquero, NM 87733
(b) the location of the discharge, including street address, and sufficient information to	11 5 miles east of the facility on Hwy 420 (Facility address 244 Bueyeros Hwy, Mosquero, NM 87733)
locate the facility with respect to current landmarks	Harding County, NM
(c) legal description (Section/Township/Range) of the discharge location	Section 31 T19N R32E
(d) maps (site specific and regional) indicating the location of pipelines to be tested and the proposed discharge location	See attached drawing *Discharge Location 5* .
(e) demonstration of compliance to the following sitting criteria or justification for any exceptions	<del>-</del>
ı wıthın 200 feet of a watercourse, lakebed, sınkhole or playa lake	No .
ıı within an existing wellhead protection area of 100-year floodplain	No
ııı wıthın, or wıthın 500 feet of, a wetland	No
iv within the area overlying a subsurface mine	Not known
v within 500 feet from the nearest permanent residence, school, hospital, institution or church	No
(f) a brief description of the activities that produce the discharge	Hydrostatic testing of 11 5 miles of 12* diameter carbon steel pipe
(g) the method and location for collection and retention of fluids and solids	Discharge of the test water to be at east end of 12" steel line at the Rosebud tie-in through 200 mesh filters to contain any solids
(h) a brief description of best management practices to be implemented to contain the discharge onsite and to control erosion	After the water passes through the filters to catch solids it will then pass through straw bales surrounded by a silt fence to prevent erosion
(i) a request for approval of an alternative treatment, use, and/or discharge location (other than the original discharge site), if necessary	Not applicable
(j) a proposed hydrostatic test wastewater sampling plan	Water samples from source wells to be taken to approved lab for testing with results presented to Hess prior to hydro testing for approval, samples will be taken of the test discharge water and the source water
(k) a proposed method of disposal of fluids and solids after test completion, including closure of any pits, in case the water generated from test exceeds the standards set forth in Subsections A, B, and C of the 20 6 2 3103 NMAC	Filters and straw bales are to be hauled to an approved landfill and disposed of
(I) a brief description of the expected quality and volume of the discharge	Approx 362,000 gallons of non-potable water sourced from nearby water wells that could potentially have sand, NORM
(m) geological characteristics of the subsurface at the proposed discharge site	Surface soils to depths of 15 5 ft to 33 5 ft consist of stiff to hard sandy and silty clay, near surface soils are of moderate plasticity, the materials underlying the surface soils and extending to the full depth of exploration consisted of moderately hard to hard sandstone and siltstone bedrock, groundwater was not encountered in any brings at the time of exploration
(n) the depth to and total dissolved solids concentration of the ground water most likely to be affected by the discharge	Local ranchers have indicated groundwater present around 50 ft below surface
(o) identification and notification of landowners at and adjacent to the discharge and collection/retention site	W O Culbertson and Sons



### CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Brad Jones New Mexico Oil Conservation Division 1220 South St. Francis Drive Santa Fe, New Mexico 87505

Re: FEF – WATER DISCHARGE PERMIT

PERMIT APPLICATIONS FEE PAYMENT PIPELINE HYDROSTATIC TESTS WEST BRAVO DOME PIPELINES

Dear Mr. Jones:

Attached please find Hess Corporation check #0001680101 in the amount of \$300.00 to address payment of two pipeline hydrostatic test water discharge permit applications and one annual permission to discharge request filing fees.

The check is made out to the New Mexico Water Quality Management Fund as required.

If you should have any questions or require additional information, please feel free to contact me at (713) 609-4204.

Sincerely,

Michael D. Ford

Environmental Advisor

michael D. Lord

MDF WBDPIPETESTFEELT DOC

PAY Three hundred and 00/100 Dollars

NEW MEXICO WATER QUALITY MGM FUND C/O NEW MEXICO OIL CONSERVATION DIV. 1220 S SAINT FRANCIS DR SANTA FE, NM 87505



Houston, TX 77002



# RECEIVED

July 22, 2008

2008 JUL 23 PM 1 39

#### NEXT DAY DELIVERY

Mr. Brad Jones New Mexico Oil Conservation Division 1220 South St. Francis Drive Santa Fe, New Mexico 87505

Re: <u>FEF - WATER DISCHARGE PERMIT</u>

NOTICE OF INTENT
PIPELINE HYDROSTATIC TEST
CO2 TRANSMISSION LINE
WEST BRAVO DOME

Dear Mr. Jones:

Hess Corporation submitted a request on 5/14/08 for an individual permit to hydrostatically test and discharge water from a new carbon dioxide (CO2) transmission line in the West Bravo Dome field located in northeast New Mexico. Hess Corporation would like to rescind the original application and reapply with this request.

#### Summary of Activities

Hess Corporation's pipeline construction contractor will hydrostatically test the West Bravo Dome carbon dioxide (CO2) transmission line located in Harding County, New Mexico. The 11.5 miles of new 12 inch steel pipe will be hydrostatically tested using approximately 362,000 gallons of water from the Girard Well. This water has been analyzed for the constituents identified in New Mexico Administrative Code (NMAC) 20.6.2.3103 (A), (B) and (C). A copy of these analyses is attached. With the exception of fluoride at 2.9 mg/l, compliance with the New Mexico standards is shown. It should be noted the EPA's current drinking water standard's maximum allowable fluoride concentration is 4.0 mg/l.

#### Name and Address of Discharger

Hess Corporation HCR 72, Box 30 Mosquero, NM 87733

#### Location and Legal Description of Discharge Location

Driving directions to the discharge site follow: From the intersection of State Highway 102 and Highway 420 in Harding County, go east on Highway 420 (caliche highway) for 6 miles, turn right into Oxy's Sheep Mountain Pipeline Station on the edge of the road. The discharge point is in an area just southwest of and adjacent to Oxy's site, located near the center of Section 31, T-19-N, R-32-E.

The test water will remain in a lined and fenced temporary storage pond while expedited analyses are completed. Once the analyses have been completed and approved by the OCD, the water will be discharged. The water will be released in a controlled rate through hay bales to prevent erosion.

FEF – Water Discharge Permit Notice of Intent July 22, 2008 Page 2 of 4

#### Maps

The following maps are included or referenced in this application.

- Map showing location of transmission line and discharge location
- Aerial map of discharge site noting closest watercourse
- Land ownership map
- Geologic map of New Mexico (referenced)
- US Dept. of Agriculture Natural Resources Conservation Service soils map (referenced)

#### Demonstration of Compliance with Siting Criteria

See attached Discharge Site Map and Certification of Compliance with Siting Criteria completed by the Hess Operations Team Leader.

#### Compliance with OCD's siting criteria is met because:

- 1. Hydrostatic test water will not be discharged within 200 feet of any watercourse (see aerial discharge site map)
- 2. The discharge site is not located within an existing wellhead protection area (see attached e-mail confirmation from Mr. Darren Padılla with the New Mexico Environment Department). The discharge site is not located within a 100-year floodplain (see attached document from the FEMA stating there are no flood maps issued for Harding County).
- 3. There are no wetlands within 500 ft (see aerial discharge site map)
- 4. Hess Corporation contacted the New Mexico Bureau of Mines and Minerals about subsurface mines in the area. An email verification was submitted to Hess that there are no mines in the area (see attached email from Bureau of Mines)
- 5. There are no residences, schools, hospitals, or churches within 500 feet (see aerial discharge site map).

#### Description of Activities

The new CO2 transmission line will be hydrostatically tested using approximately 362,000 gallons of water from the Girard Well. The line will be tested for at least four continuous hours at a pressure equal to 125 percent, or more, of the maximum operating pressure.

#### Method & Location for Collection and Retention of Fluids

A lined and barbed wire fenced temporary holding pond will be used to contain the test water prior to discharge. The pond's inside dimensions will be 125 feet by 150 feet by 4 feet, with a capacity of 9,500 barrels. The test water will be transferred from the pipe into the temporary holding pond by connecting a hose from the pipe directly to the temporary holding pond. The pipeline construction contractor will use plastic liners or drip trays under hose and valve connections to collect drips and leaks when transferring water.

#### BMPs to Contain Discharge On-Site & Control Erosion

Water will be pumped from the temporary holding pond onto adjacent lands owned by W. O. Culbertson and Sons, Inc. The water will be released in a controlled rate through hay bales so that erosion does not occur.

#### Request for Alternate Treatment/Disposal

If the hydrostatic test water does not meet conditions for discharge, Hess will make arrangements for disposal of the water into a permitted injection well or treat the water to NMOCD specification for discharge.

FEF – Water Discharge Permit Notice of Intent July 22, 2008 Page 3 of 4

#### Hydrostatic Test Water Sampling Plan

The hydrostatic test water sample(s) will be collected from the temporary holding pond following removal of the water from the transmission line. The water will be analyzed for the constituents identified in NMAC 20.6.2.3103 (A)(B(C). Upon receipt of the analytical results, Hess will submit them to the OCD for approval to discharge.

#### Disposal of Fluids & Solids - Pond Closure

The water from the hydrostatic test will be pumped from the temporary holding pond onto adjacent lands owned by W. O. Culbertson and Sons, Inc. Solids, if any, remaining in the pond will be analyzed for the following constituents before closure activities:

- 1. Benzene
- 2. Total BTEX.
- 3. TPH
- 4. GRO and DRO combined fraction
- 5. Chlorides

In the event that the solids analyses exceeds the limits established for in-place burial per NMAC 19.15.17.13, the solids will be removed for treatment/disposal in a state approved landfarm/landfill. The plastic pit liner will be removed and disposed of in a state approved landfill. The pond will be buildozed in and the impacted area reseeded.

#### Expected Quality & Volume of Discharge

The expected volume of the hydrostatic test discharge is approximately 362,000 gallons. The water quality is expected to be comparable to the quality of the Girard Well water and will be analyzed to determine if it meets WQCC standards.

#### Geological Characteristics of Subsurface at Discharge Site

According to the NM Bureau of Mines and Mineral resources geologic map, the discharge site is within the Sierra Grande Uplift in the Jurassic Age Entrada Sandstone. Soils in the area are classed in the Mansker-Portales association, gently sloping. The soil consists of a fine sandy loam from 0 to 10 inches in depth and a loam from 10 to 60 inches in depth. The soils parent material is a calcareous alluvium derived from igneous and sedimentary rock. The NM Bureau of Mines and Mineral geologic map may be found at: <a href="http://geoinfo.nmt.edu/publications/maps/geologic/home.html">http://geoinfo.nmt.edu/publications/maps/geologic/home.html</a>. Information about soils was obtained from the NRCS web soil survey website at: <a href="http://websoilsurvey.nrcs.usda.gov/app/">http://websoilsurvey.nrcs.usda.gov/app/</a>.

#### Depth & TDS Concentration of Ground Water Most Likely to be Affected by Discharge

The New Mexico Office of the State Engineer iWATERS Database was queried for information on the average depth to water for the proposed discharge site. The system returned no records found (see attached printout). Local ranchers report the depth to groundwater as being approximately 50 feet. Per the USGS Ground Water Atlas, the total dissolved solids concentration of water in the High Plains Aquifer in eastern New Mexico is generally less than 500 mg/l (see <a href="http://pubs/usgs/gov/ha/ha730/ch\_c/C-text5.html">http://pubs/usgs/gov/ha/ha730/ch\_c/C-text5.html</a>.

#### ID of Landowner at and Adjacent to Discharge and Collection/Retention Site

A map is provided showing the landownership of the underlying and adjacent property owner from the proposed discharge site. W. O. Culbertson and Sons, Inc. is the underlying and adjacent landowner. Discussions are ongoing with Joe Culbertson and Kathy Whatley (W. Culbertson's children) regarding the project and the temporary holding pond.

FEF – Water Discharge Permit Notice of Intent July 22, 2008 Page 4 of 4

#### Closing

In the event of a release associated with project activities, Hess will comply with OCD's Release Notification and Corrective Action regulation NMAC 19.15.3.116 to remediate the spill as soon as possible.

A check for \$100 was submitted with our rescinded application. Therefore, we are not submitting a filing fee with this application. If an additional filing fee is required, please let me know.

Once OCD rules this application as administratively complete, Hess will provide notice of the permit application in the Quay County Sun newspaper following requirements in NMAC 20.6.2.3108. In addition, a sign will be placed at the location of the discharge and at the post office or grocery store in Mosquero, New Mexico providing a synopsis of the public notice.

If you should have any questions or require additional information, please feel free to contact me at (713) 609-4204.

Sincerely,

Michael D. Ford

Environmental Advisor

MDF.WBDPIPETEST1LTREV DOC

Attachments



#### **COVER LETTER**

Monday, July 14, 2008

Michael Ford Hess Corporation HCR72 Box 30 Mosquero, NM 87733

TEL: (575) 650-0316

**FAX** 

RE: Hess West Bravo Dome

Dear Michael Ford:

Order No.: 0806231

Hall Environmental Analysis Laboratory, Inc. received 1 sample(s) on 6/16/2008 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager Nancy McDuffie, Laboratory Manager

NM Lab # NM9425 AZ license # AZ0682 ORELAP Lab # NM100001



Date: 14-Jul-08

CLIENT:

Hess Corporation

Lab Order:

0806231

Client Sample ID: Girard Well

Collection Date: 6/16/2008 7:00:00 AM

Project:

Hess West Bravo Dome

Date Received: 6/16/2008

Lab ID:

0806231-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 504.1: EDB					Analyst: JAT
1,2-Dibromoethane	ND	0 010	μg/L	1	6/19/2008 5:15.44 PM
Surr: 1,2,3-Trichloropropane	71 9	54.9-135	%REC	1	6/19/2008 5·15:44 PM
EPA METHOD 8082: PCB'S					Analyst: JMF
Aroclor 1016	ND	10	μg/L	1	6/26/2008 8·53:39 AM
Aroclor 1221	ND	50	μg/L	1 .	6/26/2008 8:53:39 AM
Aroclor 1232	ND	1.0	μg/L	1	6/26/2008 8:53:39 AM
Aroclor 1242	ND	1.0	μg/L	1	6/26/2008 8:53:39 AM
Aroclor 1248	ND	1.0	μg/L	1	6/26/2008 8:53:39 AM
Aroclor 1254	ND	1.0	μg/L	1	6/26/2008 8:53:39 AM
Aroclor 1260	· ND	1.0	μg/L	1	6/26/2008 8:53·39 AM
Surr: Decachiorobiphenyl	68.4	23.9-124	%REC	<b>1</b>	6/26/2008 8:53:39 AM
Surr: Tetrachloro-m-xylene	79.2	28.1-139	%REC	. 1	6/26/2008 8:53:39 AM
EPA METHOD 8310: PAHS					Analyst: DMF
Naphthalene	ND	2.0	μg/L	1	6/30/2008 3:01:27 PM
1-Methylnaphthalene	ND	2.0	μg/L	,1	6/30/2008 3:01:27 PM
2-Methylnaphthalene	ND	20	µg/L	1	6/30/2008 3:01:27 PM
Acenaphthylene	ND	2.5	μg/L	1	6/30/2008 3:01:27 PM
Acenaphthene	ND	5.0	μg/L	1	6/30/2008 3:01:27 PM
Fluorene	ND	0.80	μg/L	1	6/30/2008 3:01:27 PM
Phenanthrene	ND	0.60	μg/L	1	6/30/2008 3.01:27 PM
Anthracene	ND	0.60	μg/L	1	6/30/2008 3:01:27 PM
Fluoranthene	ND	0.30	µg/L	1	6/30/2008 3:01:27 PM
Pyrene	ND	0.30	μg/L	1	6/30/2008 3:01:27 PM
Benz(a)anthracene	ND	0.070	μg/L	1	6/30/2008 3:01:27 PM
Chrysene	ND	0.20	μg/L	1	6/30/2008 3.01.27 PM
Benzo(b)fluoranthene	ND	0.10	µg/L	1	6/30/2008 3:01:27 PM
Benzo(k)fluoranthene	ND	0.070	μg/L	1	6/30/2008 3:01:27 PM
Benzo(a)pyrene	ND	0.070	μg/L	1	6/30/2008 3:01:27 PM
Dibenz(a,h)anthracene	ND	0.070	μg/L	1	6/30/2008 3.01,27 PM
Benzo(g,h,i)perylene	ND	0.080	µg/L	1	6/30/2008 3:01:27 PM
Indeno(1,2,3-cd)pyrene	ND	0.080	μg/L	1	6/30/2008 3:01:27 PM
Surr: Benzo(e)pyrene	67.3	38.3-106	%REC	1	6/30/2008 3:01:27 PM
PA METHOD 300.0: ANIONS					Analyst: SLB
Fluoride	2.9	0.10	mg/L	1	6/16/2008 9:43:40 PM
Chloride	33	0.10	mg/L	1	6/16/2008 9:43 40 PM
Nitrogen, Nitrate (As N)	2.0	0.10	mg/L	1	6/16/2008 9:43:40 PM
Sulfate	60	0.50	mg/L	1	6/16/2008 9:43:40 PM
TO A METHOD TATAL METHOLITY			•		Aughut onne

Qualifiers:

**EPA METHOD 7470: MERCURY** 

Page 1 of 4

Analyst: SNV

Value exceeds Maximum Contaminant Level

Value above quantitation range

Analyte detected below quantitation limits j

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank В

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Date: 14-Jul-08

CLIENT:

Hess Corporation

0806231

Client Sample ID: Girard Well

Lab Order:

Hess West Bravo Dome

Collection Date: 6/16/2008 7:00:00 AM Date Received: 6/16/2008

Project: Lab ID:

0806231-01

Matrix: AQUEOUS

Analyses	Result	PQL (	Qual Units	DF	Date Analyzed
EPA METHOD 7470: MERCURY					Analyst. SNV
Mercury	ND	0.00020	mg/L	1 .	7/7/2008 2·49:21 PM
EPA 6010B: TOTAL RECOVERABLE	METALS				Analyst: TES
Aluminum '	ND	0.020	mg/L	1	7/8/2008 3:07:16 PM
Barium	0.048	0.010	mg/L	1	7/8/2008 3:07:16 PM
Boron	0.24	0.040	mg/L	1	7/8/2008 3.07:16 PM
Cadmium	ND	0.0020	mg/L	1	7/8/2008 3:07:16 PM
Chromium	ND	0.0060	mg/L	1	6/23/2008 1:32:28 PM
Cobalt	ND	0.0060	mg/L	1	7/8/2008 3:07:16 PM
Copper	ND	0.0060	mg/L	1	7/8/2008 3:07:16 PM
Iron	ND	0.050	mg/L	1	7/8/2008 3:07:16 PM
Lead	ND	0.0050	mg/L	1	6/23/2008 1:32:28 PM
Manganese	0.0021	0.0020	mg/L	1	7/8/2008 3:07:16 PM
Molybdenum	ND	0.0080	mg/L	1	7/8/2008 3:07:16 PM
Nickel	ND	0.010	mg/L	1	7/8/2008 3:07.16 PM
Silver	ND	0.0050	mg/L	1	7/8/2008 3:07:16 PM
Zinc	ND	0.020	mg/L	1	7/8/2008 3:07:16 PM
EPA METHOD 8260B: VOLATILES		•		*	Analyst: HL
Benzene	ND	1.0	µg/L	1	6/19/2008 10:41:23 PM
Toluene	, ND	1.0	μg/L	1	6/19/2008 10:41:23 PM
Ethylbenzene	ND	10	μg/L	1	-6/19/2008 10·41:23 PM
Methyl tert-butyl ether (MTBE)	ND	1.0	μg/L	1	6/19/2008 10:41:23 PM
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1	6/19/2008 10.41:23 PM
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1	6/19/2008 10:41:23 PM
1,2-Dichloroethane (EDC)	ND	1.0.	μg/L	1	6/19/2008 10:41:23 PM
1,2-Dibromoethane (EDB)	ND	1.0	µg/L	1	6/19/2008 10:41:23 PM
Naphthalene	ND	, 2.0	μ <b>g/L</b>	1	6/19/2008 10 41:23 PM
1-Methylnaphthalene	ND	4.0	μg/L	1	6/19/2008 10:41:23 PM
2-Methylnaphthalene	ND	4.0	μg/L	1	6/19/2008 10:41:23 PM
Acetone	ND	10	μg/L	· 1	6/19/2008 10:41:23 PM
Bromobenzene	ND	1.0	µg/L	1	6/19/2008 10:41:23 PM
Bromodichloromethane	ND	1.0	· µg/L	1	6/19/2008 10:41:23 PM
Bromoform	ND	1.0	μg/L	1	6/19/2008 10.41:23 PM
Bromomethane	, ND	1.0	µg/L	1	6/19/2008 10.41.23 PM
2-Butanone	ND	10	µg/L	1	6/19/2008 10:41:23 PM
Carbon disulfide	ND	10	μg/L	1	6/19/2008 10:41:23 PM
Carbon Tetrachloride	ND	1.0	µg/L	1	6/19/2008 10:41:23 PM
Chlorobenzene	ND	1.0	μg/L	1	6/19/2008 10:41:23 PM
Chloroethane	ND	2.0	µg/L	1	6/19/2008 10:41:23 PM
Chloroform	, <b>N</b> D	10	μg/L	1 '	6/19/2008 10:41:23 PM
Chloromethane	ND	1.0	μg/L	1	6/19/2008 10:41:23 PM

#### Qualifiers:

- Value exceeds Maximum Contaminant Level
- Е Value above quantitation range
- Analyte detected below quantitation limits J
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank В
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- Reporting Limit

Page 2 of 4

Date: 14-Jul-08

CLIENT:

**Hess Corporation** 

Lab Order:

0806231

Project:

Hess West Bravo Dome

Lab ID:

0806231-01

Client Sample ID: Girard Well

Collection Date: 6/16/2008 7:00:00 AM

Date Received: 6/16/2008

Matrix: AQUEOUS

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES	<del></del>	<u></u>	****	<del>-</del>	Analyst: HL
2-Chlorotoluene	ND	1.0	μg/L	1	6/19/2008 10:41:23 PN
4-Chlorotoluene	ND	1.0	µg/L	1	6/19/2008 10:41:23 PM
cis-1,2-DCE	ND	1.0	µg/L	1	6/19/2008 10:41:23 PN
cis-1,3-Dichloropropene	ND	1.0	μg/L	1	6/19/2008 10.41:23 PN
1,2-Dibromo-3-chloropropane	ND	2.0	μg/L	1	6/19/2008 10:41:23 PM
Dibromochloromethane	ND	1.0	µg/L	1	6/19/2008 10:41:23 PM
Dibromomethane	ND	1.0	μg/L	1	6/19/2008 10:41:23 PM
1,2-Dichlorobenzene	ND	1.0	μg/L	1 <sup>-</sup>	6/19/2008 10.41:23 PM
1,3-Dichlorobenzene	ND	1.0	µg/L	1	6/19/2008 10:41:23 PN
1,4-Dichlorobenzene	ND	1.0	µg/L	1	6/19/2008 10:41 23 PM
Dichlorodifluoromethane	ND	1.0	µg/L	1	6/19/2008 10:41:23 PM
1,1-Dichloroethane	ND	10	µg/L	1	6/19/2008 10:41:23 PM
1,1-Dichloroethene	ND	1.0	μg/L	1	6/19/2008 10:41.23 PM
1,2-Dichloropropane	ND	1.0	μg/L	1	6/19/2008 10:41:23 PM
1,3-Dichloropropane	ND	1.0	μg/L	1	6/19/2008 10:41:23 PM
2,2-Dichloropropane	ND	2.0	µg/L	1	6/19/2008 10.41:23 PM
1,1-Dichloropropene	, ND	1.0	µg/L	1	6/19/2008 10.41:23 PM
Hexachiorobutadiene	ND	1.0	µg/L	1	6/19/2008 10:41:23 PM
2-Hexanone	ND	10	μg/L	1	6/19/2008 10:41:23 PM
lsopropylbenzene	ND	10	μg/L	1	6/19/2008 10:41:23 PM
4-Isopropyltoluene	ND	1.0	μg/L	1	6/19/2008 10:41:23 PM
4-Methyl-2-pentanone	ND	10	µg/L	1	6/19/2008 10:41:23 PM
Methylene Chloride	ND	3.0	µg/L	1 .	6/19/2008 10:41:23 PM
n-Butylbenzene	ND	1.0	μg/L	1	6/19/2008 10:41 23 PM
n-Propylbenzene	ND	1.0	μg/L	1	6/19/2008 10.41:23 PM
sec-Butylbenzene	ND	1.0	µg/L	1	6/19/2008 10:41:23 PM
Styrene	ND	1.0	µg/L	1	6/19/2008 10:41:23 PM
tert-Butylbenzene	ND	1.0	μg/L	1	6/19/2008 10:41:23 PM
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1	6/19/2008 10:41:23 PM
1,1,2,2-Tetrachloroethane	ND	2.0	μg/L	1	6/19/2008 10:41:23 PM
Tetrachioroethene (PCE)	ND	1.0	µg/L	1	6/19/2008 10:41:23 PM
trans-1,2-DCE	ND	1.0	μg/L	1	6/19/2008 10:41:23 PM
trans-1,3-Dichloropropene	ND	1.0	μg/L .	1 ,	6/19/2008 10:41:23 PM
1,2,3-Trichlorobenzene	ND	1.0	µg/L	1	6/19/2008 10:41:23 PM
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1	6/19/2008 10:41:23 PM
1,1,1-Trichloroethane	, ND	1.0	μg/L . ՝	1	6/19/2008 10:41:23 PM
1,1,2-Trichloroethane	ND	1.0	μg/L	1	6/19/2008 10:41:23 PM
Trichloroethene (TCE)	ND	. 1.0	µg/L	1	6/19/2008 10:41:23 PM
Trichlorofluoromethane	ND	, 1.0°	µg/L	1	6/19/2008 10:41:23 PM
1,2,3-Trichloropropane	ND	2.0	μg/L	1	6/19/2008 10:41:23 PM
Vinyl chloride	ND '	1.0	µg/L	1	6/19/2008 10:41:23 PM
Xylenes, Total	ND	1.5	µg/L	1	6/19/2008 10:41:23 PM

#### Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 3 of 4

Date: 14-Jul-08

CLIENT:

Hess Corporation

Lab Order:

0806231

Hess West Bravo Dome

Project: Lab ID:

11035 11031 151410 1501

0806231-01

Client Sample ID: Girard Well

Collection Date: 6/16/2008 7:00:00 AM

Date Received: 6/16/2008

Matrix: AQUEOUS

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES	,	· · · · · · · · · · · · · · · · · · ·			Analyst: HL
Surr: 1,2-Dichloroethane-d4	94 1	68.1-123	%REC	1	6/19/2008 10:41:23 PM
Surr: 4-Bromofluorobenzene	93:4	53.2-145	%REC	. 1	6/19/2008 10.41:23 PM
Surr: Dibromofluoromethane	96.6	68.5-119	%REC	1	6/19/2008 10:41:23 PM
Surr: Toluene-d8	97.8	64-131	%REC	1	6/19/2008 10:41:23 PM
PA METHOD 9067: TOTAL PHENOLICS	•				Analyst: JAT
Phenolics, Total Recoverable	ND	2.5	µg/L	1	6/19/2008
6M4500-H+B: PH					Analyst: KMS
рΗ	8.26	. 0.1	pH units	1	6/17/2008
SM 2540C TOTAL DISSOLVED SOLIDS			•		Analyst: KMS
Total Dissolved Solids	360	, 20	mg/L	1	6/20/2008

Qualifiers:

RL Reporting Limit

Value exceeds Maximum Contaminant Level

E Value above quantitation range

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

## Benchmark Analytics, Inc.

4777 Saucon Creek Road Center Valley, PA 18034

Work Order: 08062265

08062265

1 of 1

. Phone: (610) 974-8100 Fax: (610) 974-8104

SEND DATA TO:

Andy Freeman NAME:

COMPANY: Hall Environmental Analysis Lab, Inc.

ADDRESS: 4901 Hawkins NE, Sulte D

Albuquerque, NM 87109-4372

PO#: · PWS ID#

WO#:

PAGE:

PHONE: FAX:

(505) 345-3975 (505) 345-4107

0806231

**TEST REPORT** 

RECEIVED FOR LAB BY: CMM	DAT	E: 06/17/2008 9:00			Page 1 of 1
SAMPLE: 0806231-01G, Girard Well SAMPLED BY: Client	Sar	Lab ID: 08062265-001A nple Time. 06/16/2008 7:00	Grab		
<u>Test</u>	Result	<u>Method</u>	RL	Analysis Start	Analysis End Analyst *
Arsenic	0.0067 mg/L	EPA 200.8	0.01	06/18/08 14:00	06/20/08 JRA-CV
Selenium	0.0066 mg/L	EPA 200.8	0.05	06/18/08 14:00	06/20/08 JRA-CV
Uranium	9.08 µg/L	EPA 200.8	30	06/18/08 14:00	06/20/08 JRA-CV
Uranlum	6.08 pCi/L	EPA 200.8		06/18/08 14:00	06/20/08 JRA-CV
SAMPLE: 0806231-01H, Girard Well		Lab ID: 08062265-001D	Grab		
SAMPLED BY: Client	Sar	npie Time. 06/16/2008 7:00			
<u>Test</u>	Result	Method	RL	Analysis Start	Analysis End Analyst *
Cyanide	< 0.005 mg/L	SM#20 4500 CN C,E	0.2	06/23/08 10:30	06/23/08 LNP-CV

#### **REMARKS:**

The above test procedures meet all the requirements of NELAC and relate only to these samples. \* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

	A
MANAGER	Climes

### BENCHMARK ANALYTICS, INC. 4777 Saucon Creek Road Center Valley, PA 18034-9004

Work Order: 08062265

08062265

1 of 1

PHONE (610) 974-8100 FAX (610) 974-8104

SEND DATA TO:

NAME:

Andy Freeman

COMPANY: Hall Environmental Analysis Lab, Inc. 4901 Hawkins NE, Suite D

Albuquerque, NM 87109-4372

PO#:

WO#:

PAGE:

Grab

Grab

PHONE:

ADDRESS:

(505) 345-3975

(505) 345-4107

TEST REPORT

PWS ID#

0806231

FAX:

RECEIVED FOR LAB BY: CMM

SAMPLED BY: Client

DATE: 06/17/2008 9:00

Page 1 of 1

SAMPLE: 0806231-01H, Girard Well

Sample Time 06/16/2008 7:00

<u>Test</u>

<u>Test</u>

Radium-226

Radium-228

Result 0.43

1.55

Uncert. ± 0.12

**MDA** 0.69 <u>Units</u> pCVL

Method **EPA 903.0** 

Lab ID: 08062265-001B

MCL Analysis Start Analysis End Analyst \* 06/20/08 10:20

07/01/08

BH-CV

SAMPLE: 0806231-01H, Girard Well

SAMPLED BY: Client

Lab ID: 08062265-001C 06/16/2008 7.00 Sample Time

Result

Uncert. ± 0.60

MDA 0.66 <u>Units</u> pCi/L

Method EPA 904.0 MCL Analysis Start Analysis End Analyst \*

07/08/08 8:30 07/10/08

CCA-CV

The above test procedures meet all the requirements of NELAC and relate only to these samples. \* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

climet.

DATE:

Benchmark Analytics, Inc.

Date: 11-Jul-08

CLIENT:

Hall Environmental Analysis Lab, Inc.

Work Order: Project:

08062265

0806231

ANALYTICAL QC SUMMARY REPORT

TestCode: CN\_TT\_4500E\_D

Sample ID: 08062265-001DDUP	SampType: DUP	TestCode CN_T	T_4500 Units: mg/L	Prep Date:	RunNo: 24042	
Client ID: 0806231-01H, Girard Wel	Batch ID: R24042	TestNo: A4500	-CN-E	Analysis Date. 6/23/2008	SeqNo: 452195	
Analyte	Result	PQL SPK value	SPK Ref Val %REC	LowLimit HighLimit RPD Ref Val	%RPD RPDLimit	Qual
Cyanide	< 0.005	0.005		0	0 10	
Sample ID: 08062268-001DMS	SampType; MS .	TestCode: CN_T	T_4500 Units: mg/L	Prep Date:	RunNo: 24042	
Client ID: ZZZZZZ	Batch ID: R24042	TestNo: A450	)-CN-E	Analysis Date: 6/23/2008	SeqNo. 452197	,
Analyte	Result	PQL SPK valué	SPK Ref Val %REC	LowLimit HighLimit RPD Ref Val	%RPD RPDLimit	Qual

Qualifiers:

Analyte detected in the associated Method Blank

Limit of detection increased due to matrix interference an

Value above quantitation range

Page 1 of 6

Analyte reported below quantitation limits

Value above calibration range but within annually verifie LBP Lead based paint is defined as a paint with greater than

PHQC Sample pH was >2. Due to matrix effects, not all quality

Due to matrix effects, not all quality control parameters

R RPD outside accepted recovery limits

Hall Environmental Analysis Lab, Inc.

Work Order:

08062265

Project:

0806231

ANALYTICAL QC SUMMARY REPORT

TestCode: ME\_ICPMS\_D

Sample ID: WBLK ED 061808 E Client ID: PBW	SampType: MBLK Batch ID: ED 061808 E	estCode: ME_ICPMS_ Units: mg/L TestNo: E200.8	Prep Date: Analysis Date: 6/18/2008	RunNo: 23901 SeqNo: 449759
Analyte	Result PO	L SPK value SPK Ref Val %REC	LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Arsenic	< 0.000 <u>5</u> 0.000	5		
Sample ID: 08061692-001D DUP	SampType: DUP	TestCode: ME_ICPMS_ Units: mg/L	Prep Date:	RunNo: 23901
Client ID: ZZZZZZ	Batch ID: ED 061808 E	TestNo: E200.8	Analysis Date. 6/12/2008	SeqNo: 449762
Analyte	Result PC	L SPK value SPK Ref Val %REC	LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Arsenic	0.0034. 0.000	. · · · · · · · · · · · · · · · · · · ·	0.003455	1.00 20
Sample ID. 08061692-001D MS	SampType: MS	TestCode: ME_ICPMS_ Units: mg/L	Prep Date:	RunNo: 23901
Client (D: ZZZZZZ	Batch ID: ED 061808 E	TestNo: E200.8	Analysis Date: 6/12/2008	SeqNo: 449763
Analyte	Result PC	NL SPK value SPK Ref Val %REC	LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Arsenic	0.0055 0.000	05 0.002020 0.003455 103	70 130	
Sample ID: MBLK ED 061808 E	SampType: MBLK	TestCode: ME_ICPMS_ Units: mg/L	Prep Date:	RunNo: 23993
Client ID PBW	Batch ID: ED 061808 E	TestNo: E200.8	Analysis Date: 6/18/2008	SeqNo: 451224
Analyte	Result PC	DL SPK value SPK Ref Val %REC	LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Arsenic Selenium	< 0.0005 0.000 < 0.0030 0.000			
Sample ID: 08061952-001A DUP	SampType: DUP	TestCode: ME_ICPMS_ Units: mg/L	Prep Date:	RunNo: 23993
Client ID: ZZZZZZ	Batch ID: ED 061808 E	TestNo: E290.8	Analysis Date: 6/18/2008	SeqNo: 451229
Analyte	Result P(	QL SPK value SPK Ref Val %REC	LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Arsenic	< 0.0005 0.00		0	0 20
Selenium	< 0.0030 0.00	30	0	0 20

Qualifiers:

- Analyte detected in the associated Method Blank
- Limit of detection increased due to matrix interference an
- Value above quantitation range

Page 2 of 6

- Analyte reported below quantitation limits
- Value above calibration range but within annually verifie LBP Lead based paint is defined as a paint with greater than
- PHQC Sample pH was >2. Due to matrix effects, not all quality
- Due to matrix effects, not all quality control parameters
- R RPD outside accepted recovery limits

Hall Environmental Analysis Lab, Inc.

Work Order:

08062265

Project:

0806231

## ANALYTICAL QC SUMMARY REPORT

TestCode: ME\_ICPMS\_D

Sample ID: 08061952-001A MS	SampType: MS	Test	Code: ME_IC	PMS_ Units: n	ng/L	Prep !	Date:		RunNo: 23	93	
Client ID: ZZZZZZ	Batch ID: ED 06180	ISE Te	estNo: E200.8			Analysis i	Date: 6/18.	/2008	SeqNo: 45	1230	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.0021	0.0005	0.002020	0	103	70	130				
Selenium	0.0231	0 0030	0.02222	0	104	70	130	•			

Qualifiers:

Analyte detected in the associated Method Blank

Limit of detection increased due to matrix interference an

Value above quantitation range

Page 3 of 6

Analyte reported below quantitation limits

Value above calibration range but within annually verifie LBP Lead based paint is defined as a paint with greater than

PHQC Sample pH was >2. Due to matrix effects, not all quality

Due to matrix effects, not all quality control parameters

RPD outside accepted recovery limits

Hall Environmental Analysis Lab, Inc.

Work Order:

08062265

Project:

0806231

### ANALYTICAL QC SUMMARY REPORT

TestCode: RA226\_903.0

Sample ID: BLANK	SampType: MBLK	TestCode RA226_903.0 Units: pCi/L	Prep Date:	RunNo: 24520
Client ID: PBW	Batch ID: R24520	TestNo: E903.0	Analysis Date: 6/20/2008	SeqNo: 462185
Analyte	Result	PQL SPK value SPK Ref Val %REC	LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Radium-226	0.08			
Sample ID: LCS	SampType: LCS	TestCode. RA226_903.0 Units: pCi/L	Prep Date:	RunNo: 24520
Client ID: LCSW	Batch ID: R24520	TestNo: E903.0	Analysis Date: 6/20/2008	SeqNo: 462186
Analyte	Result	PQL SPK value SPK Ref Val %REC	LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Radium-226	15.71	10.66 0 147	74 126	S
Sample ID: LCS DUP 1	SampType: LCSD	TestCode: RA226_903.0 Units: pCi/L	Prep Date:	RunNo: 24520
Client ID: LCSS02	Batch ID: R24520	TestNo: E903.0	Analysis Date: 6/20/2008	SeqNo: 462187
Analyte	Result	PQL SPK value SPK Ref Val %REC	LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Radium-226	12.08	10.66 D 113	74 126	26.0 . 0
Sample ID: LCS DUP 2	SampType: LCSD	TestCode: RA226_903.0 Units. pCi/L	Prep Date:	RunNo: 24520
Client ID: LCSS02	Batch ID: R24520	- TestNo: E903.0	Analysis Date: 6/20/2008	SeqNo: 462188
Analyte	Result	PQL SPK value SPK Ref Val %REC	LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Radium-226	13.68	10 66 0 128	74 126	14.0 0 S
Sample ID: LCS-RC	SampType: LCS	TestCode: RA226_903.0 Units. pCi/L	Prep Date:	RunNo: 24520
Client ID: LCSW	Batch ID: R24520	TestNo: E903.0	Analysis Date: 6/20/2008	SeqNo: 462190
Analyte	Result	PQL SPK value SPK Ref Val %REG	LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Radium-226	13.83	10.66 0 130	74 126	S

Qualifiers:

B Analyte detected in the associated Method Blank

D Limit of detection increased due to matrix interference an

E Value above quantitation range

Page 4 of 6

J Analyte reported below quantitation limits

L Value above calibration range but within annually verifie LBP

LBP Lead based paint is defined as a paint with greater than

PHQC Sample pH was >2. Due to matrix effects, not all quality

Due to matrix effects, not all quality control parameters

R RPD outside accepted recovery limits

Hall Environmental Analysis Lab, Inc.

Work Order:

08062265

Project: 0806231

### ANALYTICAL QC SUMMARY REPORT

TestCode: RA226\_903.0

Sample ID: LCS DUP 2 RC	SampType: LCSD	TestCode: RA226	903.0 Units: pCi/L		Prep l	Date:		RunNo: 248	520	
Client ID: LCSS02	Batch ID: R24520	TestNo: E903.0			Analysis	Date. 6/20/2	800	SeqNo: 462	2191	
Analyte	Result	PQL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit I	RPD Ref Val	**************************************	RPDLimit	Qual .
Radium-226	12.43	10.66	0	117	74	126				,

Qualifiers:

Analyte detected in the associated Method Blank

Analyte reported below quantitation limits

PHQC Sample pH was >2. Due to matrix effects, not all quality

Limit of detection increased due to matrix interference an E

Value above quantitation range

Page 5 of 6

Value above calibration range but within annually verifie LBP Lead based paint is defined as a paint with greater than

Due to matrix effects, not all quality control parameters

Hall Environmental Analysis Lab, Inc.

Work Order:

08062265

Project:

0806231

ANALYTICAL QC SUMMARY REPORT

TestCode: RA228 904.0

Sample ID: LCS	SampType: LCS	TestCode: RA228	904.0 Units: pCI/L		Prep [	Date:		RunNo: 24838	
Client ID: LCSW	Batch ID: R24838	TestNo: E904.0			Analysis (	Date: 7/8/2	2008	SeqNo: 469864	
Analyte .	Result	PQL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit	Qual
Radium-228	11.39	11.42	Ð	100	57	143			
Sample ID: BLANK-RC	SampType: MBLK	TestCode: RA228	904.0 Units: pCi/L	-	Prep [	Date <sup>.</sup>		RunNo: 24838	
Client ID: PBW	Batch ID: R24838	TestNo: <b>E904.0</b>			Analysis I	Date: 7/8/7	2008	SeqNo: 469069	
Analyte	Result	PQL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit	Qual

Radium-228

0.17

12

Qualifiers: Analyte detected in the associated Method Blank Limit of detection increased due to matrix interference an

E Value above quantitation range

Page 6 of 6

Analyte reported below quantitation limits

Value above calibration range but within annually verifie LBP Lead based paint is defined as a paint with greater than

Due to matrix effects, not all quality control parameters -

R RPD outside accepted recovery limits

Date: 14-Jul-08

# QA/QC SUMMARY REPORT

Client:

Hess Corporation

Project: Hess West Bravo Dome

Work Order:

080623

Project: Hess West	Bravo Dome	,						Work Order	: 0806231
Analyte	Result	Units	PQL	%Rec	LowLimit	HighLim	it %RPD	RPDLimit	Qual
Method: EPA Method 300.0: A	nions				/			,	000 40 07 00 44
Sample ID: MB		MBLK			Batch I	ID: R289	357 Analysis	Date: 6/16/2	008 10:07:20 AN
Fluoride	ND	mg/L	0.10						
Chloride	ND	mg/L	0.10			•			
Nitrogen, Nitrate (As N)	ND	mg/L	0.10						
Sulfate	ND	mg/L	0.50						
Sample ID: LCS		LCS			Batch I	D: <b>R28</b> 9	357 Analysis I	Date: 6/16/2	008 10:24:44 AN
Fluoride	0.5085	mg/L	0.10	102	90	110			
Chloride	5.084	mg/L	0.10	102	90	110			
Nitrogen, Nitrate (As N)	2.598	mg/L	0.10	104	90	110			
Sulfate	10.37	mg/L	0.50	104	90	110			
Method: EPA Method 9067: To	otal Phenolics					_			
Sample ID: MB-16235		MBLK			Batch I	D: 162	267 Analysis I	Date:	6/19/2008
Phenolics, Total Recoverable	ND	µg/L	2.5						
Sample ID: LCS-16235		LCS			Batch I	D: 162	167 Analysis I	Date:	6/19/2008
Phenolics, Total Recoverable	26.08	μg/L	2.5	130	51.7	133			
Sample ID: LCSD-16235		LCSD			Batch I	D: 162	.67 Analysis i	Date:	6/19/2008
Phenolics, Total Recoverable	25.48	µg/L	2.5	127	51.7	133	2.33	0	
Method: EPA Method 504.1; E	DR				•				
Sample ID: MB-16525		MBLK			Batch I	D <sup>.</sup> 162		Date: 6/19/	2008 1.10.14 PM
•	ND		0.040		54.0		.o		
1,2-Dibromoethane	ND	µg/L	0 010		Datah I	D: 400	ro Amelicaio I	2-1 0140#	0000 4:00:50 DM
Sample ID: LCS-16525		LCS			Batch I		52 Analysis [	Jale: 0/19/2	2008 1:22:58 PM
1,2-Dibromoethane	0.1200	μg/L	0.010	120	70	130			
Sample ID: LCSD-16525		LCSD			Batch II	D: 162	52 Analysis [	Date: 6/19/2	2008 1:35·47 PM
1,2-Dibromoethane	0.1230	µg/L	0 010	123	70	130	2.47	13.5	
Method: EPA Method 8082: PC	B's								
Sample ID: MB-16232		MBLK			Batch II	D. 162	32 Analysis [	Date: 6/25/2	2008 9.27:06 PM
Aroclor 1016	ND	μg/L	1.0						
Aroclor 1221	ND	μg/L	5.0						
Aroclor 1232	ND	μg/L	1.0						•
Aroclor 1242	ND	μg/L	1.0						
Aroclor 1248	ND	µg/L	1.0						
Arocior 1254	ND	μg/L	1.0						
Aroclor 1260	ND	μg/L	10						
Sample ID: LCS-16232		LCS			Batch II	D: 162	32 Analysis D	Date: 6/25/20	08 10:15:40 PM
Aroclor 1016	1.888	µg/L	1.0	37.8	27.4	132			
Aroclor 1260	2.680	µg/L	1.0	53.6	47.6	119			
Sample ID: LCSD-16232		LCSD			Batch II		32 Analysis D	Date. 6/25/20	08 11:04:50 PM
Aroclor 1016	2.844	µg/L	1.0	56.9	27.4	132	40.4	45.7	
"COIO! 10 10									

#### Qualifiers:

Page 1

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Date: 14-Jul-08

# **QA/QC SUMMARY REPORT**

Client:

Hess Corporation

Project: Hess West Bravo Dome

Work Order:

0806231

Project: Hess Wo			<del></del>			1		Work Or		0806231
Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLi	nit Qua	 
Method: EPA Method 8310	: PAHs									
Sample ID: MB-16218		MBLK			Batch	ID: 16218	Analysis D	ate: 6/3	30/2008 12	2:39:04 PI
Naphthalene	ND	μg/L	2.0							
1-Methylnaphthalene	ND	µg/L	2.0		•					
2-Methylnaphthalene	ND	μg/L	2.0					•		
Acenaphthylene	ND	μg/L	2.5							
Acenaphthene	ND	µg/L	5.0							
Fluorene	ND	µg/∟	0.80							
Phenanthrene	ND	µg/∟	0.60							
Anthracene	ND	μg/L	0.60				,			
Fluoranthene	ND	µg/L	0.30							
Pyrene	ND	μg/L	0.30							
Benz(a)anthracene	ND	µg/L	0.070							
Chrysene .	ND	µg/L	0.20							
Benzo(b)fluoranthene	ND	µg/L	0.10							
Benzo(k)fluoranthene	ND	μg/L	0 070							
Benzo(a)pyrene	ND	μg/L	0.070							
Dibenz(a,h)anthracene	ND	µg/L	0.070							
Benzo(g,h,i)perylene	ND 1	µg/L	0.080				•			
Indeno(1,2,3-cd)pyrene	ND	μg/L	0.080							
Sample ID: LCS-16218		LCS			Batch I	D. <b>16218</b>	Analysis Da	ate. 6/	30/2008 1	.27:04 PN
Naphthalene	14.31	μg/L	2.0	35.8	31:5	90.7	-			
1-Methylnaphthalene	14.91	μg/L -	2.0	37.2	32.5	93.3				
2-Methylnaphthalene	14.20	μg/L	2.0	35.5	32.8	89.6				
Acenaphthylene	15.51	µg/L	2.5	38.7	37.8	92.4				
Acenaphthene	16.75	μg/L	5 0	41 9	38.6	93.9				
Fluorene	1.850	µg/L	0.80	46.1	38	95.5		•		
Phenanthrene	1.160	μg/L	0.60	50.2	32 9	107				
Anthracene	1.060	μg/L	0.60	52.7	35.2	98.3				
Fluoranthene	2.110	μg/L	0.30	52.7 52.6	36 4	104				
Pyrene	1.900	μg/L μg/L	0.30	47 4	37 1	104				
Benz(a)anthracene	0.1700	µg/L µg/L	0.30	42.4	33.7	102				
· · · · · · · · · · · · · · · · · · ·	0.9700		0.070	48.3	35.7 35.2	96.1				
Chrysene Benzo(b)fluoranthene	0.2400	µg/∟ µg/∟	0 10	47.9	33.6	94.2				
Benzo(k)fluoranthene	0.1200	μg/L μg/L	0.070	44.0	25.4 ·	94.2 110				
Зелzo(к)лиогальтель Зелzo(a)pyrene	0.1200	μg/L	0.070	47.8	26.9	102				
Dibenz(a,h)anthracene	0.1200		0.070	47.8 47.9	40.7					
	0.2400	µg/L µg/L	0.080	48.0	24.3	92.1 <sup>*</sup> 109				
Benzo(g,h,i)perylene	0.5020	µg/L µg/L	0.080	50.1	42 6	99.9		•		
ndeno(1,2,3-cd)pyrene	0.5020	LCSD	0.000	3u. i			Analusis Di	in C'	2012000	45:04 DM
Sample ID: LCSD-16218					Batch II		Analysis Da		30/2008 2:	15.04 21
Naphthalene	23.20	µg/L	2.0	58 0	31.5	90.7	47.4	32 1	R.,	
-Methylnaphthalane	23.73	μg/L	2.0	59.2	32.5	93.3	45.7	32.7	R	
-Methylnaphthalene	23 01	µg/L	2.0	57.5	32.8	89.6	47 4	34 -	R	
cenaphthylene	23.33	µg/L ,	25	58.2	37.8	92.4	40.3	38.8	R	
Acenaphthene	25.02	µg/L	5.0	62 6	38.6	93.9	39.6	38.6	R	
luorene	2.620	μg/L	0.80	65.3	38	95.5	34.5	29.3	R	

Qualifiers:

Page 2

E Value above quantitation range

J Analyte detected below quantitation limits

RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Date: 14-Jul-08

# **QA/QC SUMMARY REPORT**

Client:

Hess Corporation

Project:

Hess West Bravo Dome

Work Order:

0806231

Analyte	Result	Units	PQL -	%Rec	LowLimit	HighLimit	%RPD	RPDL	imit Qual
Method: EPA Method 8310:	PAHs								
Sample ID: LCSD-16218		LCSD			Batch	ID: 16218	Analysis E	Date:	6/30/2008 2:15:04 PM
Phenanthrene	1.470	μg/L	0.60	65.7	32.9	107	23.6	25	
Anthracene	1.400	µg/L	0 60	69 7	35 2	98.3	27.6	23.9	R
Fluoranthene	2.780	· µg/L	0.30	69.3	36.4	104 ·	27.4	15 7	R
Pyrene	2.550	μg/L	0.30	63.6	37 1	102	29 2	15.3	R
Benz(a)anthracene	0.2500	μg/L	0.070	62.3	33.7	101	38.1	19	R
Chrysene	1.340	µg/L	0.20	66.7	35.2	96.1	32.0	16 6	R
Benzo(b)fluoranthene	0.3200	µg/L	0 10	63.9	33.6	94.2	28.6	21.7	R
Benzo(k)fluoranthene	0.1600	µg/L	0.070	60.0	25 4	110	28.6	19.4	R
Benzo(a)pyrene	0.1500	µg/L	0.070	59.8	26.9	102	22.2	16.7	R
Dibenz(a,h)anthracene	0.3200	µg/L	0.070	63.9	40.7	92.1	28.6	17.3	R
Benzo(g,h,i)perylene	0.3200	µg/L	0 080	64.0	24.3	109	28.6	18	R
Indeno(1,2,3-cd)pyrene	0.6560	μg/L	0 080	65.5	42.6	99.9	26.6	17 7	R
Method: EPA Method 7470:	Mercury								
Sample ID: MB-16412		MBLK			Batch I	D: 16412	Analysis D	ate:	7/7/2008 2:45.45 PN
Mercury	ND	mg/L	0.00020						
Sample ID: LCS-16412		LCS			Batch I	D: 16412	Analysis D	ate:	7/7/2008 2:47:33 PN
Mercury	0.005104	mg/L	0.00020	102	80	120			

Ou	allfi	iers:
~~	er 2 5 7 2 1	

E Value above quantitation range

R RPD outside accepted recovery limits

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Page 3

J Analyte detected below quantitation limits

## QA/QC SUMMARY REPORT

Client:

Hess Corporation

Project:

Hess West Bravo Dome

Work Order:

0806231

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD RF	PDLimit Qual
Method: EPA 6010B: Tota	il Recoverable Me	tals					<del> </del>	
Sample ID: MB-16227		MBLK			Batch I	D: <b>16227</b>	Analysis Date.	6/19/2008 3:05:17 PM
Aluminum	ND	mg/L	0 020					
Barium	ND	mg/L	0.010		į			
Boron	ND	mg/L	0.040					
Cadmium	ND	mg/L	0.0020					
Chromium	<b>N</b> D	mg/L	0.0060					
Cobalt	ND	mg/L	0.0060					
Copper	ND	mg/L	0.0060					
Iron	ND	mg/L	0.050					
Lead	ND	mg/L	0 0050	,				
Manganese	ND	mg/L	0.0020					
Molybdenum	ND	mg/L	0.0080				•	
Nickel	ND	mg/L	0.010				•	·
Silver	ND	mg/L	0.0050					•
Zinc	ND	mg/L	0.020	,			•	
Sample ID: MB-16227		MBLK		,	Batch I	D: <b>16227</b>	Analysis Date.	6/23/2008 1:27:33 PN
	MD		0.0000		Daton 1	. , , oan,	, maryoro Dato.	0/20/2000 1.27.00 1 1
Chromium Lead	ND ND	mg/L	0.0060					
Sample ID: MB-16227	NU	mg/L <i>MBLK</i>	0.0050		Batch II	, D. 46007	Anglicain Date:	7/0/2000 2:50:20 71
1					Batch	D: <b>16227</b>	Analysis Date	7/8/2008 2:56:39 PN
Aluminum	ND	mg/L	0.020			•		
Barium	ND	mg/L	0 010					
Boron	ND	mg/L	0.040					
Cadmium	ND	mg/L	0.0020	,				
Cobalt	ND	mg/L	0 0060					
Copper	ND	mg/L	0.0060			•		
ron	ND	mg/L	0.050					
Manganese	ND	mg/L	0.0020					
Molybdenum	ND	mg/L	0.0080					
Nickel	ND .	mg/L	0.010					
Silver .	ND	mg/L	0.0050					
Inc	ND	mg/L	0.020					
Sample ID: LCS-16227		LCS			Batch II	D: 16227	Analysis Date:	6/19/2008 3:08:20 PM
Murninum	0.4852	mg/L	0.020	96.3	80	120		
Barium	0.4716	mg/L	0.010	94.3	80	120		•
Boron	0.4712	mg/L	0.040	92.9	80	120		
admium	0.4657	mg/L	0.0020	93.1	80	120		
Chromium	0.4700	mg/L	0.0060	94.0	80	120	-	
obalt	0.4524	mg/L	0.0060	90.5	80	120		
opper	0.4799	mg/L	0.0060	96.0	80	120		
on	0.4724	mg/L	0.050	94.5	80	120		
ead	0.4650	mg/L	0.0050	93.0	80	120		
langanese	0 4710	mg/L	- 0.0020	94.2	80	120		
lolybdenum	0.4845	mg/L	0.0080	96.9	80	120		,
lickel	0.4531	mg/L	0.010	90.6	80	120		
		<b>→</b>			1.			

Qualifiers:

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

## **QA/QC SUMMARY REPORT**

Client:

**Hess Corporation** 

Project:

Hess West Bravo Dome

Work Order:

0806231

								1 Order: 0800231
Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD RF	PDLimit Qual
Method: EPA 6010B: Total	Recoverable Me	etals						
Sample ID: LCS-16227		LCS			Batch	ID: 16227	Analysis Date:	6/19/2008 3:08:20 PM
Silver	0 4797	mg/L	0.0050	95.9	80	120		
Zinc	0 4617	mg/L	0.020	92.3	80	120		
Sample ID: LCS-16227		LCS			Batch !	ID: 16227	Analysis Date:	6/23/2008 1.29:59 PM
Chromium	0.4388	mg/L	0.0060	87.8	80	120		
Lead	0 4305	mg/L	0.0050	86.1	80	120		
Sample ID: LCS-16227		LCS			Batch I	D: <b>16227</b>	Analysis Date	7/8/2008 2 <sup>-</sup> 59:40 PM
Aluminum	0.4788	mg/L	0.020	93.0	80	120		
Barium	0.4854	mg/L	0.010	97.1	80	120	•	
Boron	0.5076	mg/L	0.040	102	80	120		
Cadmium	0.4870	mg/L	0.0020	97.4	80	120		
Cobalt	0.4958	mg/L	0.0060	99.2	80	120		
Copper	0.4833	mg/L	0.0060	96.7	80	120		
Iron	0.5185	mg/L	0.050	104	80	120		
Manganese ·	0.4815	mg/L	0.0020	96.3	80	120		
Molybdenum	0.5174	mg/L	0.0080	103	80	120		
Nickel	0.4779	mg/L	0.010	95.6	80	120		
Silver	0.4764	. mg/L	0.0050	95.3	80	120		
Zinc ,	0.49781	mg/L	0.020	99.6	80	120		
Method: SM 2540C Total Dis	ssolved Solids		•					
Sample ID: MB-16241	•	MBLK			Batch I	D: <b>16241</b>	Analysis Date:	6/20/2008
Total Dissolved Solids	ND	mg/L	20					
Sample ID: LCS-16241		LCS			Batch I	D: <b>1624</b> 1	Analysis Date:	6/20/2008
Total Dissolved Solids	1005	mg/L	20	100	80	120		
	,							

Qual	lfiers
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E Value above quantitation range

R RPD outside accepted recovery limits

S Spike recovery outside accepted recovery limits

J Analyte detected below quantitation limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

## **QA/QC SUMMARY REPORT**

Client:

**Hess Corporation** 

Project:

Hess West Bravo Dome

Work Order:

0806231

Analyte	Result	Units	PQL	%Rec	LowLimit F	lighLimit .	%RPD	RPDLim	it Qual	
Method: EPA Method 8260B:	VOLATILES									
Sample ID: 5ml rb		MBLK			Batch ID	R28995	Analysis I	Date: 6/1	9/2008 8:54:	:12 AI
Benzene	ND	μg/L	1.0							
Foluene	ND	μg/L	1.0							
Ethylbenzene	ND	μg/L	1.0							
Methyl tert-butyl ether (MTBE)	ND	μg/L	10							
,2,4-Trimethylbenzene	ND	µg/L	1.0		•					
I,3,5-Trimethylbenzene	ND	μg/L	1.0					1 >		
,2-Dichloroethane (EDC)	ND	µg/L	1.0			1	,			
,2-Dibromoethane (EDB)	ND	μg/L	1.0		•					
Naphthalene	ND	μg/L	2.0							
-Methylnaphthalene	ND	µg/L	4.0							
-Methylnaphthalene	ND	μg/L	4.0							
Acetone	ND	μg/L	10							
Bromobenzene	ND	μ <b>g/L</b>	1.0							
Bromodichloromethane	ND	μg/L	1.0							
Bromoform	ND	µg/L	1.0						•	
Bromomethane	ND	µg/L	1.0			•				
-Butanone	ND	μg/L	10							
Carbon disulfide	ND	μg/L	10					•		
Carbon Tetrachloride	ND	μg/L	1.0						•	
Chlorobenzene	ND	μg/L	10							
Chloroethane	ND	µg/L	20					,		
Chloroform	ND	µg/L	1.0					,		
Chloromethane	ND	μg/L	1.0							
-Chlorotoluene	ND	ha/r	1.0							,
-Chlorotoluene	ND	μg/L	1.0							
is-1,2-DCE	ND	μg/L	1.0							
is-1,3-Dichloropropene	ND	μg/L	1.0							
,2-Dibromo-3-chloropropane	ND	μg/L	2.0							
Pibromochloromethane	ND	μg/L	1.0							
Pibromomethane	ND	μg/L	1 0							
,2-Dichlorobenzene	ND	μg/L	1.0							
,3-Dichlorobenzene	ND	µg/L	1.0							
4-Dichlorobenzene	ND	μg/L	10							
ichlorodifluoromethane	ND	μg/L	1.0						,	
1-Dichloroethane	ND	µg/L	1.0							
1-Dichloroethene	ND	μg/L	1.0	1						
2-Dichloropropane	ND	µg/L	1.0							
3-Dichloropropane	ND	μg/L	1.0							
2-Dichloropropane	ND	µg/L	2.0							
1-Dichloropropene	ND	µg/L	1.0			1				
exachlorobutadiene	ND	μg/L	1.0				*			
Hexanone	ND	μg/L	10							
opropylbenzene	ND	μg/L	1.0						*	
-Isopropyltoluene	ND	μg/L	1.0					, ,		

Qualifiers:

E Value above quantitation range

Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

## **QA/QC SUMMARY REPORT**

Client:

Hess Corporation

Project: Hess West Bravo Dome

Work Order:

0806231

				<del></del>				101del: 0600231
Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD RP	DLimit Qual
Method: EPA Method 8260	3: VOLATILES							
Sample ID: 5ml rb		MBLK			Batch	ID: R28995	Analysis Date:	6/19/2008 8:54:12 AM
4-Methyl-2-pentanone	ND	μg/L	10					
Methylene Chloride	ND	µg/L	3.0					
n-Butylbenzene	ND	μg/L	1.0					
n-Propylbenzene	ND	μg/L	1.0					
sec-Butylbenzene	ND	μg/L	1.0					
Styrene	ND	μg/L	1.0					
tert-Butylbenzene	/ ND	μ <b>g/</b> L	10					
1,1,1,2-Tetrachloroethane	ND	μg/L	1.0					
1,1,2,2-Tetrachloroethane	ND	µg/L	2.0					~
Tetrachioroethene (PCE)	ND	μg/L	1.0					•
trans-1,2-DCE	ND	μg/L	1.0					
trans-1,3-Dichloropropene	ND	μg/L	1.0					
1,2,3-Trichlorobenzene	ND	μg/L	10					
1,2,4-Trichlorobenzene	ND	μg/L	1.0					
1,1,1-Trichloroethane	ND	μg/L	1.0					
1,1,2-Trichloroethane	ND	μg/L	1.0					
Trichloroethene (TCE)	ND	μg/L	10					
Trichlorofluoromethane	ND	μg/L	1.0					
1,2,3-Trichloropropane	NÒ	μg/L	2.0					
Vinyl chloride	ND	μg/L	1.0					
Xylenes, Total	ND	μg/L	1.5					
Sample ID: 100ng lcs		LCS			Batch	ID: R28995	Analysis Date:	6/19/2008 9:52:08 AM
Benzene	21.08	μg/L ·	1.0	105	86.8	120		
Toluene	20.29	μg/L	1.0	101	64.1	127		
Chlorobenzene	20.88	µg/L	1.0	104	82.4	113		
1,1-Dichloroethene	24.61	µg/L	1.0	123	86.5	132		
Trichloroethene (TCE)	18 71	ha/r	1 0	93.5	77.3	123		•

Qu	alif	iers:
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E Value above quantitation range

R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

J Analyte detected below quantitation limits

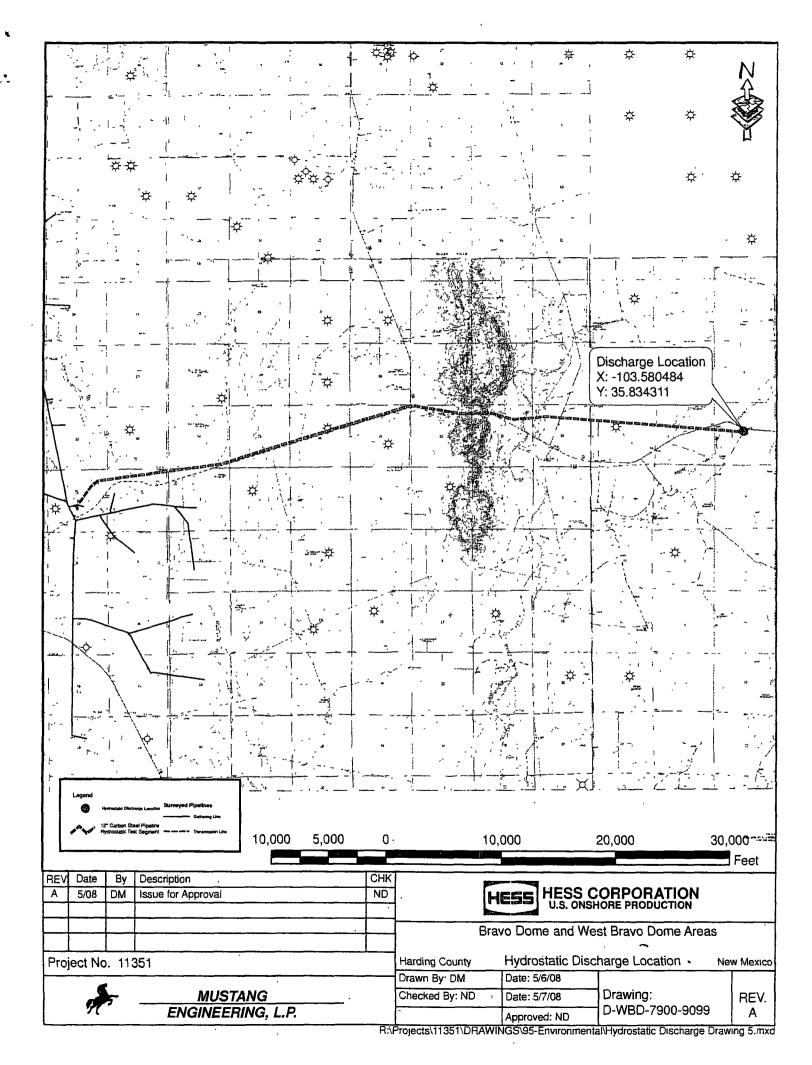
H Holding times for preparation or analysis exceeded

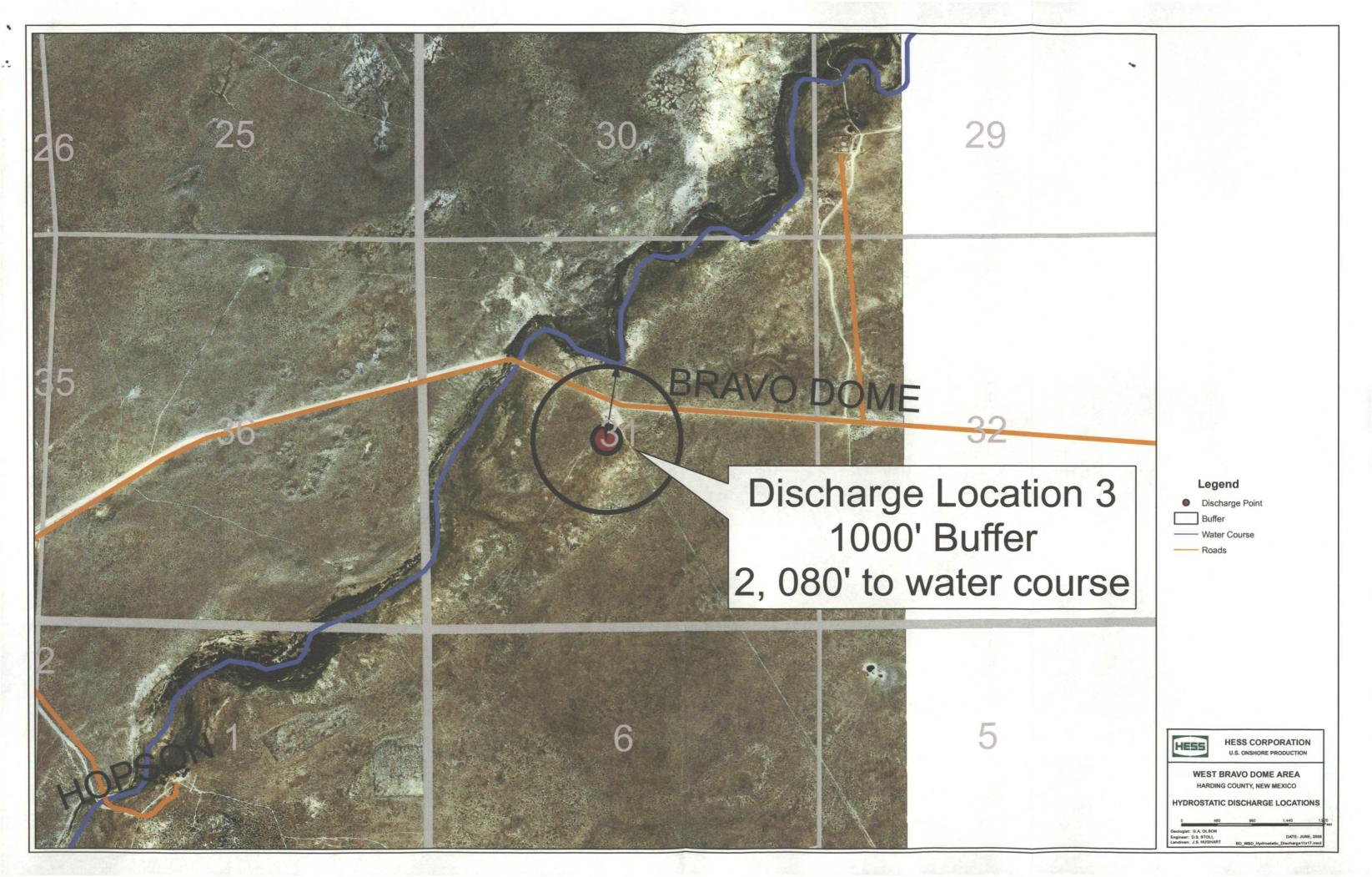
### Hall Environmental Analysis Laboratory, Inc.

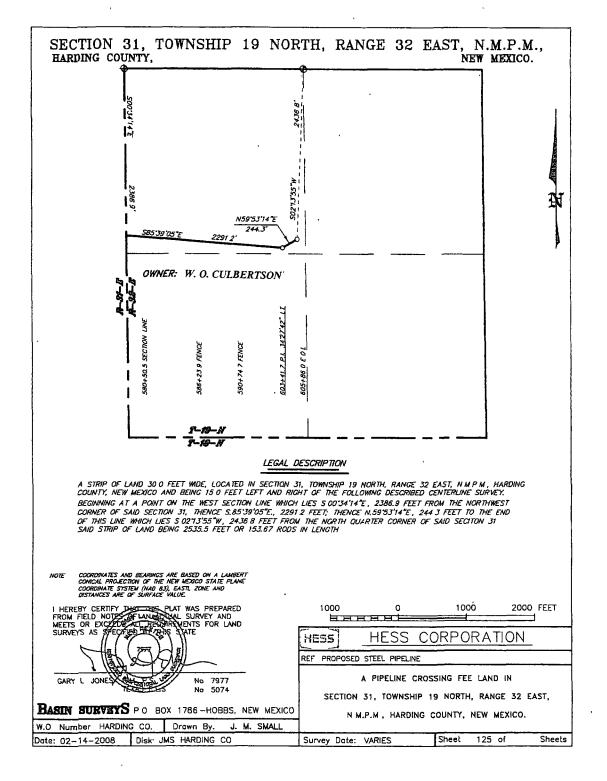
#### Sample Receipt Checklist

	Campic 10	COIPE	OHOOKHOL			
Client Name HESS			Date Receive	ed:	6/16/2008	
Work Order Number 0806231	_		Received by	r: AT	. 1-	<u>ر</u>
Checklist completed by: Linux C	More	<i>Da</i>	116/08	abels checked b	oy. Initials	-
Matrix.	Carrier name <u>Cli</u>	ent dro	o-off			
Shipping container/cooler in good condition?	Ye	s 🔽	No 🗆	Not Present		
Custody seals intact on shipping container/cooler?	Ye	s 🗌	No 🗌	Not Present	☐ Not Shipped	$\checkmark$
Custody seals intact on sample bottles?	Ye	s 🗆	No 🗆	N/A	$ \mathbf{V}$	
Chain of custody present?	Ye	s 🗹	No 🗆			
Chain of custody signed when relinquished and recei	ved? Ye	s 🗹	No 🗆		ı	
Chain of custody agrees with sample labels?	Ye	s 🗹	No 🗆			
Samples in proper container/bottle?	Ye	s 🗹	No 🗆			
Sample containers intact?	Ye	s 🗹	No 🗆			
Sufficient sample volume for indicated test?	·Ye	s 🗹	No 🗌			
All samples received within holding time?	Ye	s 🗹	No 🗆			
Water - VOA vials have zero headspace? No	VOA vials submitted	i 🗆	Yes 🗹	No 🗌		
Water - Preservation labels on bottle and cap match?	Ye.	s 🗹	No 🗌	N/A		
Water - pH acceptable upon receipt?	Yes	· 🗹	No 🗆 .	N/A		
Container/Temp Blank temperature?		1°	<6° C Acceptab			
COMMENTS.			If given sufficient	time to cool.	,	
· · · · · · · · · · · · · · · · · · ·						
, , ,		v.				
Client contacted Date	contacted:		Pers	on contacted		
Contacted by: Rega	arding:					
Comments:						
				v		<del></del>
Corrective Action			,		•	
• .	, ,					
	,					

		Custody Record	Turn-Around	Time:		-	HALL ENVIRONMENT				ra i								
Client: +	less Co	rparation		□ Rush													EIT I		<b>(</b>
			Project Name	: 	Brave Don					ww	w.ha	llenvi	ironn	nenta	al.co	m			
Address:	HCR72	, Box 30		West	DI AVA DON	ne	4901 Hawkins NE - Albuquerque, NM 87			A 8710	09								
	Mosqu	ero NM 87733	Project #:	. 1	•1			Tel.	505	-345-3	3975	F	ax s	505-3	345-	4107			
Phone #:	575-	650-0316	<del></del>	rard We	LU					<u> </u>	<i>P</i>	naly		Requ	uest				
email or F	ax#: dh	olcomb@hess.com	Project Mana		_ ,		=		sel			-	Q <sub>4</sub>	g		`  -	ts		
QA/QC Pad	<del>-</del>		M	ichaelf	-ord		(8021)	TPH (Gas only)	ğ	ŀ			,PO4,SO4)	PCB's		1,			
		☐ Level 4 (Full Validation)			· -		B's (	뛰	Gas				9, P.		1	-	4		
☐ Other_	[] ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (		Sampler:	Janny k	folcomb_	6555384/	TMB's	削	5B (		8	Î	2	8	l		3		Î
	ype)	<u> </u>	Office:		1		+	# Ш	80	41.50	82	A A	စ္ခ်	les/		Ø -	其		۱۶
						TO A PORT	MTBE	MTBE	힐	휘	Įě	Ϋ́	ਨੂੰ	뜷	Ø	Ē	#		es (
Date	Time	Sample Request ID	Container	Preservative	HEAL No.		+	<u>+</u>	Met	<u> </u>	8	<u>E</u>	JS (F	P.		စ္သုိ	3		a a
	,	Campio Hogador is	Type and #	Туре	080623	1	втех	BTEX +	TPH Method 8015B (Gas/Diesel)	티	EDC (Method 8260)	310	hior	8081 Pesticides / 8082	8260B (VOA)	8270 (Semi-VOA)	<b>1</b>		Air Bubbles (Y or N)
6/16/08	7:000	IN Grand Well	BrnGlass	14,504	-	i						<u> </u>			<u> </u>	w x			十
C	7:029	K plings	1	<u> </u>		1										Ŝ			1
	7:030	K "														X			1
	7:484	DK 11	Plostic Oct	HNO3													X		
	7:00%	AK I.	h h	HNO3										٦		3	X		
	7:1020	M c	Plastic	HNOZ												~	Ň		
	7:1180	M.	,,	NaOH							<u> </u>								
	7:148	K n		HN03							<u> </u>				]				
	7:400			4,504				$\perp$			_								
	7:1880	AT IL			- 1							<u> </u>					<b>X</b>		$\perp$
	7:210	16 w	Glass Ampale		1						1_						4		
lested of 20	7.2512	a (3 bottles)	1 1	Hacla	- 1							<u> </u>					<b>X</b>	<u> </u>	
Plate:	8:30a	Relinquished by: Danny Holcomb	Mololan	Reconved by:	1221		Rem	arks	:										
Date:	Time:	Relinquished by:	1111	Received by:	Ve/14	10													
# ////// If ned	12:25 cessary, sample:	s submitted to Hall Environmental may be sub	ocontracted to other	ccredited laborator	ies. This serves as notice	of this i	ossibili	tv. An	v sub-c	ontracte	d data	will be	cleariv	notate	d on the	he analyi	rical repor		







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#### SURFACE USE AGREEMENT

This Surface Use Agreement ("Agreement") is dated and made effective May 1, 2008 ("Effective Date"), by and between W. O. Culbertson & Sons, Inc., ("WOC"), whose address is 1101 Liberal St., Dalhart, Texas, 79022 and Hess Corporation ("Hess"), a Delaware corporation with an office at 500 Dallas St., Level 2, Houston, Texas 77002. WOC and Hess are hereinafter individually referred to as "Party" and collectively as the "Parties".

WHEREAS, Hess is constructing a carbon dioxide gas processing plant (the Plant) located in Section 5, Township 18 North, Range 30 East, Harding County, New Mexico for the purpose of processing carbon dioxide gas to be produced from the nearby West Bravo Dome Carbon Dioxide Gas Unit and other leases and lands; and

WHEREAS, Hess intends to construct an approximate twelve (12) mile carbon dioxide steel transport line ("the Transport Line") from the Plant through portions of Township 18 North, Range 30 East and Township 19 North, Ranges 30-32 East and ending in Section 31, Township 19 North, Range 32 East at the interconnect with the Sheep Mountain Pipeline located near Rosebud, New Mexico; and

WHEREAS, Portions of the Transport Line shall cross lands owned in fee simple or leased from the State of New Mexico by WOC located in Section 31, Township 19 North, Range 32 East ("the WOC Lands").

#### Certification of Compliance with Siting Criteria

- I, Danny Holcomb, Operations Team Leader with Hess Corporation, visited the proposed discharge site in the field on June 10, 2008, and verified that the proposed discharge location for the hydrostatic test water, upon OCD approval, meets the following criteria:
  - No watercourses within 200 feet
  - No existing wellhead protection area
  - Not located within a 100-year floodplain
  - No wetlands within 500 feet
  - No permanent residence, school, hospital, institution or church with 500 feet

My observation in the field matches the enclosed map showing where Hess's pipeline construction contractor plans to discharge the water.

WHolcomb	Oper. Tram	beads.	7-21-03	آ
Signature	Title		Date	

#### Ford, Michael

From: Padilla, Darren, NMENV [darren.padilla@state.nm.us]

**Sent:** Thursday, July 17, 2008 4.36 PM

To: Ford, Michael

Subject: RE: Wellhead Protection Area

H<sub>1</sub> Mike,

Based on what you provided it is apparent the discharge site is not anywhere near any wellhead protection areas for public water systems in NM The closest ones are located tens of miles from the site.

Good luck with the project!

Darren

#### Darren J. Padilla

Hydrologist
Drinking Water Bureau
NM Environment Dept.
Phone: 505/476-8631
Fax: 505/476-8656

From: Ford, Michael [mailto:MFord@hess.com]

Sent: Thursday, July 17, 2008 2:36 PM

To: Padilla, Darren, NMENV

Subject: Wellhead Protection Area

#### Darren,

Per our phone conversation this afternoon, Hess Corporation is preparing a water discharge permit application to the New Mexico Oil Conservation Division for hydrostatic test water from a new carbon dioxide transmission line. The hydrostatic test water will de discharged approximately in the middle of Section 31, T-19-N, R-32-E, Harding County, New Mexico. The coordinates for the discharge are 35 deg 50.033N and 103 deg 34.810W. I have also attached a PDF file containing an aerial photograph of the proposed discharge location.

Please advise if the proposed discharge location is located within any existing wellhead protection areas

Let me know if you have any questions on this and thanks for the help.

Mike Ford Environmental Advisor Hess Corporation Phone: 713-609-4204

<< DischargePoint3.pdf>>



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Community: HARDING CO \*

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#### Ford, Michael

From: Moiola, Lloyd, EMNRD [lloyd.moiola@state.nm.us]

Sent: Thursday, June 19, 2008 12:36 PM

To: Ford, Michael

Subject: RE: Abandoned Mines - Hydrostatic Test Water Discharge Permit Applications

Mr. Ford.

Records in the Abandoned Mine Land Program office in Santa Fe do not show any abandoned mines in your project area.

Thanks,

Lloyd Moiola AML Project Manager

From: Ford, Michael [mailto:MFord@hess.com]

Sent: Tuesday, June 17, 2008 10:12 AM

To: Moiola, Lloyd, EMNRD

Subject: Abandoned Mines - Hydrostatic Test Water Discharge Permit Applications

Mr. Moiola.

Hess Corporation is currently preparing pipeline hydrostatic test water discharge permit applications for our West Bravo Dome carbon dioxide (CO2) pipeline project. Please advise if your records show any abandoned mines in the following locations:

- 1. Sect. 31, T-19-N, R-32-E
- 2. Sect. 5, T-18-N, R-30-E
- 3. Sect. 16, T-18-N, R-30-E

Thanks for your help.

Please contact me if you have any questions regarding this information request.

Mike Ford

**Environmental Advisor** 

Hess Corporation

Phone: 713-609-4204 Mobile. 713-829-6076

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# New Mexico Office of the State Engineer POD Reports and Downloads

Township: 19N	Range: 32E	Sections: 31			-			
NAD27 X:	Y:	Zone:	- ' "	Search Radius:	ı			
County: HA	Basin:		5.	Number:	Suffix:			
Owner Name: (First)	(Las	et) All	-	O Non-Domestic	① Domestic			
POD / Surface Data Report Avg Depth to Water Report Water Column Report								
	Clear Form	ıWATERS Me	nu	Help				

AVERAGE DEPTH OF WATER REPORT 07/17/2008

(Depth Water in Feet)
Bsn Tws Rng Sec Zone X Y Wells Min Max Avg

No Records found, try again