

**AP - 59**

**APPROVAL**

**DATE:**

**2007-2006**

AP-59

Approval

2007-2006

**Hansen, Edward J., EMNRD**

**From:** Hansen, Edward J., EMNRD  
**Sent:** Thursday, June 14, 2007 6:18 PM  
**To:** Kristin Pope  
**Cc:** Randall Hicks (Randall Hicks); Hack Conder; Price, Wayne, EMNRD; 'Katie Lee'  
**Subject:** RE: F-35 & G-35 SWD; NMOCD Case # AP-59 Vadose Zone Remedy Approval

Dear Ms. Pope:

The New Mexico Oil Conservation Division (NMOCD) has reviewed your "Vadose Zone Remedy" (submitted on February 2, 2007, and the amendments submitted on June 13, 2007) for the above referenced sites. Since this is an experimental remedy, additional measures may be required to encourage vegetative diversity or density. However, the vegetative diversity and density can be monitored with relative ease. Therefore, the NMOCD hereby approves the remedy (as amended) with the condition that the proposed corrective action be initiated by July 16, 2007, at the sites. Also, Rice Operating Company must submit a quarterly summary report(s) for the sites. Upon review of the report(s), the NMOCD will determine if additional measures will be required for the site to encourage additional vegetative diversity or density. In addition, please send a copy of the Vadose Zone Remedy with the amendments to the District Office in Hobbs.

Please be advised that NMOCD approval of this remedy does not relieve the owner/operator of responsibility should operations fail to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD approval does not relieve the owner/operator of responsibility for compliance with any NMOCD, federal, state, or local laws and/or regulations.

If you have any questions regarding this matter, please call me at 505-476-3489.

Edward J. Hansen  
Hydrologist  
Environmental Bureau  
NMOCD

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**From:** Katie Lee [mailto:katie@rthicksconsult.com]  
**Sent:** Wednesday, June 13, 2007 4:16 PM  
**To:** Hansen, Edward J., EMNRD; Price, Wayne, EMNRD  
**Cc:** Kristin Pope; Randall Hicks (Randall Hicks); Hack Conder  
**Subject:** F-35 & G-35 SWD; NMOCD Case # AP-59 Minor Modification

Gentlemen,

Attached, please find our proposed minor modification to our Vadose Zone Remedy for F-35 and G-35 near Buckeye, NM (NMOCD Case # AP-59). We hope this will satisfactorily address your comments to our previous design proposal.

If you have any questions or concerns, please do not hesitate to contact me at 505-266-5004, or Kristin Pope at Rice Operating Company 505-393-9174. Thank you for your time and consideration, we look

6/14/2007

forward to your response.

Regards,

Katie Lee  
Staff Scientist  
R.T. Hicks Consultants, Ltd.  
ph. 505-266-5004  
fax 505-266-0745  
mobile 505-400-7925

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

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6/14/2007

**Hansen, Edward J., EMNRD**

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**From:** Hansen, Edward J., EMNRD  
**Sent:** Friday, March 23, 2007 9:20 AM  
**To:** Carolyn Haynes; 'Kristin Pope'  
**Cc:** Price, Wayne, EMNRD; 'r@rthicksconsult.com'  
**Subject:** AP059 for Vacuum SWD F-35 & G-35

Dear Ms. Haynes:

The New Mexico Oil Conservation Division (NMOCD) has reviewed your amendment "Stage 2 Abatement Plan Vadose Zone Remedy" (dated November 15, 2006) for the above referenced site. Prior to implementing the proposed remedy, Rice Operating Company (ROC) must provide soil sample analytical results for chloride from at least one boring in the center of each excavation at each of the two sites. The borings must be advanced to groundwater with soil samples taken at 5 feet intervals. Also, please provide TDS and chloride analytical results from new water samples from the vicinity production wells, SPS-27 and SPS-25. The soil and water analytical data must be submitted to the NMOCD by Monday, April 23, 2007. In addition, please submit the soil classification for the "native soil" that would be used in the proposed evapotranspiration cover and the percent standard Proctor density that would be used when installing the native soil portion of the cover. The NMOCD will evaluate the data when further reviewing the proposed remedy for possible approval.

Furthermore, ROC must proceed with the proposed groundwater remedy (i.e., pump and treat with a R.O. unit and wildlife watering tank) at the F-35 site by Monday, April 2, 2007, and at the G-35 site by Monday, July 2, 2007. Please be advised that NMOCD approval of this plan does not relieve the owner/operator of responsibility should operations pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD approval does not relieve the owner/operator of responsibility for compliance with any OCD, federal, state, or local laws and/or regulations.

If you have any questions regarding this matter, please contact me at 505-476-3489.

Edward J. Hansen  
Hydrologist  
Environmental Bureau

P.S.: The Public Notice for the Stage 1 & 2 Abatement Plan (AP059) appears to have been adequately met in accordance with Rule 19 in January, 2006.

3/23/2007

## Price, Wayne, EMNRD

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**From:** Price, Wayne, EMNRD  
**Sent:** Friday, September 29, 2006 8:07 AM  
**To:** 'Kristin Pope'  
**Cc:** Randall Hicks  
**Subject:** RE: Vacuum: G-35 & F-35 NMOCD Case #1R0330 & 1R0332 Now AP-59

Thanks Kristin. It appears OCD never issued the first approval. The cover letter for the public notice dated March 22, 2006 indicated this was for a stage 1, but the actual notice was for stage 1 and 2. Should not be a problem as long as public notice was issued. I think during our meeting we will go over the rule 19 procedure for approving AP's. We are assigning this a new case number AP-59. Please include this in all new correspondences.

In addition, I need to know when actual groundwater remediation will start?

-----Original Message-----

From: Kristin Pope [mailto:kpope@riceswd.com]  
Sent: Thursday, September 28, 2006 5:32 PM  
To: Price, Wayne, EMNRD  
Cc: Randall Hicks  
Subject: Fw: Vacuum: G-35 & F-35 NMOCD Case #1R0330 & 1R0332

----- Original Message -----

From: "Price, Wayne, EMNRD" <wayne.price@state.nm.us>  
To: "Katie Lee" <katie@rthicksconsult.com>  
Cc: "Randall Hicks" <R@rthicksconsult.com>; "Dale Littlejohn" <dale@rthicksconsult.com>; "Kristin Pope" <kpope@riceswd.com>  
Sent: Friday, April 28, 2006 11:11 AM  
Subject: RE: Vacuum: G-35 & F-35 NMOCD Case #1R0330 & 1R0332

Approved!

-----Original Message-----

From: Katie Lee [mailto:katie@rthicksconsult.com]  
Sent: Friday, April 14, 2006 4:32 PM  
To: Price, Wayne, EMNRD  
Cc: Randall Hicks; 'Dale Littlejohn'; Kristin Pope  
Subject: Vacuum: G-35 & F-35 NMOCD Case #1R0330 & 1R0332

Dear Mr. Price,

Attached, please find our minor modifications to the Stage 1 & 2 Abatement Plan for the above referenced site, along with two modified plates.

If you have any questions or concerns, please do not hesitate to contact us.

Best regards,

Katie Lee  
Staff Scientist  
R.T. Hicks Consultants, Ltd.  
901 Rio Grande Blvd. NW F-142  
Albuquerque, NM 87104

Office Phone: 505-266-5004  
Fax: 505-266-0745

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**Price, Wayne, EMNRD**

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**From:** Price, Wayne, EMNRD  
**Sent:** Friday, April 28, 2006 11:11 AM  
**To:** 'Katie Lee'  
**Cc:** Randall Hicks; 'Dale Littlejohn'; Kristin Pope  
**Subject:** RE: Vacuum: G-35 & F-35 NMOCD Case #1R0330 & 1R0332

Approved!

-----Original Message-----

From: Katie Lee [mailto:katie@rthicksconsult.com]  
Sent: Friday, April 14, 2006 4:32 PM  
To: Price, Wayne, EMNRD  
Cc: Randall Hicks; 'Dale Littlejohn'; Kristin Pope  
Subject: Vacuum: G-35 & F-35 NMOCD Case #1R0330 & 1R0332

Dear Mr. Price,

Attached, please find our minor modifications to the Stage 1 & 2 Abatement Plan for the above referenced site, along with two modified plates.

If you have any questions or concerns, please do not hesitate to contact us.

Best regards,

Katie Lee  
Staff Scientist  
R.T. Hicks Consultants, Ltd.  
901 Rio Grande Blvd. NW F-142  
Albuquerque, NM 87104

Office Phone: 505-266-5004  
Fax: 505-266-0745

# R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745

April 11, 2006

**Wayne Price**

NMOCD Environmental Bureau Chief

1220 South St. Francis Drive

Santa Fe, New Mexico 87505

**Via E-mail**

RE: F-35 SWD & G-35 SWD, T17S, R35E; NMOCD Case #: 1R0330 & 1R0332

Dear Mr. Price,

This letter presents our proposal for a minor modification to the Stage 1 & 2 Abatement Plan submitted to your office on January 12, 2005. We propose a minor expansion of the characterization plan: the addition of three (3) additional wells. We propose a minor relocation of the originally proposed wells (see revised Plate 2 of the Abatement Plan, attached):

Well F-2 – located 800 feet east of F-35 and 800 feet west of the G-35 site

Well G-2 – located about 1000 feet east of G-35

We also revised our potentiometric surface map for the area as Xcel Energy advised us that SPS-26, an Xcel supply well, was mis-located. The corrected map is attached. After we complete, develop, purge and sample these new wells in addition to the proposed sampling effort described in the Stage 1 & 2 Plan, we will re-draw the potentiometric surface map and re-evaluate the water chemistry hypotheses presented in the Plan. We will then submit a short letter report with the new data and maps to NMOCD that also informs of our intent to drill:

F-3 – located about 400 feet directly down gradient of the F-35 site,

G-3 – located about 500 feet directly down gradient of the G-35 site, and

G-4 – located down gradient from the G-35 site, at a location to be determined, based upon the newly acquired data

Until we conduct the first phase of the field assignment, we believe it is premature to select locations for these additional wells. We look forward to completing phase 1 of the field assignment, full-scale testing of the sand filter component of the point-of-use water treatment system and then moving forward with the second phase of the proposed investigation and full-scale testing of the RO unit proposed for the point-of-use treatment system. Please contact me, if you have any questions regarding this minor modification.

Sincerely,

R.T. Hicks Consultants, Ltd.



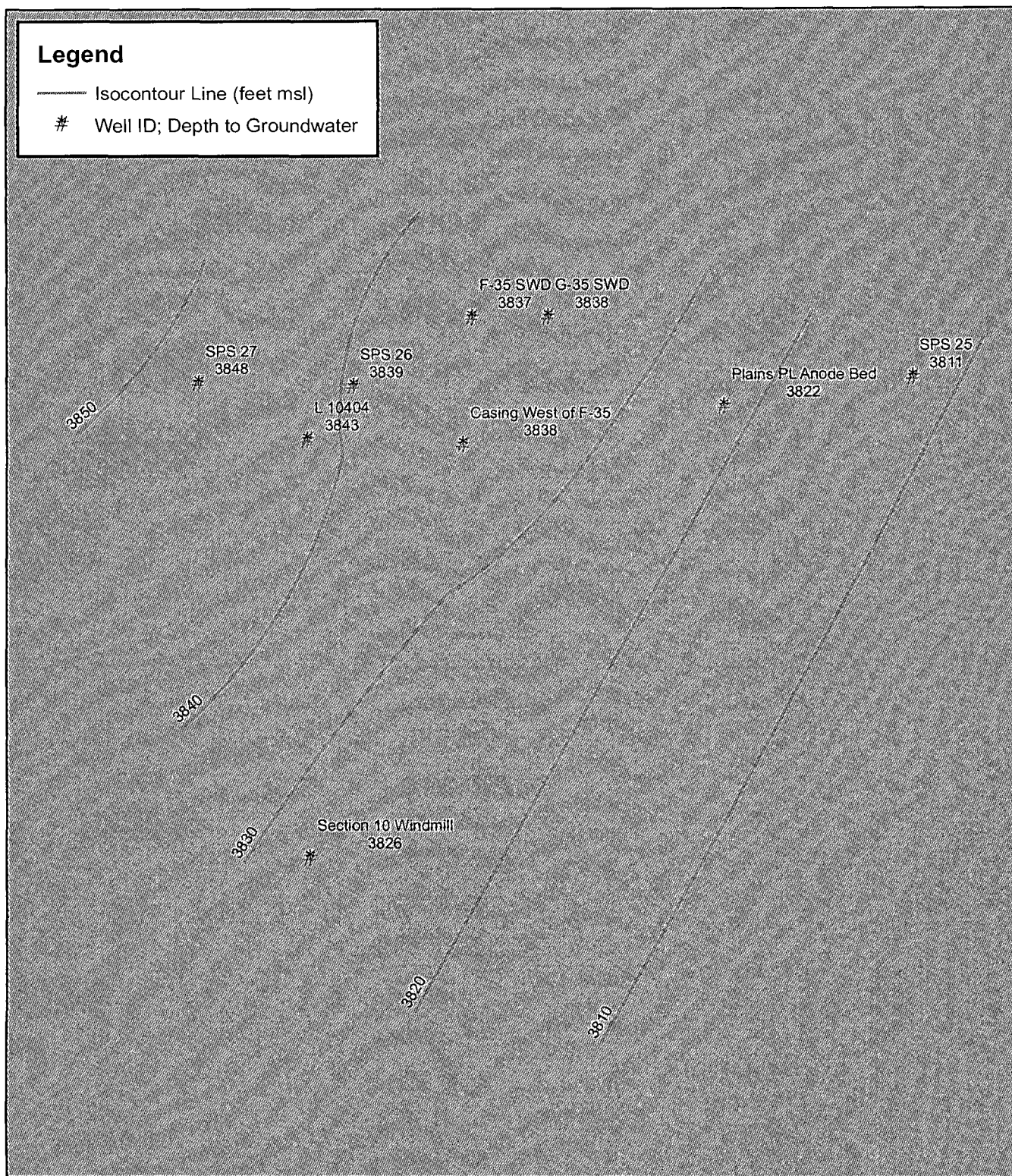
Katie Lee

Staff Scientist

Copy: Rice Operating Company

## Legend

- Isocontour Line (feet msl)
- # Well ID; Depth to Groundwater



0 0.5 1 2 Miles

1

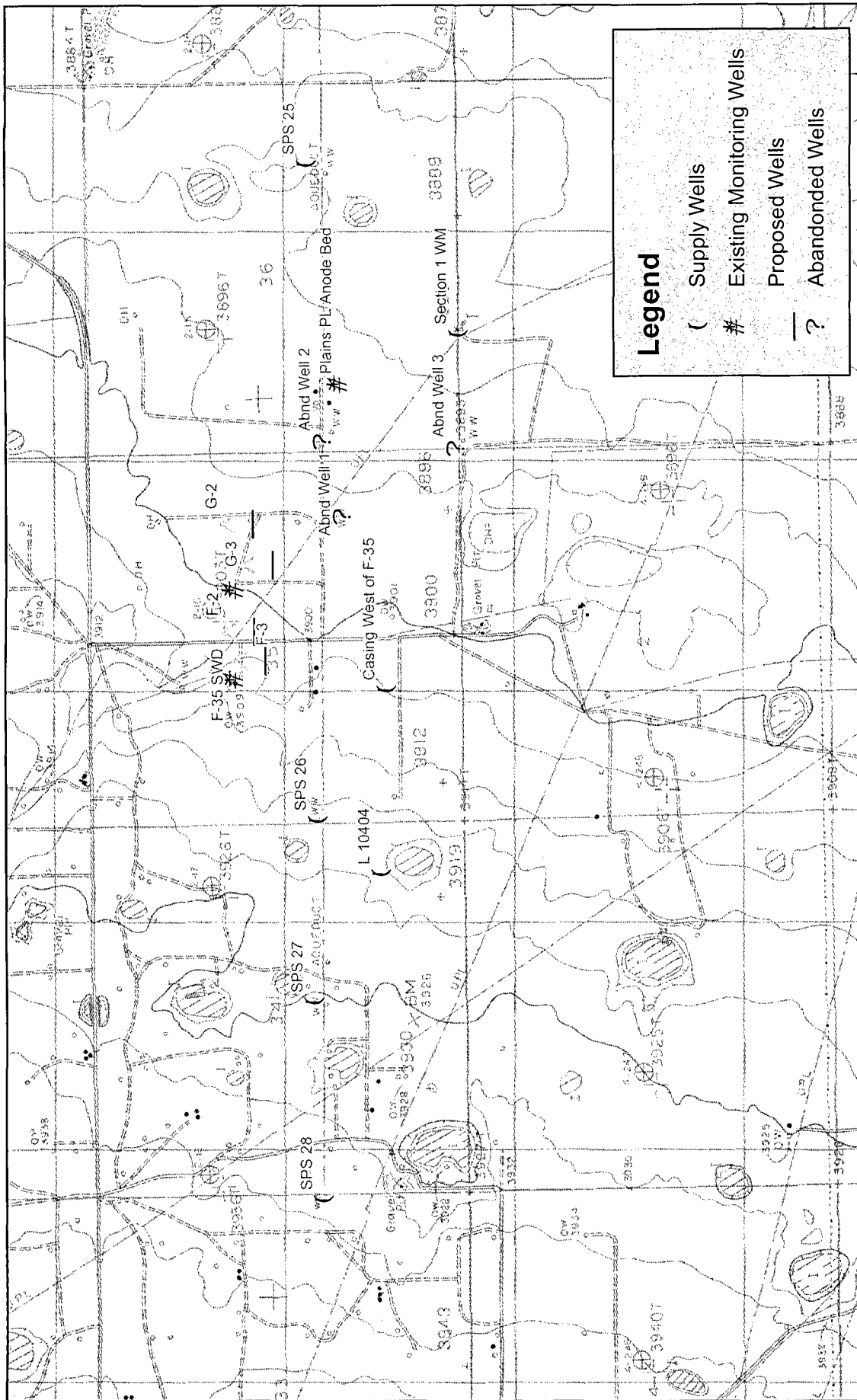
**R.T. Hicks Consultants, Ltd**  
 901 Rio Grande Blvd NW Suite F-142  
 Albuquerque, NM 87104  
 Ph: 505.266.5004

Local Potentiometric Surface Map

Plate 5

ROC: Stage 1 & 2 Abatement Plan G-35/F-35

April 2006



<b>R.T. Hicks Consultants, Ltd</b> 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	G-35/F-35 Nearby Wells and Proposed Monitoring Wells  ROC: Stage 1 & 2 Abatement Plan G-35/F-35	Plate 2  April 2006
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**Price, Wayne, EMNRD**

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**From:** Price, Wayne, EMNRD  
**Sent:** Thursday, April 27, 2006 3:57 PM  
**To:** 'Randall Hicks'  
**Cc:** 'Kristin Pope'; 'Dale Littlejohn'  
**Subject:** RE: G-35-F-35 SWD

Yes, approved!

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**From:** Randall Hicks [mailto:r@rthicksconsult.com]  
**Sent:** Thursday, April 27, 2006 2:53 PM  
**To:** Price, Wayne, EMNRD  
**Cc:** 'Kristin Pope'; 'Dale Littlejohn'  
**Subject:** G-35-F-35 SWD

Wayne

This email confirms our discussion of the minor modification to the Abatement Plan for the above-referenced sites. You verbally agreed to our proposal to install 2 monitoring wells: one east of F-35 (F-2 on the attached map) and one east of G-35 (G-2). We plan to install these wells during the second week in May. After we measure water levels in the area and verify ground water flow direction and evaluate the laboratory results of sampling, we will install the next three monitor wells. We believe that two of the next three will be southeast of the release sites (F-3 and G-3), but we wish to confirm the flow direction and chemistry before we put in the holes. We will provide a brief report to NMOCD with the data and our proposed locations for the next three holes, which we will probably schedule for drilling in July or August.

Does this accurately reflect our conversation of today and at the hearing of last week?

Randy Hicks  
505-266-5004  
cell: 505-238-9515

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4/28/2006