

**GW – 033**

**GENERAL  
CORRESPONDENCE**

**YEAR(S): 2008 - 2010**



Date: November 9, 2010

To: Leonard Lowe  
Environmental Engineer  
Oil Conservation Division/EMNRD  
1220 S. St. Francis Dr.  
Santa Fe, NM 87505

Subject: Public Notice Draft for Permit Modification  
GW-033

Mr. Lowe,

You are receiving this letter in regards to the draft public notice you requested (English & Spanish) regarding the application for the Modification to Discharge Permit GW-033. You requested this draft be provided to you for approval prior to the notice being published and signs being posted locally. In response to your statement of never receiving such draft, please see the attached copies of email verification confirming that the draft was submitted to you electronically on September 10, 2010 and again electronically on September 29, 2010. Also enclosed in this letter is a copy of the draft public notice for request of Modification to Discharge Permit GW-033 in Spanish and English. Please review and provide comments for approval or desired changes. Upon approval we would like to start the notification process as the Modification application was submitted to your office on October 5, 2010 and signed for by Vighil. UPS tracking number and documentation enclosed. A copy of the draft notice was also placed on the electronic copy of the Discharge Permit Modification application provided for your review delivered along with the hard copy.

It is my understanding that there is a \$100 filing fee to be submitted for the Permit Modification request and an additional \$2000 due upon approval of the application. To whom and where does Anadarko Petroleum Corporation need to submit payment for these charges?

Please provide us a time frame for your review and approval of the draft public notice as well as the permit modification request to Discharge Permit GW-033. Should you have any questions or concerns regarding either the application or public notice please address them to me in writing or electronically. This will enable me to expedite responses in an efficient and timely manner. Provided below is all my contact information.

A handwritten signature in black ink, appearing to read "Eric W. Weaver".

Eric W. Weaver  
Sr. Environmental Analyst  
Anadarko Petroleum Corporation  
#10 Desta Dr. Ste 650 E Office (432-684-2808)  
Midland, Texas 79705  
eric.weaver@anadarko.com

## **PUBLIC NOTICE**

Western Gas Resources, Inc., 1201 Lake Robbins Drive, The Woodlands, TX 77380 has submitted a Major Modification application to the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division for the currently approved discharge plan (GW-033) for their San Juan River Gas Plant, located in Section 1, Township 29 North, Range 15 West, NMPM, San Juan County, New Mexico, approximately eight miles west of Farmington, New Mexico and 1.7 miles north of Kirtland, New Mexico.

The modification request is due to the addition of an Acid Gas Injection well that will slightly increase the amount of plant process wastewater that may be discharged to the evaporation pond currently permitted under discharge plan GW-033. Plant process wastewater is discharged to a double-lined surface evaporation pond, designed with a primary liner leak detection system. Groundwater most likely to be affected by a spill, leak or accidental discharge is at a depth of approximately 10 feet, and has a total dissolved solids concentration of approximately 4,500 mg/l. The discharge plan addresses how oilfield products and waste will be properly handled, stored, and disposed of, including a discussion on how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water.

Any interested person or persons may obtain information, submit comments, or request to be placed on a facility-specific mailing list for future notices by contacting Leonard Lowe at the New Mexico OCD at 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, Telephone (505) 476-3492. The OCD will accept comments and statements of interest regarding the modification and will create a facility-specific mailing list for persons who wish to receive future notices.

## **EI AVISO PÚBLICO**

Western Gas Resources, Inc., 1201 impulsión de Robbins del lago, los arbolados, TX 77380 ha sometido un uso importante de la modificación a la energía de New México, a los minerales y al departamento de los recursos naturales, división de la conservación del aceite para el plan actualmente aprobado de la descarga (GW-033) para su planta del gas del río del San Juan, situado en la sección 1, municipio 29 del norte, se extiende 15 del oeste, NMPM, condado del San Juan, New México, aproximadamente ocho millas al oeste de Farmington, de New México y de 1.7 millas de norte de Kirtland, New México.

La petición de la modificación es debido a la adición de un pozo de inyección ácido del gas que aumente levemente la cantidad de aguas residuales del proceso de la planta que se puede descargar a la charca de la evaporación permitida actualmente bajo plan GW-033 de la descarga. Las aguas residuales de proceso de la planta se descargan a una charca superficial doble-alineada de la evaporación, diseñada con un sistema primario de la detección del escape del trazador de líneas. La agua subterránea muy probablemente que se afectará por un derramamiento, un escape o una descarga accidental está en una profundidad de aproximadamente 10 pies, y tiene una concentración disuelta total de los sólidos de aproximadamente 4.500 mg/l. Las direcciones del plan de la descarga cómo los productos y la basura del campo petrolífero serán manejados correctamente, almacenado, y dispuesto, incluyendo una discusión en cómo los derramamientos, los escapes, y otras descargas accidentales a la superficie serán manejados para proteger el agua dulce.

Cualquier persona o persona interesada puede obtener la información, someter comentarios, o la petición de ser colocado en una lista que envía facilidad-específica para los avisos futuros entrando en contacto con a Leonard Lowe en el New México OCD en St. del sur 1220 Impulsión de Francis, FE de Papá Noel, New México 87505, teléfono (505) 476-3492. El OCD aceptará comentarios y declaraciones del interés con respecto a la modificación y creará una lista que envía facilidad-específica para las personas que desean recibir los avisos futuros.

## Weaver, Eric

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**From:** Weaver, Eric  
**Sent:** Friday, September 10, 2010 10:40 AM  
**To:** 'leonard.lowe@state.nm.us'  
**Cc:** McEvers, Kent; Betik, Julie; 'brandon.powell@state.nm.us'  
**Subject:** San Juan River Plant Modification Notice for GW-033

**Attachments:** San Juan Plant Mod - DraftPermitNoticeFinal Eng -Span.DOC

Leonard,

I have attached the notification for the application for the modification to our Discharge Permit GW-033. I have not quite got the Mod. Request finished, but thought I would go ahead and get your approval on the notification to save time. Review the attachment and please respond with any comments or changes you may have.

Thanks and best regards.



San Juan Plant Mod  
- DraftPerm...

### *Eric W. Weaver*

Anadarko Petroleum  
Sr. Environmental Analyst  
Midland, Texas  
Office 432-684-2808  
Cell 432-413-2494

Tracking:	Recipient	Delivery	Read
	'leonard.lowe@state.nm.us'		
	McEvers, Kent		Read: 9/10/2010 10:45 AM
	Betik, Julie	Delivered: 9/10/2010 10:40 AM	
	'brandon.powell@state.nm.us'		

**Weaver, Eric**

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**From:** Lowe, Leonard, EMNRD [Leonard.Lowe@state.nm.us]  
**Sent:** Wednesday, September 29, 2010 10:12 AM  
**To:** Weaver, Eric  
**Subject:** RE: GW-033 permit modification Request

Mr. Weaver,  
I have yet to receive any notifications to review.  
llowe

**Leonard Lowe**

Environmental Engineer  
Oil Conservation Division/EMNRD  
1220 S. St. Francis Drive  
Santa Fe, N.M. 87505  
Office: 505-476-3492  
Fax: 505-476-3462  
E-mail: [leonard.lowe@state.nm.us](mailto:leonard.lowe@state.nm.us)  
Website: <http://www.emnrd.state.nm.us/ocd/>

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**From:** Weaver, Eric [mailto:[Eric.Weaver@anadarko.com](mailto:Eric.Weaver@anadarko.com)]  
**Sent:** Wednesday, September 29, 2010 8:08 AM  
**To:** Lowe, Leonard, EMNRD  
**Cc:** McEvers, Kent; Betik, Julie  
**Subject:** GW-033 permit modification Request

Leonard,

I sent the permit modification for GW-033 to you today via UPS next day. There is a hard copy and an electronic copy provided. In the electronic drive is also included a copy of our request notification. Please review for approval. It is the same file sent to you on September 10th for review. I would like to do the notification as soon as possible after you receive the modification request. If there are any questions please feel free to call at the numbers listed below. Thanks

***Eric W. Weaver***

Anadarko Petroleum  
Sr. Environmental Analyst  
Midland, Texas  
Office 432-684-2808  
Cell 432-413-2494

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9/30/2010

## Weaver, Eric

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**From:** Weaver, Eric  
**Sent:** Wednesday, September 29, 2010 10:32 AM  
**To:** leonard.lowe@state.nm.us  
**Subject:** FW: San Juan River Plant Modification Notice for GW-033

**Attachments:** San Juan Plant Mod - DraftPermitNoticeFinal Eng -Span.DOC

I sent you this on September 10, 2010.

---

**From:** Weaver, Eric  
**Sent:** Friday, September 10, 2010 10:40 AM  
**To:** 'leonard.lowe@state.nm.us'  
**Cc:** McEvers, Kent; Betik, Julie; 'brandon.powell@state.nm.us'  
**Subject:** San Juan River Plant Modification Notice for GW-033

Leonard,

I have attached the notification for the application for the modification to our Discharge Permit GW-033. I have not quite got the Mod. Request finished, but thought I would go ahead and get your approval on the notification to save time. Review the attachment and please respond with any comments or changes you may have. Thanks and best regards.



San Juan Plant Mod  
- DraftPerm...

*Eric W. Weaver*  
Anadarko Petroleum  
Sr. Environmental Analyst  
Midland, Texas  
Office 432-684-2808  
Cell 432-413-2494

## Tracking Summary

### Tracking Numbers

**Tracking Number:** 1Z 1AE 378 01 9717 462 2  
**Type:** Package  
**Status:** **Delivered**  
**Delivered On:** 09/30/2010  
9:45 A.M.  
**Delivered To:** SANTA FE, NM, US  
**Signed By:** VIGHIL  
**Service:** NEXT DAY AIR

Tracking results provided by UPS: 10/05/2010 9:52 A.M. ET

**NOTICE:** UPS authorizes you to use UPS tracking systems solely to track shipments tendered by or for you to UPS for delivery and for no other purpose. Any other use of UPS tracking systems and information is strictly prohibited.

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**Lowe, Leonard, EMNRD**

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**From:** Weaver, Eric [Eric.Weaver@anadarko.com]  
**Sent:** Tuesday, October 27, 2009 1:10 PM  
**To:** Lowe, Leonard, EMNRD  
**Cc:** Powell, Brandon, EMNRD; McEvers, Kent  
**Subject:** SJRP Discharge Permit GW-033  
**Attachments:** Equipment update to Permit.pdf

<<Equipment update to Permit.pdf>>

Leonard,

Attached is a summary of the equipment additions made during the last year. If you have any questions give me a call. Thanks.

*Eric W. Weaver*

Anadarko Petroleum Corp.  
Environmental Analyst  
432-684-2808 Office  
432-413-2494 Mobile  
10 Desta Drive STE 650E  
Midland, TX 79705-4533

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**Date:** October 26, 2009

**Attention:** New Mexico Oil Conservation Division  
Leonard Lowe  
Environmental Engineer  
1220 S. St. Francis Drive  
Santa Fe, NM 87505

**Subject:** WGR Asset Holding Co. LLC./ Anadarko Petroleum Corporation  
San Juan River Gas Plant  
Discharge Permit GW-033

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**Equipment Additions to Plant:**

During the past year there has been some addition of compressors and equipment that would update the plot plan for the San Juan River Plant operating under GW-033 discharge permit. A 1445 hp compressor and associated storage tanks and containments for lube oil and antifreeze. These additions were made in late 2008 early 2009. Also a double lined 400 bbl welded steel tank with lined containment was added in early 2009. These additions should not significantly change or alter discharge from the plant but should be noted as additions. Below is a full detailed list as well as pictures and an updated plot plan with the additions.

**Equipment List:**

1-1445 Horsepower Compressor

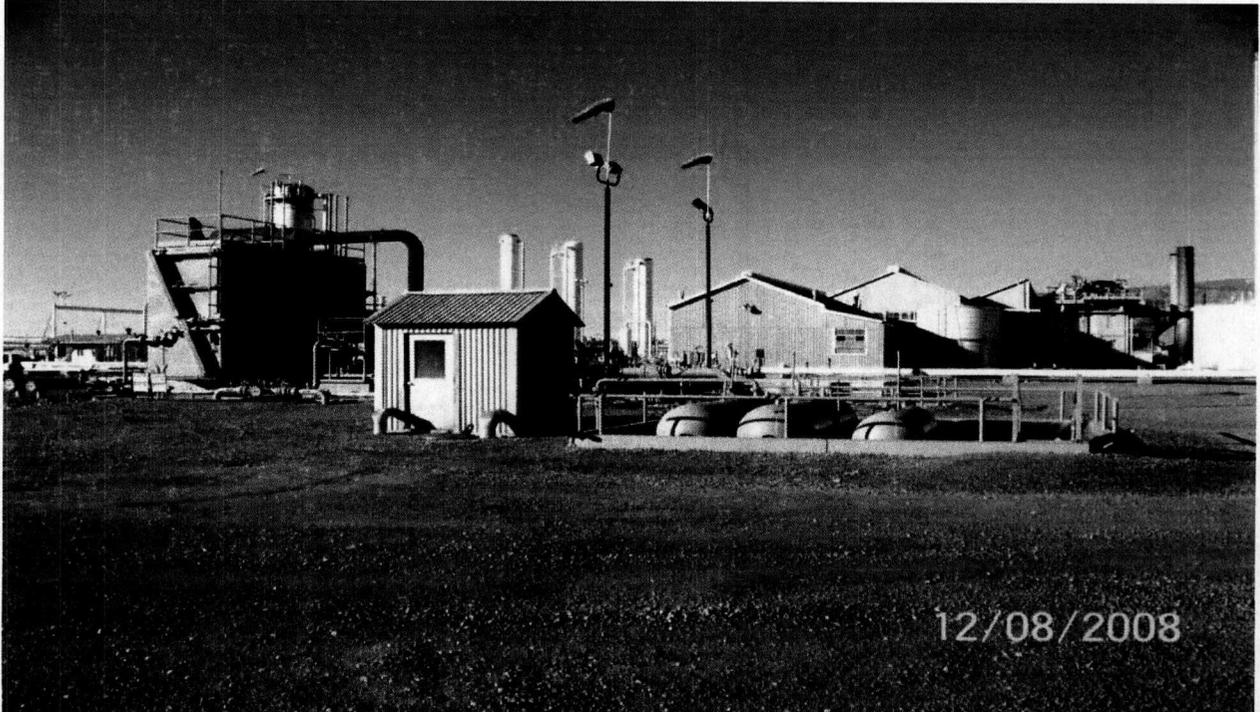
- 1-20x20 sub-grade lined containment
- 1. 2-2000 gal bulk lube storage tanks
- 2. 1-1000 gal bulk antifreeze storage tank
- 1-10x15 sub-grade lined containment
- 1. 1-500 gal bulk waste oil storage tank

1-400 bbl welded steel double lined vertical tank.

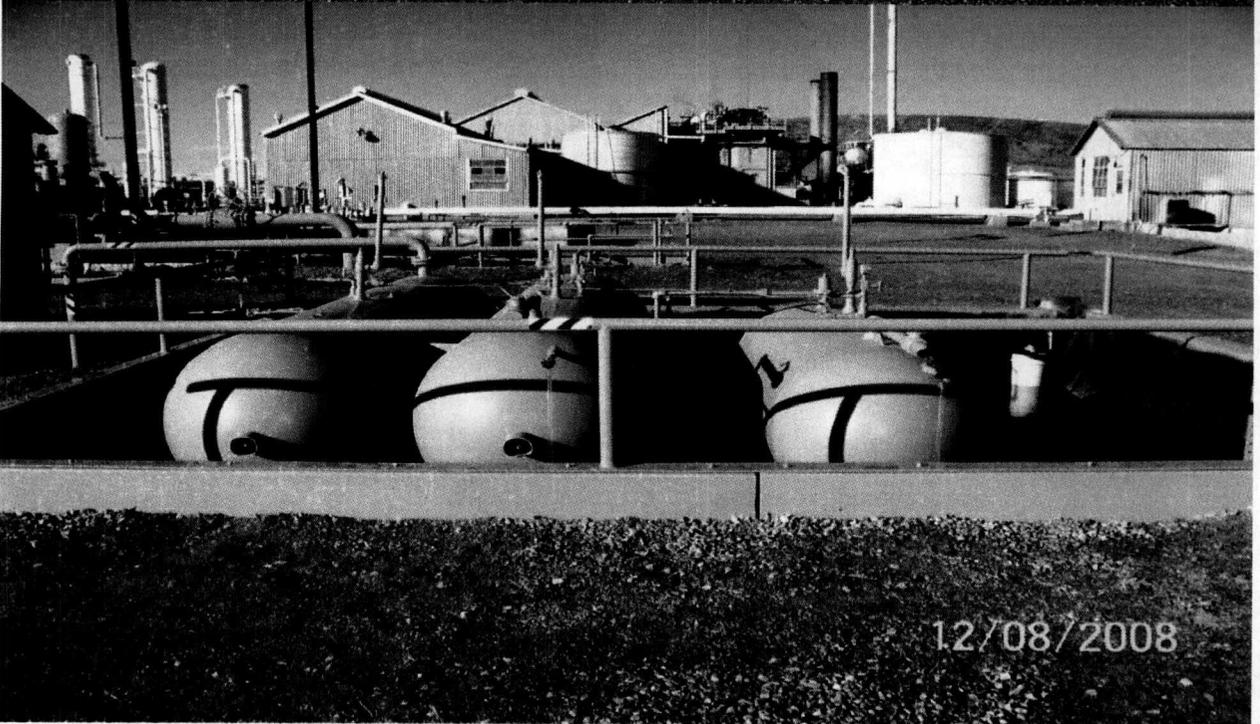
- 1-40x36x2 above grade poly lined impoundment.

Eric W. Weaver

Sr. Environmental Analyst  
WGR Asset Holding Co. LLC. / Anadarko Petroleum Corporation

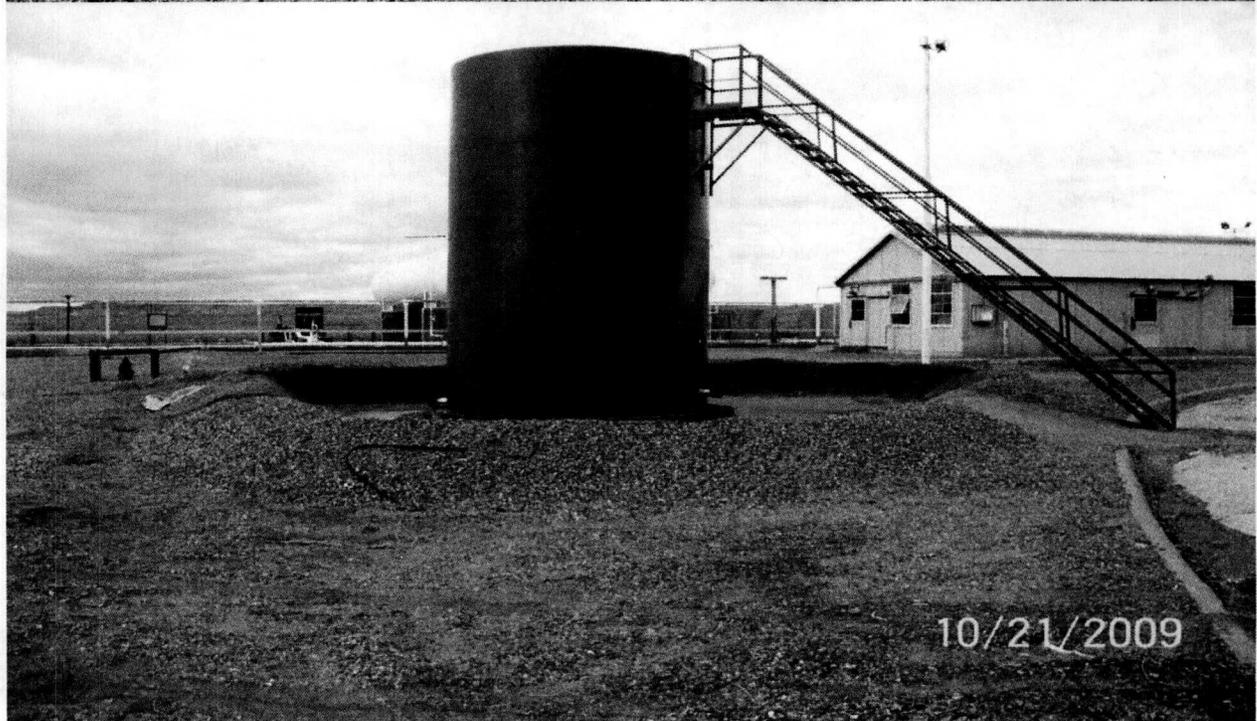
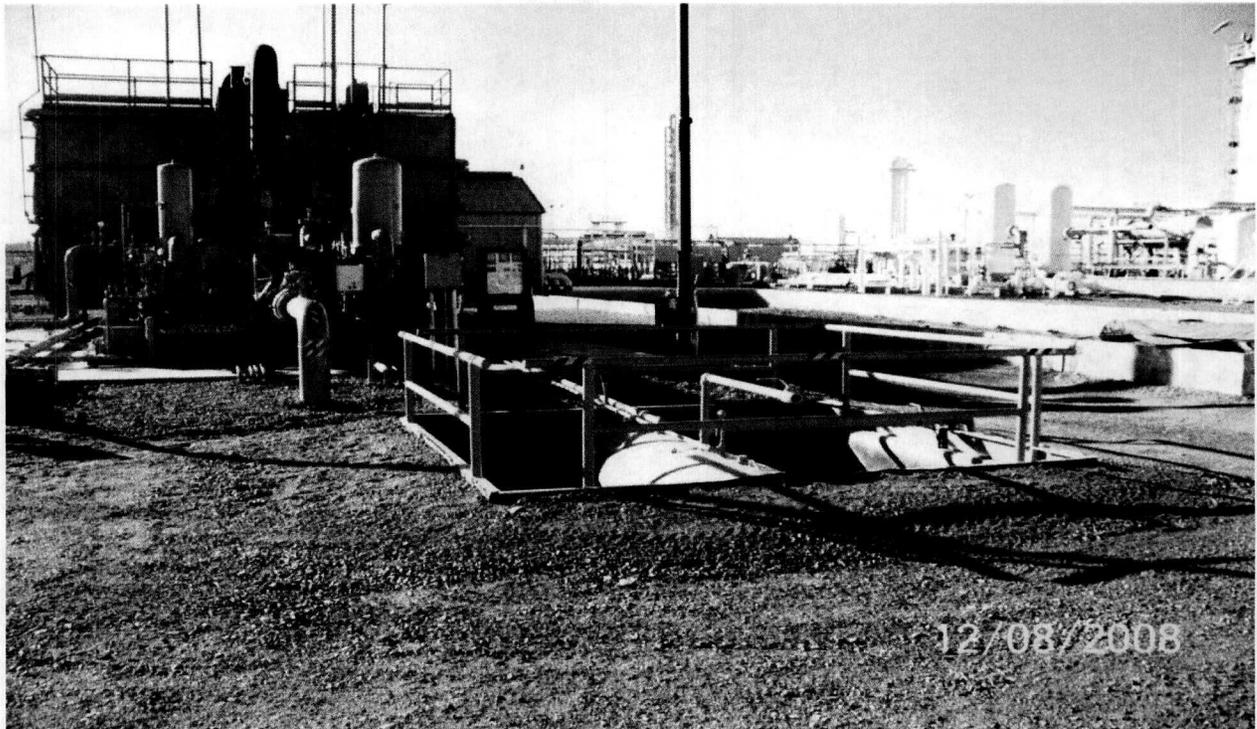


12/08/2008



12/08/2008







**Date:** April 1, 2009

**Attention:** New Mexico Oil Conservation Division  
Leonard Lowe  
Environmental Engineer  
1220 S. St. Francis Drive  
Santa Fe, NM 87505

**Subject:** WGR Asset Holding Co. LLC. / Anadarko Petroleum Corporation  
San Juan River Gas Plant  
South Evaporation Pond Liner Repairs Summary Report

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During July 2007 a thunderstorm with strong winds moved through the Kirtland, NM area where the WGR San Juan River Plant is located. Winds scattered a pile of corrugated sheet metal located adjacent to the evaporation pond at the south end of the property. One of the many pieces was blown into the North east corner of the pond. Upon investigation it appeared the sheet metal tore a hole in the protective bird netting covering the pond. Plant personnel were sent into the pond to repair the netting and attempt to inspect the 60 ml liner for breach of integrity below the one foot or so of fluid level. No such breaches were identified at this time, but inspection was not thorough due to the level of fluids stored in the pond at the time. This Pond was designed and installed with a leak detection system and is monitored, inspected and documented twice a week.

August 1, 2007 the first sign of liquids began to appear in leak detection pipe Number two located on the northeast third of the pond. Levels and flow was not consistent or continuous and it was first suspected that it may have been condensation forming between the two liners due to the above average amount of rain fall received in the area from late summer through fall.

In late September a sample was taken to try and fingerprint the water collected in the leak detection pipe to the water being stored in the pond. Analysis was run for Chlorides, BTEX, and TPH. Results were inconsistent, and are listed in table below in milligrams / liter.



Sample-Field Code	BTEX				TX1005 Extended	Chlorides
	Ben.	Tol.	Eth.	Xyl.		
138019-#2 Pipe	10.8	54.7	13.6	85.0	<5.00 (mg/L)	23700 (mg/L)
138020-Pond E. Center	<1.00	2.52	<1.00	<1.00	16.5 (mg/L)	11700 (mg/L)

By January 2008 it was agreed that the flow to the detection pipe had to be from a breach due to the piece of sheet metal being blown in to the pond. On January 31, 2008 leak was reported to Brandon Powell with the NMOCD Aztec field office and also Leonard Lowe Environmental Engineer located in the Santa Fe office. Per Leonard's request a work plan was prepared and submitted to his office for approval. Two options were proposed in this work plan. Option one was to drain and close the pond and option two was to drain, locate and repair holes in the liner. Also at this time a request was made for an extension on any work to the pond due to the abnormally high amount of snowfall received and cold temperatures impeding and delaying work progress.

On February 4, 2008 work plan was approved by Leonard Lowe and permission was granted to delay repairs or closure of the pond till late spring or early summer. In March 2008 plans for closure of the pond began. Analytical of the water and solids of the pond were taken to insure all material was disposed of according to regulations. It was determined free fluids could be hauled to a State approved disposal. Solids with a Chloride content ranging from 20-33,000 mg/L could only be disposed of a State approved landfill. The closest landfills that would accept high chlorides solids were located in the southeast corner of New Mexico over 400 miles away. Expense for trucking such a large volume of solids across the state was not cost feasible. Please refer to table below for analysis.

Sample-Field Code	BTEX	TPH	Chlorides
300305-001-#2 Pipe	N/A	N/D	24460 (mg/L)
45732-Pond	N/A	N/A	32700 (mg/L)
4533-Pond	12.2 (mg/L)	31.1 (mg/L)	N/A



It was determined that the option for closure of the south evaporation was cost prohibitive due to the limited availability for disposal of high chloride solid waste. In June of 2008 pond was taken out of service and Key Energy was employed to begin pulling free fluids of the pond and hauling them to their approved deep well injection disposal facility. The process was hindered by rain fall adding to the amount of fluids to be hauled for disposal. By mid July of 2008 the bird netting was removed from the northeast section of the pond so suspected area of liner breach could be exposed. Plant personnel along with employees of Riley Industrial jetted the area with high pressure washers and used a super sucker vacuum truck to recover solids. Once solids were removed they were pumped back into the pond on the south side. Once the area was cleaned, two small holes were exposed. Continuing rains and scheduling of a contractor to repair the holes in the liner delayed repairs to October of 2008. It took several months for all residual water between the liners to filter through the sand down to the leak detection pipe. Since October 17, 2008 the detection system has been free of fluids. On October 22, 2008 liner was again cleaned of all debris and hydrocarbons so contractor could poly-weld holes and do additional repairs around the inlet pipe while pond was out of service and drained. Once repairs had set for a week, pond was put back in service to collect pigging waste from pipeline operations.

Attached to this summary for review are the inspection data for leak detection, work plan, and photos.

Respectfully,

Eric W. Weaver  
Sr. Environmental Analyst  
WGR Asset Holding Co. LLC / Anadarko Petroleum Corporation

**Weaver, Eric**

---

**From:** Weaver, Eric  
**Sent:** Thursday, January 31, 2008 10:19 AM  
**To:** 'leonard.lowe@state.nm.us'  
**Cc:** 'brandon.powell@state.nm.us'; McEvers, Kent; McClain, Robert  
**Subject:** South Pond at San Juan river Plant Kirtland, NM

**Attachments:** Summary\_Report.pdf; Inspection records and Liner Diagram.pdf

Leonard,

This is to confirm our earlier phone conversation on the suspected leak in the primary liner in the evaporation pond at the San Juan River plant located in Kirtland, NM. As The EHS representative for Anadarko Petroleum Corp. It is my responsibility to report all environmental issues to State regulatory agencies. Some time in late August plant personnel reported finding fluids in a leak detection pipe at the permitted evaporation pond on plant property. At this time we began roughly monitoring the amounts detected. On September 28th of this year I was on site to personally inspect and sample the pond water and water in the detection pipe. Plant personnel felt that at this time the water caught in the detection system may have been due to condensation caused by above normal fall precipitation. We began monitoring and recording weekly fluid amounts in the detection pipe. As you can see by the records attached they are very sporadic with little consistency to them. After reviewing the analytical and continued catch of water up into the drier late fall months we determined there to be a definite breach in the primary liner. It was decided at this time to wait until spring to repair the liner due to the heavy snow and extremely cold weather could hamper repair efforts at this time. The leak was reported to Brandon Powell out of the Aztec office at 9:20 Am 1-31-08 and Leonard Lowe out of the Santa Fe office at 9:35 on 1-31-08. We request that you review the attached information and analytical provided. Since the amounts of fluids is sporadic and relatively small quantities we would like to wait until Spring (April-May) to clean the pond and repair the liner. Repair efforts could e hampered and delayed by the cold unpredictable winter. Weather. Also with the presence of a geomat and additional secondary liner we feel there is little or no chance of fluids escaping and impacting subsurface soil or ground water. Also as mentioned in our phone conversation we are hoping that possible upstream addition of compressors would cut amount of water coming into the plant so that we may possibly close this pond sometime in late spring to late summer. Please respond and advise us as to the next plan of action you wish us to take. We appreciate your cooperation and any assistance you can offer.



Summary\_Report.pdf (88 KB)    Inspection records and Liner Diagram.pdf (88 KB)

**Eric W. Weaver**  
**Anadarko Petroleum Corp.**

Environmental Analyst  
432-684-2808 Office  
432-413-2494 Mobile  
16 Costa Drive STE 650E  
Midland, TX 79703-4533

**Weaver, Eric**

---

**From:** Lowe, Leonard, EMNRD [Leonard.Lowe@state.nm.us]  
**Sent:** Monday, February 04, 2008 11:11 AM  
**To:** Weaver, Eric  
**Cc:** Powell, Brandon, EMNRD; McEvers, Kent; McClain, Robert  
**Subject:** RE: South Pond at San Juan river Plant Kirtland, NM

Mr. Eric Weaver,

Good morning,

Thank you for informing the NMOCD of the situation at the San Juan River Gas Plant's pond located in Kirtland, New Mexico.

Your proposed plan on working this situation is acceptable. I understand the rationale for initiating work on this pond until the weather permits, being that the amount of suspected fluid leak is small.

Please inform the OCD when you initiate work on this problem and any other information pertaining to its discharge plan.

Side Note: for future references to this facility in any manner please reference its Discharge Plan Number, GW-033. This will alleviate any confusion in the future on identifying a report, correspondence, etc, that we receive for this facility and identify who in the OCD Environmental Bureau is working this plan. It's all good until they send me someplace else, if that does happen.

If you have any more questions please feel free to call me.

llowe

**Leonard Lowe**  
Environmental Engineer  
Oil Conservation Division/EMNRD  
1220 S. St. Francis Drive  
Santa Fe, N.M. 87505  
Office: 505-476-3492  
Fax: 505-476-3492  
E-mail: [leonard.lowe@state.nm.us](mailto:leonard.lowe@state.nm.us)  
Website: <http://www.emnrd.state.nm.us/oed/>

---

**From:** Weaver, Eric [mailto:Eric.Weaver@anadarko.com]  
**Sent:** Thursday, January 31, 2008 9:19 AM  
**To:** Lowe, Leonard, EMNRD  
**Cc:** Powell, Brandon, EMNRD; McEvers, Kent; McClain, Robert  
**Subject:** South Pond at San Juan river Plant Kirtland, NM

Leonard,

This is to confirm our earlier phone conversation on the suspected leak in the primary liner in the evaporation pond at the San Juan River plant located in Kirtland, NM. As The EHS representative for Anadarko Petroleum Corp. It is my responsibility to report all environmental issues to State regulatory agencies. Some time in late August plant personnel reported finding fluids in a leak detection pipe at the permitted evaporation pond on plant property. At this time

2/5/2008

.....  
Wednesday, 02 April 2008

Leonard Lowe  
NMOCD  
Santa Fe, NM

RE: South Evaporation Pond  
San Juan River Gas Plant

The following is an update on the status of the south evaporation pond located at Western Gas Resources' San Juan River Gas Plant.

With the advance of warmer weather we have begun to catch water in the #2 inspection pipe again. The attached spreadsheet details inspections and sampling events. In the course of future planning, Kent McEvers, the Plant Superintendent and I have agreed rather than to repair the liner it would be in our best interest to close the pond and route the water to a tank battery. The battery would be constructed more central to the plant and would include separation equipment so that any oil could be removed from the water and sold. Our main concern is whether the water will be considered exempt for downhole disposal/injection. The fluids collected are water and hydrocarbons from pigging operations and blow down water from the cooling tower and dehy units. The economics to properly dispose of the water is a major consideration in whether we close the pond or repair the liner. Could you please confirm for us if the water from such operations can be disposed of in typical water injection facilities?

To close the pond, we would begin with pulling all fluids out and separating the oil and water. The oil would be sold and the water would be disposed of by down hole injection at an approved facility. Any remaining solids will be removed and disposed of at an approved land farm. The liners and geomat would then be removed and properly disposed of or reused if integrity remains intact. Delineation sampling of the exposed floor and walls will be performed prior to final closure to insure compliance with all NMOCD regulations. Any impacted soils identified beneath the liner will be removed and hauled to an approved land farm. Once all analytical has cleared, the pond will be closed with packed caliche and 1-2 feet of clean topsoil. The area will be capped in case of future subsidence. In addition, the former pond area will be reseeded with an appropriate vegetation blend to prevent erosion from wind or rain.

Final closure of the pond is tentative until the economics of the process water disposal can be established. The alternative to closing the pond is to drain and clean as described above and repair the liner. The bird netting would be replaced and we would continue to use the pond under the current discharge plan.

Work could begin as soon as we are notified of our disposal options and a corresponding work plan approved. Our tentative goal is to have final closure or repairs of the pond be completed the week of May 12<sup>th</sup>. If you have any questions or suggestions please contact me at 432-684.2808 or Kent McEvers at the plant, 505.598.5601. We appreciate any assistance you may be able to provide in this matter.

Action Date	Amount Collected		#2 Leak Dection Pipe @ South Pond	San Juan River Plant
	Inches	Ounces		
8/1/2007	0.25	4.65		
9/4/2007	2.00	37.20		
9/28/2007	1.25	23.25	**Sample Taken	
10/8/2007	0.00	0.00		
10/12/2007	0.00	0.00		
10/15/2007	0.00	0.00		
10/19/2007	4.00	74.40		
10/22/2007	4.00	74.40		
10/29/2007	4.00	74.40		
11/8/2007	0.00	0.00		
11/12/2007	1.00	18.60		
11/19/2007	1.00	18.60		
11/26/2007	1.00	18.60		
12/3/2007	0.00	0.00		
12/1/2007	2.00	37.20		
12/17/2007	0.00	0.00		
12/27/2007	4.50	83.70		
12/31/2007	0.25	4.65		
1/2/2008	0.00	0.00		
1/7/2008	0.25	4.65		
1/14/2008	0.00	0.00		
1/21/2008	0.25	4.65		
1/25/2008	0.00	0.00		
1/28/2008	0.00	0.00		
2/1/2008	0.00	0.00		
2/4/2008	0.00	0.00		
2/8/2008	0.00	0.00		
2/11/2008	0.00	0.00		
2/14/2008	0.00	0.00		
2/22/2008	0.00	0.00		
2/25/2008	1.00	18.60		
2/29/2008	3.55	66.03		
3/3/2008	3.82	71.05		
3/7/2008	4.00	74.40		
3/10/2008	3.90	72.54		
3/14/2008	3.82	71.05		
3/17/2008	4.25	79.05	**Sample Taken	
3/24/2008	12.00	223.20	** Sample Taken	
3/28/2008	13.00	241.80	**Sample Taken	
008	4.50	83.70	**Sample Taken	
008	2.50	46.50		
008	4.50	83.70	**Sample Taken	
008	5.00	93.00	**Sample Taken	
008	4.50	83.70		
008	5.00	93.00	**Sample Taken	
008	7.50	139.50		

008	7.50	139.50		
008	8.00	148.80		
008	8.00	148.80		
5/1/2008	5.00	93.00	**Sample Taken	
008	4.75	88.35		
008	8.00	148.80		
5/9/2008	8.00	148.80		
008	8.00	148.80	**Sample Taken	
008	12.00	223.20		
5/23/2008	9.00	167.40		
008	9.00	167.40	**Sample Taken	
008	4.50	83.70		
008	4.25	79.05	**Sample Taken	Tested for BTEX,TPH, and Chlorides by Envirotech
008	4.75	88.35		
008	6.00	111.60		
008	6.00	111.60		
008	5.50	102.30		
008	4.50	83.70		
6/30/2008	9.00	167.40		
			**Sample Taken	Tested for BTEX, TPH, and Chlorides by Envirotech
008	4.50	83.70	Taken	Monthly Sample
008	8.50	158.10		
7/11/2008	8.00	148.80		
7/14/2008	8.00	148.80		
7/18/2008	8.00	148.80		
7/21/2008	7.00	130.20		
<b>7/25/2008</b>	<b>3.00</b>	<b>55.80</b>		Clean and locate holes in liner
7/28/2008	5.50	102.30		
8/1/2008	5.50	102.30		
8/4/2008	4.00	74.40		
8/8/2008	8.00	148.80	rain	
8/11/2008	7.00	130.20		
8/15/2008	7.50	139.50		
8/18/2008	4.50	83.70		
8/22/2008	5.00	93.00		
8/25/2008	5.00	93.00		
8/29/2008	5.50	102.30		
9/2/2008	5.50	102.30	rain	
9/5/2008	2.00	37.20		
9/8/2008	3.00	55.80		
9/11/2008	2.50	46.50		
9/15/2008	1.50	27.90		
9/19/2008	1.50	27.90		
9/22/2008	1.00	18.60	rain	
9/26/2008	1.00	18.60		
9/29/2008	2.25	41.85		
10/1/2008	1.50	27.90		
10/6/2008	0.00	0.00	No inspection	
10/10/2008	0.00	0.00	No inspection	
10/13/2008	0.75	13.95		
10/17/2008	0.00	0		

10/20/2008	0.00	0	
10/27/2008	0.00	0	
10/28/2008			The pond liner holes were welded today. Bob McClain
10/29/2008	0.00	0	
11/3/2008	0.00	0	
11/7/2008	0.00	0	
11/10/2008	0.00	0	
11/14/2008	0.00	0	Water is over welded liner holes. No leak to date. Bob McClain
11/17/2008	0.00	0	No drips. No water in down hole.
11/20/2008	0.00	0	No drips No water in down hole.
11/24/2008	0.00	0	No drips. No water in down hole.
11/28/2008			No inspection Holiday
12/1/2008	0.00	0	No drips. No water in down hole.
12/5/2008	0.00	0	No drips. No water in down hole.
12/8/2008	0.00	0	No drips. NO Water in down hole
12/12/2008	0.00	0	No drips. No Water in down hole.
12/15/2008	0.00	0	No drips. No water in down hole.
12/19/2008	0.00	0	No drips. No water in down hole.
12/22/2008	0.00	0	No drips. No water in down hole.
12/26/2008			No inspection made
12/30/2008	0.00	0	No drips. No water in down hole.



07/23/2008



27/10/2008





28/10/2008



28/10/2008



## **Lowe, Leonard, EMNRD**

---

**From:** Powell, Brandon, EMNRD  
**Sent:** Thursday, January 29, 2009 3:46 PM  
**To:** Lowe, Leonard, EMNRD  
**Subject:** FW: WGR-San Juan River Gas Plant complaint  
**Attachments:** 1252 1-29-09 Memo Complaint.doc; Evap pond from N side.jpg; Evap Pond from E Side.jpg; Bus Barn From Evap Pond.jpg; Condensate tank.jpg; Condensate Tank pipes and valves.jpg

Leonard-

FYI

Western is checking the Pond for H2S today and tomorrow I am meeting the NMED at the plant to double check the H2S levels.

If there is anything else you can think of please let me know.

Thank You  
Brandon Powell  
Environmental Specialist  
New Mexico Oil Conservation  
1000 Rio Brazos Rd, Aztec NM 87410  
Office: (505) 334-6178 ext. 15  
E-mail: [Brandon.Powell@state.nm.us](mailto:Brandon.Powell@state.nm.us)

---

**From:** Dailey, Aaron, NMENV  
**Sent:** Thursday, January 29, 2009 12:46 PM  
**To:** Rosacker, Chris, NMENV; Morris, Allan, NMENV; Powell, Brandon, EMNRD  
**Subject:** WGR-San Juan River Gas Plant complaint

Please refer to attached memo.  
Chris, Allan, please let me know if you think EE form from company is needed

Brandon—Please let me know if you all need anything from me.  
Also, do you think we could borrow your H2S monitor for a bit just to verify there is no H2S coming from the pond?

Thanks,

Aaron Dailey  
NMED-Air Quality Bureau  
3400 Messina, Suite 5000  
Farmington, NM 87402  
Phone: (505)566-9747  
Fax: (505)566-9757  
Cell: (505)716-0721



**BILL RICHARDSON**  
GOVERNOR

*State of New Mexico*  
**ENVIRONMENT DEPARTMENT**

**Air Quality Bureau**  
1301 Siler Road  
Building B  
Santa Fe, NM 87507  
Phone (505) 476-4300  
Fax (505) 476-4375  
[www.nmenv.state.nm.us](http://www.nmenv.state.nm.us)



**RON CURRY**  
SECRETARY

**JON GOLDSTEIN**  
DEPUTY SECRETARY

**MEMORANDUM**

**TO:** Chris Rosacker, AQB Compliance Inspections/Compliance  
Brandon Powel, EMNRD OCD Environmental

**FROM:** Aaron Dailey, NMED/AQB, Environmental Compliance Specialist

**RE:** Western Gas Resources/Anadarko San Juan River Gas Plant (AI 1277) AQB  
Complaint based site visit 1/29/2009.

**DATE:** January 29, 2009

---

The purpose of this memorandum is to document observations that I, Aaron Dailey, AQB Compliance Inspector, made based on a complaint received in my office on behalf of the Bureau at the San Juan River Gas Plant on January 29, 2009.

I received an odor complaint from Jeff Hunt (505) 598-5545, Director of Transportation for the Central Consolidated Schools (CCSD) in Kirtland, at approximately 8:10 am on Thursday, January 29, 2009. He is in charge of a "bus barn" that employs approximately 12 full time workers and 30 drivers for CCSD. Jeff mentioned that he and his employees began smelling a very strong rotten egg smell coming from the gas plant about 1:00 pm on Wednesday January 28<sup>th</sup>. Jeff stated he smelled the odor and noted no change in strength of the odor until 5:00 pm when he and the employees left work that day.

I reported the complaint to Chris Rosacker of the AQB in Santa Fe and he reported it on the ENTS database. I arrived at the San Juan River Gas Plant, 99 County Road 6500 in Kirtland, at approximately 8:45 am, Thursday, January 29, 2009. I met with Arlyn Thorson, Plant Maintenance Supervisor, and described the purpose and scope of my visit. Arlyn mentioned that the gas plant also received an odor complaint from residents living nearby.

According to Arlyn's description, the cause of the odor emitted from the gas plant is as follows: The condensate tank near the Aneth inlet captures all liquids that come from the plant dehydrator, which is "sweet" gas at that point. Normally, the condensate tank will allow for separation of vapor, NGLs and water. Vapors are plumbed to the plant flare and the liquids are

Re: Menefee

1/23/2009

normally piped to the "Make" tank and a "sales" tank. The gas liquids are pumped to a truck and sold to be refined somewhere else.

Arlyn told me that the pipe going from the condensate tank to the sales tank was clogged, so they turned a valve to a pipe that would allow for the water to drain to the evaporation pond on the SE side of the gas plant. According to Arlyn, approximately 2 barrels of gas were pumped into the evaporation pond. When the facility workers discovered this had occurred, Arlyn told me that they reversed the pipe flow using a pump truck and attempted to recover the majority of the gas that was in the evaporation pond. Arlyn stated that mercaptans are naturally present in this gas and that, to his knowledge, this was the source of the strong odor emitted from the evaporation pond.

I walked around the perimeter of the evaporation pond and noticed a very strong odor emitted from the pond's Eastern edge. The wind was blowing steadily at approximately 15-20 mph from the WNW. I noticed the blue colored "bus barn" was approximately 1/3 mile to the ESE of the evaporation pond, which would place the "bus barn" in the cone of air flow given the weather conditions during my site visit. I noticed that the majority of the pond was frozen except for the area where the surface contained liquid gas (photos attached).

I asked to go to the condensate tank and observed a Key Energy pump truck and workers attempting to repair and troubleshoot the pipe going from the condensate tank to the "sales" tank. Arlyn provided me with a description of the pipelines and the location of the valve that allows for the condensate tank to supply the evaporation pond line.

I drew a schematic of the affected parts of the facility, took additional photos and notes, and left the facility at approximately 9:30 am.

Samples were not taken as I am not equipped with any sampling apparatus.

I met with "bus barn" employees and explained the nature of my visit and asked if Jeff Hunt was present. They told me where to find Jeff. I asked additional questions regarding the nature of the odor, passed the information that I had on to them, and explained that the odor complaint is still under investigation.

I met with CCSD's Jeff Hunt and the Director of Human Resources, Nancy Frazzini, at the CCSD Business Office in Kirtland at 9:45 am. I explained to them that my investigation is ongoing and provided them the information that I ascertained from gas plant personnel. I asked when they smelled the last strong odor from the facility and they stated that it was approximately 6 months ago. Nancy explained the fact that there is an elementary school just East of the "bus barn." I acknowledged this fact and expressed my utmost concern for the public's health and welfare and told them both that I would notify them of any pertinent results as soon as I could.

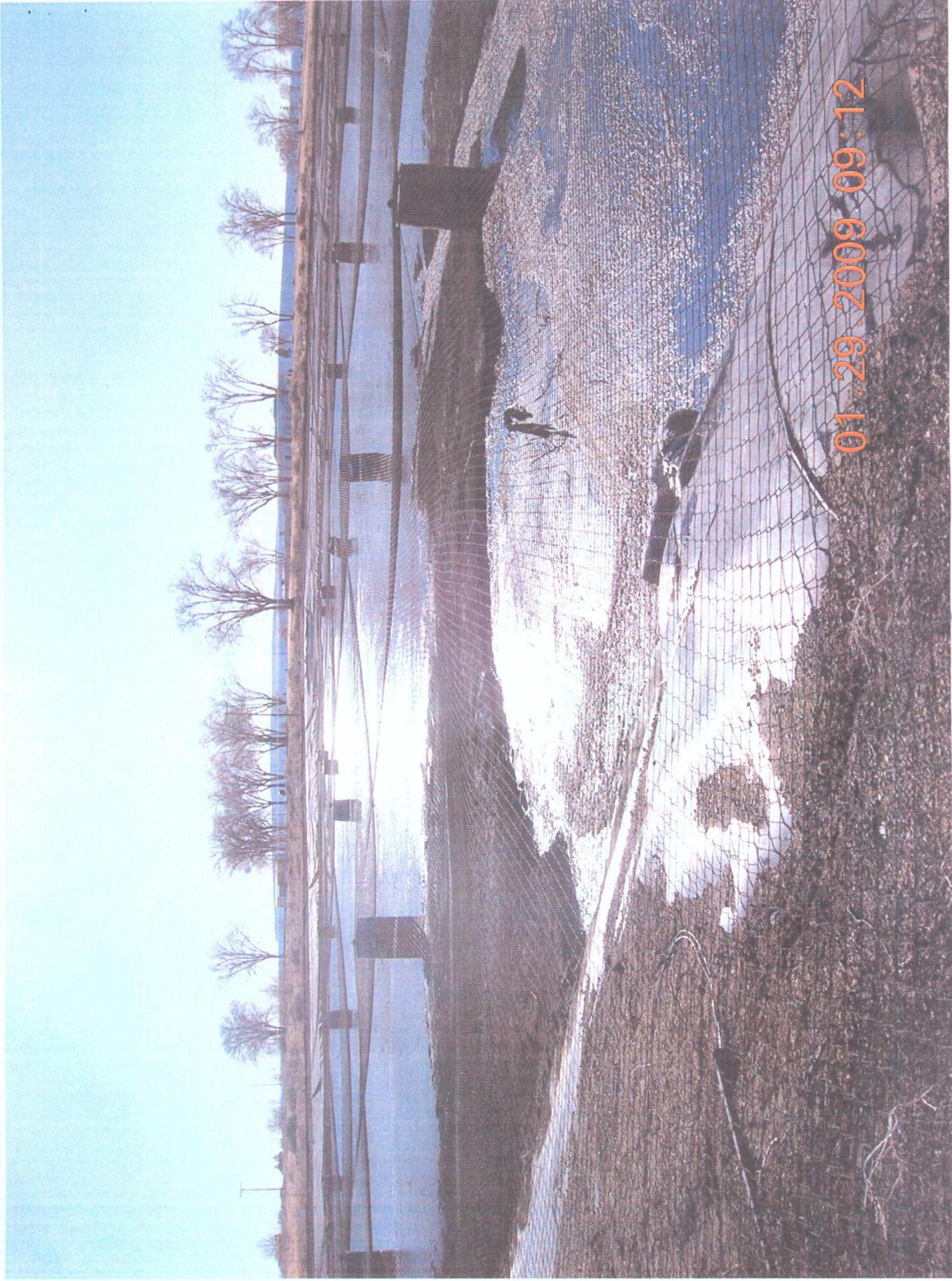
I talked with Julie Betik, (832)636-1000, Western Gas' Environmental contact, as she contacted me at approximately 10:20 am.

Memorandum To Stimmel and Morris  
Re: Menefee  
1/23/2009

Page 3 of 3

I talked with Brandon Powell of the EMNRD OCD and he requested I e-mail him something so he could help me forward this to someone charged with this facility in the OCD.

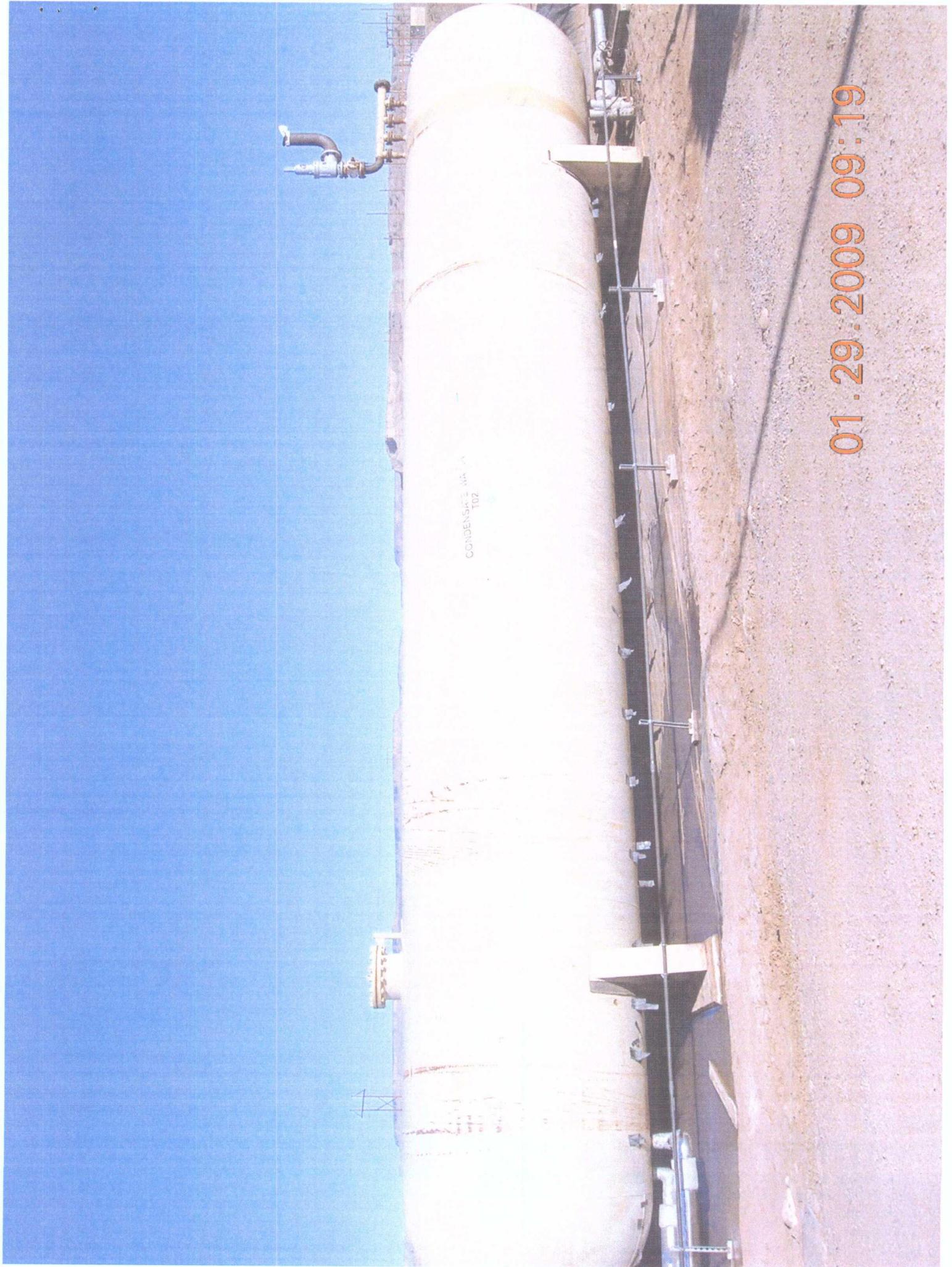
Please contact me @(505)566-9747 if you have any questions. This memo is written in haste. Schematics and hand written notes are available if needed.



01.29.2009 09:12



01.29.2009 09:14



01.29.2009 09:19



01:29:2009 09:13

**Lowe, Leonard, EMNRD**

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**From:** Weaver, Eric [Eric.Weaver@anadarko.com]  
**Sent:** Tuesday, February 05, 2008 12:38 PM  
**To:** Lowe, Leonard, EMNRD  
**Subject:** RE: Inspection Report GW-033

Leonard,

I spoke with Kent McEvers, Plant superintendent at the San Juan River Plant. We reviewed the 5 issues from the January of 2007 inspection. Below is a list of actions taken to those 5 items cited for discharge permit GW-033

A) A high wind storm in late summer damaged the netting covering the pond. Efforts are being made to restretch it across the pond and take out all the slack so it does not sag into the water when frozen or snowed on. Weather is hampering this project at this time. a propane canon has been placed next to the pond in the interim to keep all birds away until the projected can be completed.

B) All used alumni and carbon has been removed and disposed of. It will no longer be stored directly in contact with the ground, but in one of our cement containments if interim storage is necessary.

C) Weeds and debris have been removed from in and around lined containments and ponds with the exception of hoses utilized for loading and unloading. The tanks and liners in question in photo 5 & 6 will be removed from service shortly and be replaced with a new tank battery constructed in a cement impoundment. These tanks are in the path of the underground mining being preformed by BDH. So that is the reason for abandonment and removal.

D) All drums have been labeled or removed. We are going to make a concentrated effort to insure all drums are properly labeled with contents in the future.

E) The Tank and containment in question in photo 8 has been removed from service and is no longer on the property.

If you have any further questions give me a call. Thanks for all your help and we will keep you posted on the pond activities

*Eric W. Weaver*

Anadarko Petroleum Corp.

Environmental Analyst

432-684-2808 Office

432-413-2494 Mobile

10 Desta Drive STE 650E

Midland, TX 79705-4533

---

**From:** Lowe, Leonard, EMNRD [mailto:Leonard.Lowe@state.nm.us]  
**Sent:** Tuesday, February 05, 2008 11:36 AM  
**To:** Weaver, Eric  
**Subject:** Inspection report

2/8/2008

Eric,

Here are the inspection photos.

llowe

**Leonard Lowe**

Environmental Engineer  
Oil Conservation Division/EMNRD  
1220 S. St. Francis Drive  
Santa Fe, N.M. 87505  
Office: 505-476-3492  
Fax: 505-476-3462  
E-mail: [leonard.lowe@state.nm.us](mailto:leonard.lowe@state.nm.us)  
Website: <http://www.emnrd.state.nm.us/ocd/>

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**Lowe, Leonard, EMNRD**

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**From:** Lowe, Leonard, EMNRD  
**Sent:** Monday, February 04, 2008 10:29 AM  
**To:** 'Weaver, Eric'  
**Cc:** Powell, Brandon, EMNRD; 'McEvers, Kent'; 'McClain, Robert'  
**Subject:** Discharge Plan Permit Conditions

Mr. Weaver,

During the renewal process of Western Gas Resources San Juan River Gas Plant the NMOCD had placed some additional conditions on the plant. Number 16 "OCD Inspections", these conditions are results of an OCD inspection conducted during the renewal process.

Have conditions identified as A – E been addressed?

You can view your file with the OCD online. To access see instructions below:

The NMOCD have processed the majority of their files for online viewing. These files can be viewed by the applicants and the public. Your discharge permits files may be viewed here:

To access the site click on the following link

(<http://ocdimage.emnrd.state.nm.us/imaging/default.aspx>)

Once you've accessed the website, look in the left hand column and click on,

**"Administrative & Environmental Orders"**

Once page is accessed find the **"Specific Information"** (near the top of the page) area and click on the Pull Down menu in **"Order Type"** window, in the menu select **"Discharge Plan Permit - (GW)"**. Find the **"Order Number/Amendment"** block, then type in the GW number (GW-XXX) in the block. Once typed in click on the **"Continue"** button. That'll take you to your file page.

You will now be at the **"Administrative/Environmental Order Search – Select Documents to View"** page.

Once on this page you will see a display of THUMBNAILS (labeled as Permits, Correspondence, Reports, etc.) Click on each thumbnail to view all information behind them. These Thumbnails may contain several pages behind them.

Let me know the conditions of items A – E on number 16 of your permit, GW-033.

Thank you for your attention.

llowe

**Leonard Lowe**

Environmental Engineer  
Oil Conservation Division/EMNRD  
1220 S. St. Francis Drive  
Santa Fe, N.M. 87505  
Office: 505-476-3492  
Fax: 505-476-3462  
E-mail: [leonard.lowe@state.nm.us](mailto:leonard.lowe@state.nm.us)  
Website: <http://www.emnrd.state.nm.us/ocd/>

2/4/2008

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**Lowe, Leonard, EMNRD**

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**From:** Lowe, Leonard, EMNRD  
**Sent:** Monday, February 04, 2008 10:11 AM  
**To:** 'Weaver, Eric'  
**Cc:** Powell, Brandon, EMNRD; McEvers, Kent; McClain, Robert  
**Subject:** RE: South Pond at San Juan river Plant Kirtland, NM

Mr. Eric Weaver,

Good morning.

Thank you for informing the NMOCD of the situation at the San Juan River Gas Plant's pond located in Kirtland, New Mexico.

Your proposed plan on working this situation is acceptable. I understand the rationale for initiating work on this pond until the weather permits, being that the amount of suspected fluid leak is small.

Please inform the OCD when you initiate work on this problem and any other information pertaining to its discharge plan.

Side Note: for future references to this facility in any manner please reference its Discharge Plan Number, GW-033. This will alleviate any confusion in the future on identifying a report, correspondence, etc, that we receive for this facility and identify who in the OCD Environmental Bureau is working this plan. It's all good until they send me someplace else, if that does happen.

If you have any more questions please feel free to call me.

llowe

**Leonard Lowe**

Environmental Engineer  
Oil Conservation Division/EMNRD  
1220 S. St. Francis Drive  
Santa Fe, N.M. 87505  
Office: 505-476-3492  
Fax: 505-476-3462  
E-mail: [leonard.lowe@state.nm.us](mailto:leonard.lowe@state.nm.us)  
Website: <http://www.emnrd.state.nm.us/ocd/>

---

**From:** Weaver, Eric [mailto:[Eric.Weaver@anadarko.com](mailto:Eric.Weaver@anadarko.com)]  
**Sent:** Thursday, January 31, 2008 9:19 AM  
**To:** Lowe, Leonard, EMNRD  
**Cc:** Powell, Brandon, EMNRD; McEvers, Kent; McClain, Robert  
**Subject:** South Pond at San Juan river Plant Kirtland, NM

Leonard,

This is to confirm our earlier phone conversation on the suspected leak in the primary liner in the evaporation pond at the San Juan River plant located in Kirtland, NM. As The EHS representative for Anadarko Petroleum Corp. It is my responsibility to report all environmental issues to State regulatory agencies. Some time in late August plant personnel reported finding fluids in a leak detection pipe at the permitted evaporation pond on plant property. At this time

2/4/2008

we began roughly monitoring the amounts detected. On September 28th of this year I was on site to personally inspect and sample the pond water and water in the detection pipe. Plant personnel felt that at this time the water caught in the detection system may have been due to condensation caused by above normal fall precipitation. We began monitoring and recording weekly fluid amounts in the detection pipe. As you can see by the records attached they are very sporadic with little consistency to them. After reviewing the analytical and continued catch of water up into the drier late fall months we determined there to be a definite breach in the primary liner. It was decided at this time to wait until spring to repair the liner due to the heavy snow and extremely cold weather could hamper repair efforts at this time. The leak was reported to Brandon Powell out of the Aztec office at 9:20 Am 1-31-08 and Leonard Lowe out of the Santa Fe office at 9:35 on 1-31-08. We request that you review the attached information and analytical provided. Since the amounts of fluids is sporadic and relatively small quantities we would like to wait until Spring (April-May) to clean the pond and repair the liner. Repair efforts could e hampered and delayed by the cold unpredictable winter. Weather. Also with the presence of a geomat and additional secondary liner we feel there is little or no chance of fluids escaping and impacting subsurface soil or ground water. Also as mentioned in our phone conversation we are hoping that possible upstream addition of compressors would cut amount of water coming into the plant so that we may possibly close this pond sometime in late spring to late summer. Please respond and advise us as to the next plan of action you wish us to take. We appreciate your cooperation and any assistance you can offer.

<<Summary\_Report.pdf>> <<Inspection records and Liner Diagram.pdf>>

*Eric W. Weaver*

Anadarko Petroleum Corp.

Environmental Analyst

432-684-2808 Office

432-413-2494 Mobile

10 Desta Drive STE 650E

Midland, TX 79705-4533

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2/4/2008

## Summary Report

Shane Estep  
ETech  
P.O. Box 8469  
Midland, TX, 79708

Report Date: October 5, 2007

Work Order: 7100119



Project Name: San Juan Plant Water  
Project Number: 062-1367-000

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
138019	#2 Pipe	water	2007-09-28	10:20	2007-10-01
138020	Pond E. Center	water	2007-09-28	10:30	2007-10-01

Sample - Field Code	BTEX				TX1005 Extended	
	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylene (mg/L)	C6-C12 (mg/L)	>C12-C35 (mg/L)
138019 - #2 Pipe	10.8	54.7	13.6	85.0	<5.00	<5.00
138020 - Pond E. Center	<1.00	2.52	<1.00	<1.00	16.5	<5.00

### Sample: 138019 - #2 Pipe

Param	Flag	Result	Units	RL
Chloride		23700	mg/L	2.00

### Sample: 138020 - Pond E. Center

Param	Flag	Result	Units	RL
Chloride		11700	mg/L	2.00

San Juan South Pond

Aug 2007

Aug

2007

Sun	Mon	Tue	Wed	Thu	Fri	Sat
29	30	31	1 1/4" 4.6502	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	
2	3	4	5	6	7	8

#2 Leak Detection Pipe Catch Readings

# Sep 2007

Sep 2007

Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27	28	29	30	31	1
2	3	4 2 37.2.02	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28 1/4 23,25.02	29
30	1	2	3	4	5	6

Oct 2007

Oct 2007

Sun	Mon	Tue	Wed	Thu	Fri	Sat
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

4"  
74.402

4"  
74.402

4"  
74.402

Nov 2007

Nov 2007

Sun	Mon	Tue	Wed	Thu	Fri	Sat
20	29	30	31	1	2	3
4	5	6	7	8 O	9	10
11	12 11' 18,6 62	13	14	15	16	17
18	19 11' 18,6 62	20	21	22	23	24
25	26 11' 18,6 62	27	28	29	30	1
2	3	4	5	6	7	8

Dec 2007

Dec 2007

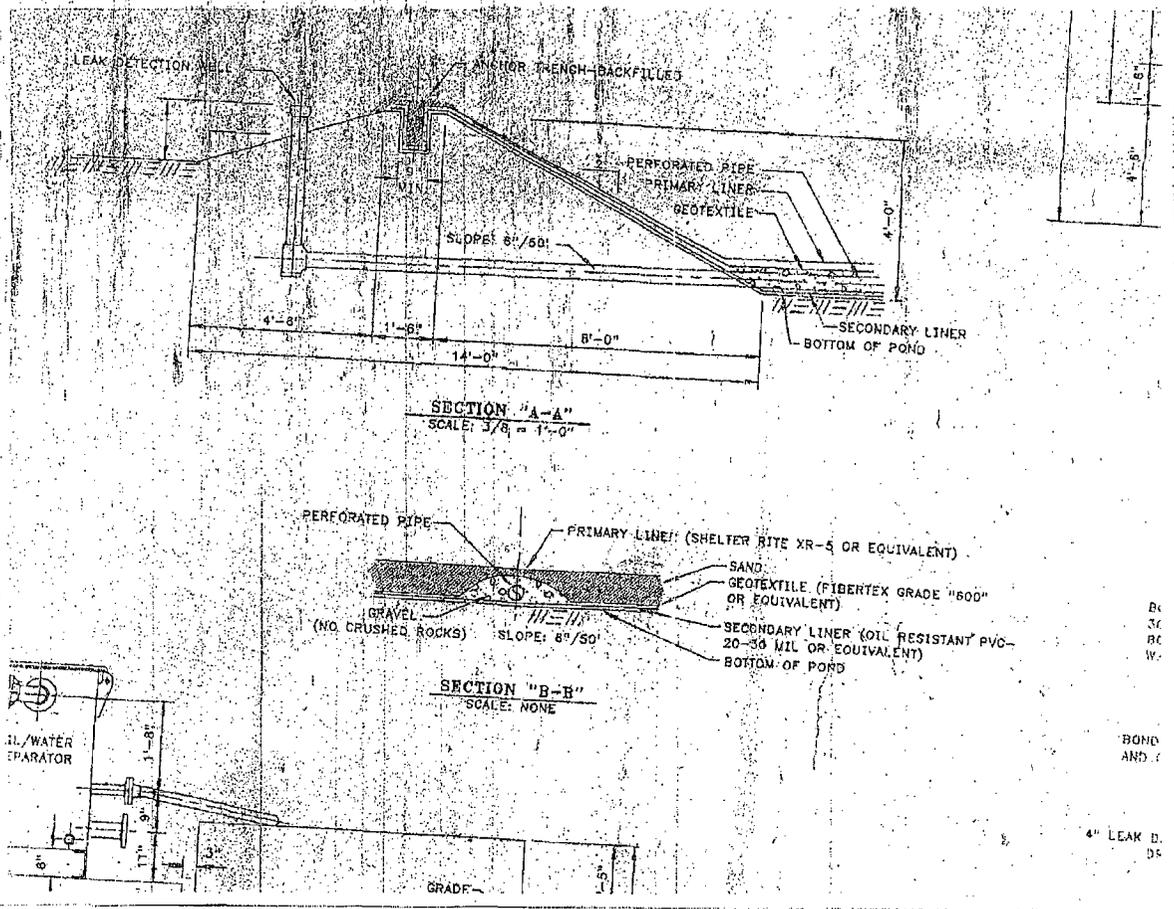
Sun	Mon	Tue	Wed	Thu	Fri	Sat
25	26	27	28	29	30	1
2	3 0"	4	5	6	7	8
9	10 2" 37.202	11	12	13	14 0"	15
16	17 0"	18	19	20	21	22
23	24	25	26	27 45" 83.702	28	29
30	31 10" 46502	1	2	3	4	5

Jan 2008

Jan 2008

Jan 2008

Sun	Mon	Tue	Wed	Thu	Fri	Sat
30	31	1	2 0	3	4	5
6	7 1.6502	8	9	10	11	12
13	14 0	15	16	17	18	19
20	21 1.6502	22	23	24	25	26
27	28	29	30	31	1	2
3	4	5	6	7	8	9

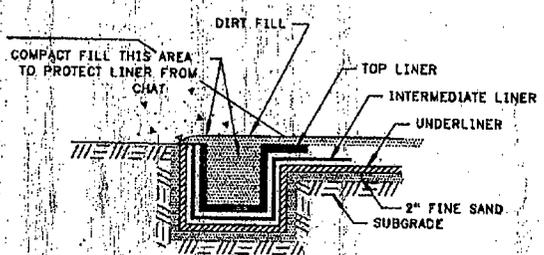
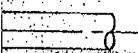


THIS DWG.  
SCALE: 3/8" = 1'-0"

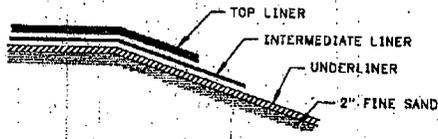


SLOPE

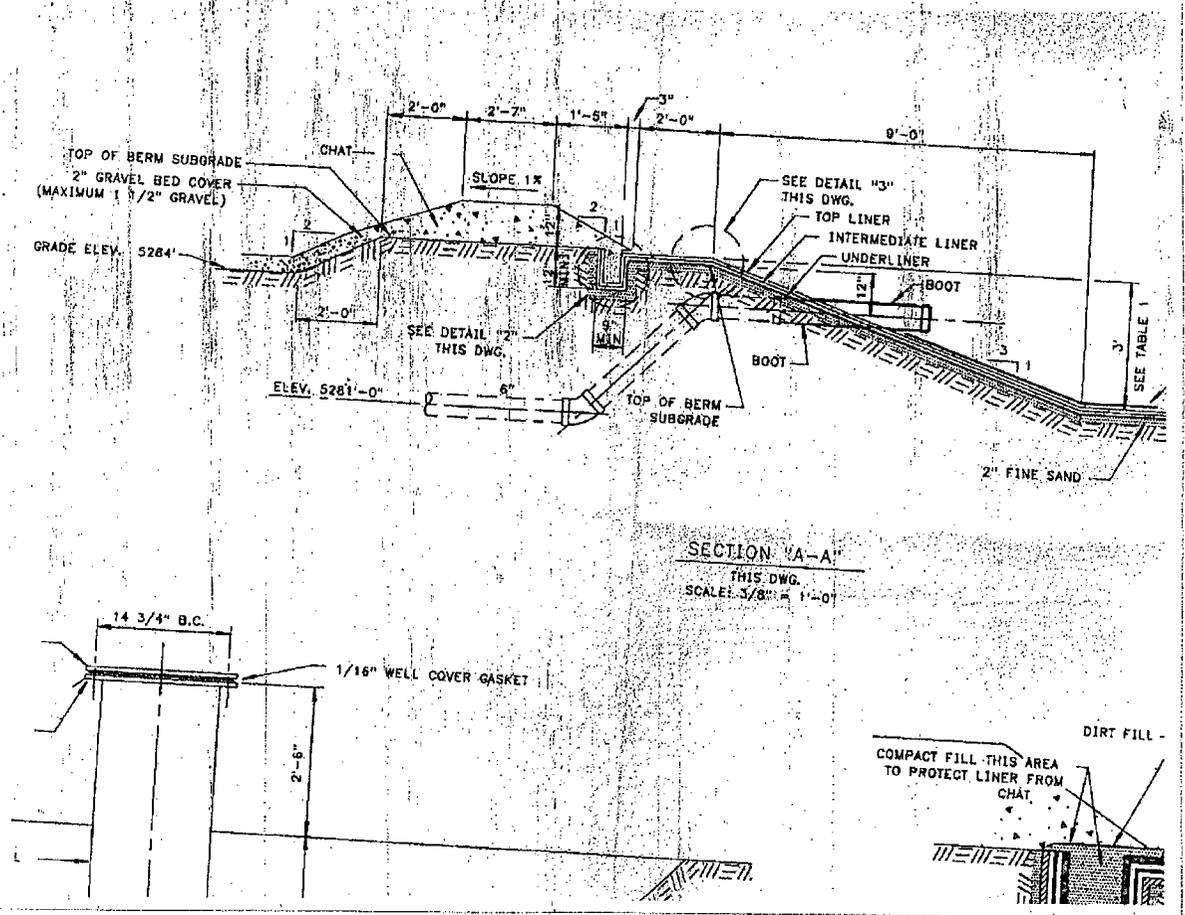
PE



DETAIL "2"  
THIS DWG.  
SCALE: NONE



DETAIL "3"  
THIS DWG.  
SCALE: NONE



1' = 550 ml  
1" =

#2 Door Hole Leak Detection

Injections

1. Weekly E' other	Weekly E' other	4"	5.5oz	4.65oz
2. 1-1-87	2"	4oz	3.7oz	
3. 5-1-87	1 1/2"	liquids	Sample taken	
4. 8-1-87	2"	liquids	27.5oz	23.25oz
5. 10-1-87	1 1/2"	liquids		
6. Gas Meter & Bot Meters				
7. October 5, 2007	Dry - 0			
8. October 12, 2007	Dry - 0			
9. October 15, 2007	Dry - 0			
10. October 19, 2007	4" liquids	88oz	74.4oz	
11. October 22, 2007	4" liquids	88oz	74.4oz	
12. October 29, 2007	4" liquids	88oz	74.4oz	
13. November 5, 2007	Dry - 0			
14. November 12, 2007	1 1/2" liquids	22oz	18.6oz	
15. November 19, 2007	1" liquids	22oz	18.6oz	
16. November 26, 2007	1" liquids	22oz	18.6oz	
17. December 3, 2007	Dry 0			
18. December 10, 2007	2" liquids	44oz	37.2oz	
19. December 17, 2007	Dry 0			
20. December 24, 2007	4 1/2" liquids	99oz	83.7oz	
21. January 1, 2008	4" liquids	88oz	74.4oz	
22. January 8, 2008	Dry - 0			
23. January 15, 2008	4" liquids	88oz	74.4oz	
24. January 22, 2008	4" liquids	88oz	74.4oz	
25. January 29, 2008	Dry - 0			
26. February 5, 2008	4" liquids	88oz	74.4oz	
27. February 12, 2008	Dry - 0			
28. February 19, 2008	4" liquids	88oz	74.4oz	
29. February 26, 2008	4" liquids	88oz	74.4oz	
30. January 21, 2008	4" liquids	88oz	74.4oz	

Brandon Powell and Peter SOS-33446178 ext 15

Kennard Lowe and Saffire SOS-472-3492

22 oct 11"  
18.6oz per inch

1000 = 1  
1 = 41224 cups

4.226 =

1 pint = 173 liters

16.52 = 173 liters

10.02 = 173 ml

.04 x

22.02

191 = 95 liter

.04 ml - 102.

#2 Down Hole Leak Detection  
Monthly Inspections

1. August 1, 2007 1/4" liquids
2. September 4, 2007 2" liquids
3. September 6, 2007 Sample was taken from down hole and  
Sample From Pond. Samples were compared - Not any  
Expectation difference  
thing a like.
4. September 28, 2007 1/4" liquids Sample was taken  
Eric's house was here. Sample from down hole & Pond  
were taken. Eric's house and Bob McLaughlin checked  
and fire alarm.
5. November 1, 2007 2 1/2" liquids
6. December 3, 2007 1/4" liquids
7. January 2, 2008 Dry