

1 UNITED STATES  
2 ENVIRONMENTAL PROTECTION AGENCY  
3 REGION 8

4  
5 REPORTER'S TRANSCRIPT OF PROCEEDINGS October 10, 2012  
6

7 IN THE MATTER OF:  
8 Docket No. SDWA-8-2011-0079  
9 Maralex Disposal, LLC,  
10 Respondent.  
11

12  
13 PURSUANT TO THE FEDERAL RULES OF CIVIL  
14 PROCEDURE, the above-entitled matter came on for hearing  
15 before THE HONORABLE JUDGE ELYANA SUTIN, on Wednesday,  
16 October 10, 2012, commencing at 9:00 a.m. at the La Plata  
17 County District Court, 1060 East Second Avenue, Durango,  
18 Colorado 81301, before Susan K. VanDenBerg, Registered  
19 Professional Reporter and Notary Public, within and for  
20 the State of Colorado.  
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A P P E A R A N C E S

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JUDGE SUTIN: This hearing is now in session.

We are on the record for the matter of Maralex Disposal,  
Case No. SDWA-8-2011-0079.

Good morning. I am Elyana Sutin. I'm a regional  
judicial officer with the United States Environmental  
Protection Agency, Region 8, in Denver, Colorado. I am  
employed by the EPA; however, I am neutral. I have no contact  
with Complainant regarding anything related to this case or  
any case that is brought in enforcement context, other than  
having the other party there -- just so you all know.

We will try and get in as much as we can today. If  
we need to go tomorrow, my preference is to start a little  
earlier in the morning, if that will work, so we can try and  
get out of here at a reasonable time. If we need more time,  
we have the day. But based on what the attorneys have told  
me, we should be able to finish today. If not, finish within  
an hour or two tomorrow. So that's my expectation.

Counsel, if you want to identify yourselves for the  
record, and then I'll talk about how we'll proceed.

MS. SWANSON: Your Honor, good morning. My name is  
Amy Swanson. I'm the attorney of record for the Complainant,  
United States Environment Protection Agency, Region 8.

MR. ZIMSKY: Good morning, Your Honor. William  
Zimsky of the law firm of Abadie & Schill in Durango,

1 Colorado, on behalf of the Respondent Maralex Disposal, LLC.

2 JUDGE SUTIN: This is how we will proceed this  
3 morning. We are governed by the Part 22 Rules of Procedure.  
4 It's 40 CFR, Part 22. And under those Rules, we loosely  
5 follow the Rules of Evidence, Federal evidence, although we  
6 do, for the most part, allow most evidence into the record.  
7 However, objections will, of course, be allowed and offers of  
8 proof and all of that in terms of procedure are followed.

9 The attorneys are allowed to make opening  
10 statements, although they're not required. Then  
11 Complainant will put on their case with direct testimony,  
12 cross-examination, and then they will rest. Respondents will  
13 put on their case -- Direct Examination, Cross-Examination,  
14 and rest.

15 In terms of witnesses, I understand from  
16 Ms. Swanson that one of her witnesses won't be here until  
17 1:00, so depending upon where we are in the case, we may have  
18 to rearrange a little bit. That shouldn't be a problem, but  
19 let me know if there is any trouble or if there are any other  
20 witnesses that we need to take at a certain time.

21 The attorneys then make may closing arguments or  
22 statement. Again, it is not necessary, but you're welcome to  
23 do so. There will be no judgment at the end of the hearing.  
24 I take all the evidence back with me, and the parties are then  
25 allowed and should file briefs, findings of fact, and

1 conclusions of law, how you think the outcome of this case  
2 should go and why. I will review those. Clearly, there will  
3 be time to get the transcript from the court reporter and be  
4 able to write briefs before I make a decision. So we'll talk  
5 about a schedule for that at the end of the hearing.

6 We discussed witness rules, and both parties  
7 indicated that they do not believe that witnesses need to be  
8 sequestered, so witnesses will be able to stay in the  
9 courtroom -- all witnesses.

10 At this time, Counsel, are there any preliminary  
11 matters we need to address with respect to the exhibits?

12 MS. SWANSON: Your Honor, yes. Based on an  
13 agreement by the parties, as of Friday, October 5th, we do  
14 have some additional exhibits that we have agreed to in terms  
15 of foundation and admissibility.

16 And to expedite the hearing process and as we  
17 discussed during our pretrial call, we have organized all of  
18 the exhibits introduced to date into one stipulated exhibit  
19 notebook that I have prepared a copy for both Respondent,  
20 yourself, Complainant, and then I have two additional copies  
21 to file with the Regional hearing clerk upon return.

22 JUDGE SUTIN: Okay.

23 MS. SWANSON: If I may approach.

24 JUDGE SUTIN: Absolutely.

25 MS. SWANSON: Thank you. Your Honor, please note

1 that there is an exhibit log at the front of the notebook, and  
2 it shows not only the proposed stipulated exhibit numbers, but  
3 also the corresponding original Complainant's and  
4 Respondent's, respectively, exhibit numbers when the documents  
5 were first introduced as part of the prehearing exchange and  
6 also supplemental prehearing exchange.

7 So if that meets with Your Honor's satisfaction,  
8 that is the notebook of exhibits that we're proposing to use  
9 for the hearing.

10 JUDGE SUTIN: Okay. At this time then Stipulated  
11 Exhibits 1 through 38 are being offered into the record for  
12 both authenticity and admissibility?

13 MR. ZIMSKY: Yes, Your Honor.

14 MS. SWANSON: Yes.

15 JUDGE SUTIN: Okay. So Exhibits 1 through 38 have  
16 been received into the record.

17 MS. SWANSON: And, Your Honor, one other point of  
18 clarification. With regard to the stipulation of fact  
19 exhibits and testimony that was originally filed with the  
20 Court on August 20, 2012, in terms of how we reference the  
21 stipulations of fact for this proceeding, I'm assuming that we  
22 don't need to make reference for purposes of the transcripts  
23 to those particular stipulations of fact but, rather, they are  
24 already considered as far as you are concerned as part of the  
25 record?



1 JUDGE SUTIN: Yes, that's correct. Any other  
2 preliminary matters?

3 MR. ZIMSKY: No, Your Honor.

4 JUDGE SUTIN: Are we ready to proceed?

5 MS. SWANSON: Yes, Your Honor.

6 JUDGE SUTIN: Okay. The court reporter will be  
7 swearing in the witnesses so, Ms. Swanson, if you would like  
8 to call your first witness.

9 MS. SWANSON: Your Honor, before I call our first  
10 witness, I would like to make a brief opening statement.

11 JUDGE SUTIN: Yes, thank you.

12 OPENING STATEMENT

13 MS. SWANSON: Good morning. My name, again, is  
14 Amy Swanson. I am an attorney with the United States  
15 Environmental Protection Agency, Denver office, Region 8.  
16 I'm representing Complainant in this matter.

17 There are three controlling authorities in this  
18 case -- the Consolidated Rules of Practice set forth in  
19 Part 22 that governs this administrative proceeding; the  
20 Underground Injunction Control Permit that authorizes and  
21 imposes regulations on the Respondent's Class II injunction  
22 well, and the Safe Drinking Water Act.

23 Not only does the Safe Drinking Water Act authorize  
24 action and assessment of penalties, but it also sets forth the  
25 statutory factors as a basis for calculating the penalty.

1           On September 27, 2011, the Complainant filed a  
2           complaint wherein it alleged that Maralex Disposal violated  
3           its permit, the applicable regulations, and the Safe Drinking  
4           Water Act on three counts: by failing to maintain mechanical  
5           integrity, by failing to observe the annulus pressure pursuant  
6           to the permit, and inaccurate reporting of the well's monthly  
7           pressure in its 2010 annual monitoring report.

8           Based on the violations alleged, the Complaint  
9           proposed a penalty of \$111,670. Today, EPA will demonstrate  
10          through both presentation and persuasion that it was more  
11          likely than not that the Respondent's well failed to maintain  
12          mechanical integrity for an approximate duration of 11 months  
13          beginning May 5, 2010, when an EPA inspector observed pressure  
14          on the tubing casing annulus until the well was repaired on or  
15          about May 24, 2011.

16          The Respondent continued to operate the well  
17          despite not being able to maintain the annulus pressure at  
18          zero as required by the permit. EPA determined at that time  
19          that the well may have lost pressure.

20          On July 6, 2010, the Respondent reported in a  
21          letter to the EPA that they no longer believed that the  
22          pressure exceedance was caused by thermal fluctuation, which  
23          is the only other explanation recognized by the permit for a  
24          pressure exceedance other than a leak. The Respondent stated  
25          also in that letter that they believed the recurring annulus

1 pressure to be caused by a leak.

2 By introducing evidence including but not limited  
3 to a description of well and how it operates in a leak-free  
4 condition, also introducing a series of communications between  
5 and observations by the parties concerning the significant  
6 annulus pressure, and also discussing the permit procedures  
7 and guidelines available to the Respondent as to what to do in  
8 the event of a loss of mechanical integrity, the Environmental  
9 Protection Agency will show that the well lost mechanical  
10 integrity in accordance with the permit for roughly one year  
11 or 11 months, during which time it posed a significant risk to  
12 underground sources of drinking water.

13 The Respondent already has stipulated to the other  
14 two violations alleged. Similarly, the EPA will show by  
15 preponderance of the evidence the overall appropriateness of  
16 the penalty. Based on equal amounts, testimony and exhibits,  
17 the EPA will illustrate conclusively its prima facie case in  
18 support of the Regional judicial officer ultimately ordering  
19 Maralex to pay the full amount of those penalties. Thank you.

20 JUDGE SUTIN: Thank you, Ms. Swanson.

21 MR. ZIMSKY: No opening statement.

22 JUDGE SUTIN: Ms. Swanson, you can call your first  
23 witness.

24 MS. SWANSON: Your Honor, just as a preliminary  
25 matter -- okay. Your Honor, the Complainant would like to

1 call its first witness, Nathan Wiser, to the stand.

2 Mr. Wiser, would you please occupy the witness box?

3 **NATHAN WISER,**

4 the witness herein, having been first duly sworn, was examined  
5 and testified as follows:

6 DIRECT EXAMINATION

7 BY MS. SWANSON:

8 Q Mr. Wiser, good morning.

9 A Good morning.

10 Q Are you familiar with the Underground Injunction  
11 Control Permit and regulatory requirements at issue in this  
12 case?

13 A I am.

14 Q Are you prepared to provide expert testimony  
15 regarding these issues?

16 A Yes, I am.

17 Q Mr. Wiser, before you give your expert testimony,  
18 I would like to ask you some questions about your background  
19 and qualifications and how you arrived at your opinions.

20 To begin with, please describe your education and  
21 degrees.

22 A I have two degrees in geology. My bachelor's  
23 degree in geology, I obtained from the University of  
24 California at Berkeley in 1987, and my master degree in  
25 geology, I obtained from Northwestern University in Evanston,

1 Illinois, in 1990.

2 Q Could you please describe your professional  
3 experience after you received your master's in geology?

4 A After I received my master's, I was hired by the  
5 Environment Protection Agency in Region 5 Chicago office into  
6 the injection well program that is run in that office covering  
7 the six states in Region 5.

8 Q Please describe your job duties.

9 A In Region 5, I was primarily a permit writer.  
10 I was assigned to work on issuing permits to would-be  
11 injunction well operators. This largely consisted of permits  
12 for injection wells associated with oil and gas operations in  
13 that region, but it also included other types of injection  
14 wells that are not associated with oil and gas matters and, in  
15 fact, included several permitting actions associated with  
16 hazardous waste injection.

17 Hazardous waste injection wells are among the most  
18 controversial that EPA handles and has the most complicated  
19 regulatory and testing requirements, monitoring requirements,  
20 and so forth.

21 Q Please describe your work experience following your  
22 employment with Region 5 EPA.

23 A In September of 1999, I accepted a position with  
24 the EPA Region 8 office in Denver, Colorado, working again in  
25 the injection well program in the Region 8 office and covering

1 the six states in the Region 8.

2 Q And during that employment period, did you review  
3 and oversee underground injection control permits and  
4 regulatory compliance?

5 A Yes. My duties in Region 8 have principally been  
6 involved in compliance assessment monitoring injection well  
7 matters for compliance with applicable requirements that are  
8 imposed by either Rule or well permits issued for these types  
9 of wells.

10 This has included conducting numerous inspections,  
11 approximately 4,000 inspections of injection wells identifying  
12 noncompliance, perhaps about 900 times following up with those  
13 noncompliances by generating letters to be signed by EPA  
14 authorities, alerting companies of the noncompliance that has  
15 been noted, and in certain cases, initiating formal  
16 enforcement proceedings to gain compliance.

17 Q What qualifies you to do your job?

18 A It is a -- it takes a long time to become quite  
19 good as an injection well overseer. In addition to my  
20 education, I've had numerous trainings in-house and not --  
21 also not offered by EPA, but outside of EPA.

22 My estimate is about a total of one year of  
23 classroom setting in the years I have been in the injection  
24 well program. This is about 45 different classes in injection  
25 well-related matters or inspection-related matters. Roughly

1 half of those 45 classes would be in matters relating to well  
2 construction, well testing, monitoring of wells, interpreting  
3 the tests and monitoring data, and also how to conduct  
4 inspections both carefully and safely, and also a series of  
5 classes in general hydrogeology matters and oil and gas  
6 matters, in general.

7 Q Did any of these trainings pertain specifically to  
8 mechanical integrity?

9 A Yes.

10 Q Approximately how many Underground Injection  
11 Control permits have you written during the course of your  
12 employment with EPA?

13 A I have written about 173 permits for injection  
14 wells.

15 Q And in your position with EPA, Region 8, have you  
16 overseen the work of any other employees?

17 A Yes, I have. I've had the responsibility as a  
18 direct report to have -- for five senior environmental  
19 employees who reported to me, and I have also mentored 10 to  
20 12 more junior EPA employees that have come into the injection  
21 well program. And I have shown them, you know, how to do  
22 their jobs.

23 Q Mr. Wiser, is it accurate to summarize that you  
24 have had roughly 22 years of employment in the Underground  
25 Injection Control program with EPA?

1           A       Yes.  That's accurate.

2           Q       Have you written any Underground Injection  
3 Control --

4                   MS. SWANSON:  And, Your Honor, with your consent,  
5 for the duration of this proceeding, I will also refer to it  
6 as UIC, the acronym UIC for Underground Injection Control.

7                   JUDGE SUTIN:  That's fine.

8           Q       (Continued by Ms. Swanson)  Have you authored any  
9 UIC papers?

10           A       I have.  In 1994, I authored a paper that was  
11 presented then at an international symposium on injection well  
12 matters.  The paper's topic was acid waste injection into deep  
13 injection wells.  That was published in 1996 in the Academic  
14 Press.

15                   I also assisted in authoring a Guidance document  
16 that resides on EPA's principal web page for the injection  
17 well program.  This Guidance is a UIC technical program  
18 Guidance and covers all matters relating to injection wells,  
19 all classes of injection wells, requirements applicable to  
20 injection wells, how monitoring takes place, what the  
21 jurisdictional matters that relate to injection wells across  
22 the nation are, and sort of a soup to nuts on injection wells.

23                   It's meant to be helpful to the public and others,  
24 and that's why it resides on the main web page of EPA.

25           Q       Have you participated in any EPA national work



1 groups for the purpose of developing UIC Guidance or policy on  
2 behalf of the Environmental Protection Agency?

3 A I have. I have participated for about ten years  
4 with the UIC technical work group, the national technical work  
5 group, composed of members from both EPA regional offices, EPA  
6 headquarters, and state UIC personnel and directors. And that  
7 work group, the UIC national technical work group, has worked  
8 on a number of different matters in the injection well  
9 program, including producing a compendium of mechanical  
10 integrity test methods, standards and past failed criteria  
11 applicable across the country, not only out of different  
12 regional offices, but the different state programs.

13 The UIC technical work group also during my  
14 time -- and by the way, I chaired this work group for a couple  
15 of years. This work group also produced a paper on fluids  
16 that are eligible to be injected into Class II disposal wells  
17 and also produced a Guidance document that I authored on the  
18 use of downhole separators in wells that simultaneously  
19 produce oil and inject.

20 I've also served on the UIC National Database  
21 Steering Committee, a committee designed to implement and  
22 promote a single, national UIC database, and I've also during  
23 my time in the Region 5 Chicago office been on a work group  
24 that formulated a policy for the Region 5 permit writers in  
25 the UIC program on how to issue permits that comply with other

1 statutory requirements, such as the Endangered Species Act or  
2 the National Historic Preservation Act.

3 Q Mr. Wiser, have you instructed or presented on the  
4 subject of UIC?

5 A I have. Three times I have been an instructor at  
6 EPA's national UIC inspector training. This is a training  
7 offered about once a year by EPA. It's a requirement to  
8 obtain an inspector credential.

9 The students in the class are both federal  
10 inspectors or would-be inspectors in the injection well  
11 program, as well as state and tribal would-be inspectors. And  
12 I've also, while in the Denver Region 8 office, I have taught  
13 the Criminal Investigation Division on matters relating to oil  
14 and gas extraction method in general and -- sorry. Could you  
15 repeat the question?

16 Q I was asking you about whether you had had any  
17 experience instructing on UIC-related matters.

18 A So I've given a couple of examples -- and yes,  
19 I have.

20 Q Thank you. Lastly, with regard to your  
21 qualifications, Mr. Wiser, have you received any national  
22 awards for your work relating to UIC?

23 A I have received awards in my capacity with EPA.  
24 I've received four different awards, including five Bronze  
25 medals and two Silver medals. The Bronze medal at EPA is the

1 Agency's third highest award category, and Silver is the  
2 second highest.

3 Also, I have received an Environmental Achievement  
4 award from the US Department of Interior and a Distinguished  
5 Service award from the US Department of Justice.

6 Q Mr. Wiser, did you supply a curriculum vitae in  
7 connection with this case?

8 A I did.

9 MS. SWANSON: Your Honor, let the record reflect  
10 that the parties have stipulated to the admission of  
11 Mr. Wiser'S CV. It was the second revision referred to as  
12 Stipulated Exhibit No. 30.

13 JUDGE SUTIN: Okay.

14 MS. SWANSON: Your Honor, also at this time,  
15 Complainant tenders Mr. Wiser to the Court as an expert in  
16 UIC program, its purpose, implementation, and regulation,  
17 including permit compliance.

18 MR. ZIMSKY: May I voir dire?

19 JUDGE SUTIN: Go ahead.

20 VOIR DIRE EXAMINATION

21 BY MR. ZIMSKY:

22 Q Mr. Wiser, you're not an engineer, correct?

23 A No. I'm a geologist.

24 Q And you're not a petroleum engineer, correct?

25 A Correct.

1 Q You have never supervised the drilling of an  
2 injection well, correct?

3 A Supervised? You mean on site?

4 Q In charge, responsible for.

5 A That's correct.

6 Q So you have never done that. Have you ever been --  
7 you have never been a person responsible for supervising the  
8 operation, the actual operation of an injection well, correct?

9 A That is correct.

10 MR. ZIMSKY: That's all the questions I have.

11 JUDGE SUTIN: Okay. Any objections to Mr. Wiser  
12 being --

13 MR. ZIMSKY: No, Your Honor.

14 JUDGE SUTIN: Mr. Wiser will be allowed to testify  
15 as an expert in -- can you say that again, Ms. Swanson -- as  
16 in the area of UIC testing?

17 MS. SWANSON: UIC program, its purposes and  
18 implementation and regulation, including permit compliance.

19 JUDGE SUTIN: All right.

20 MS. SWANSON: Just to clarify, Your Honor, we are  
21 not tendering him as an expert on the operation of a well or  
22 as someone who would construct a well.

23 JUDGE SUTIN: Okay. Thank you.

24 Q (Continued by Ms. Swanson) Mr. Wiser, turning to  
25 the UIC program, please describe the scope and purpose of the

1 Federal UIC program.

2 A The Federal UIC program was born with the 1974 Safe  
3 Drinking Water Act. It was enacted as a preventative program.  
4 UIC program is found in Part C of the Federal Safe Drinking  
5 Water Act.

6 And accompanying the passage of this Act is a very  
7 helpful document from the US House of Representatives. This  
8 document is No. 93-1185. This US House report charges EPA  
9 with a number things, including implementing at least two  
10 important policies as the House saw it.

11 The first of these two policies is that the  
12 UIC program developed by the EPA should protect not only  
13 aquifers that are currently in use for drinking water, but  
14 also aquifers that have the potential to be used that may not  
15 currently be used; to protect those aquifers from injection  
16 activities.

17 The second important policy that was charged to EPA  
18 was to ensure that the protection forwarded to injection -- to  
19 the aquifers from injection, that these protections apply not  
20 only for substances that have a national primary drinking  
21 water standard, but they include any substance that has the  
22 potential for human health impact.

23 Q With regard to today's proceedings, what would you  
24 describe as being one of the most protected requirements of  
25 the UIC program?

1           A       With regard to this matter, a very key provision is  
2 the establishment and maintenance of mechanical integrity of  
3 the well.

4           Q       What is the EPA's role in administering the UIC  
5 program?

6           A       EPA administers the UIC program throughout the  
7 country, except in those locations where it has been  
8 delegated. This generally means that the UIC program is  
9 directly implemented by EPA on Indian land, Indian country,  
10 and also in certain states that have not been delegated the  
11 authority to implement the Safe Drinking Water Act UIC  
12 program.

13          Q       Please describe what wells the EPA regulates.

14          A       EPA regulates six classes of injection wells. They  
15 include Class I wells. These are Roman numerals, by the way.  
16 In the classes of wells, a Class I well is a category that  
17 injects industrial and municipal waste. This can include for  
18 industrial waste, nonhazardous waste and hazardous waste.

19                 Class II injection wells are wells that are  
20 principally associated with oil and gas operations. They  
21 inject wastes brought to the surface in connection with oil  
22 and gas production, and they also are used for the injection  
23 related to enhancing oil and gas production or storage of  
24 hydrocarbons that are liquid.

25                 Class III injection wells are wells that inject for

1 the purposes of subsurface mining like in situ mining, such as  
2 salt mining.

3 Class IV injection wells are wells that inject  
4 hazardous waste or above them.

5 Class IV wells is an abandoned class. They're not  
6 allowed.

7 Class V injection wells are a category that means  
8 it's neither Class I through IV, and also not Class VI. And  
9 Class VI injection wells are a relatively new class of wells.  
10 These are wells that are designed for the purpose of  
11 sequestering carbon dioxide.

12 Q Turning to Class II wells, Mr. Wiser, how are Class  
13 II wells authorized?

14 A Class II injection wells are authorized by  
15 regulation, as either by Rule for certain categories of  
16 Class II wells, or as in the case of the well at issue today,  
17 exclusively by permit.

18 And a permit -- once a permit is issued, the permit  
19 must contain certain regulatory provisions. The regulations  
20 spell out what must be contained in a UIC permit for a Class  
21 II disposal well, and the regulations also allow for  
22 additional requirements that can be in place, any permits that  
23 are deemed necessary to be protective of underground sources  
24 for drinking water. Once the permit is issued, it is the  
25 controlling document for the well.

1 Q And who do UIC permits apply to?

2 A They apply to the operator of the well or the  
3 Permittee, the one who receives a permit.

4 Q Can you describe, please, what the objectives of a  
5 UIC permit are?

6 A The objectives of the UIC permit collectively is to  
7 ensure that waste injection into a disposal well does not harm  
8 underground sources of drinking water or endanger them.

9 Q And describe, please, the general components of a  
10 Class II permit.

11 A The general components of the Class II permit  
12 include requirements for well construction, well operation,  
13 monitoring of the well's operation, certain testing  
14 requirements, and reporting provisions.

15 Q Mr. Wiser, briefly describe how a permit is issued.

16 A UIC permits are issued after the EPA receives an  
17 application from a company to obtain a permit. And upon the  
18 decision that the permit may be issued, the EPA then prepares  
19 a draft of this permit.

20 The draft of the permit is then subject to a  
21 minimum of 30 days' public notice, during which time, the  
22 public, including the Permittee, can read and comment to the  
23 EPA on the provisions of the permit, and if there are  
24 objectionable conditions of the permit, bring those to EPA's  
25 attention.



1           At the conclusion of the comment period, then the  
2           EPA will issue its final permitting decision which may be to  
3           issue the permit or make changes to the permit based upon  
4           comments received. And once the permit is finally issued, it  
5           becomes effective when EPA signs it.

6           And if there had been no comments received, it  
7           becomes effective on the same day it is signed. If there had  
8           been comments received during the comment period, then it  
9           becomes effective at least 30 days later to -- and this is a  
10          period of time during which the Agency allows for that permit  
11          to be repealed.

12          Q       Is it possible, Mr. Wiser, once a permit has been  
13          issued for a Permittee to seek changes and modifications to  
14          that permit?

15          A       Yes, it is.

16          Q       Would you please describe?

17          A       Permittees frequently request changes made to the  
18          permits that they have received. It is as simple as making a  
19          request to EPA to modify the permit. It doesn't necessarily  
20          mean that the permit will be modified, but it opens the  
21          process for engaging the potential to make changes to the  
22          permit.

23          Q       And can you just give maybe one or two examples of  
24          types of things a Permittee may seek to have changed in their  
25          permit?

1           A       Yes. A very common type of permit modification is  
2 the allowable injection pressure. This is the maximum  
3 pressure that may be used at the wellhead to inject into the  
4 well. It's very common for permittees to seek differences in  
5 that number because that number is placed into the permit as a  
6 maximum.

7                       There are changes in testing procedures. Sometimes  
8 there are changes in how the well is to be constructed. If an  
9 injection well isn't providing the injection capacity that a  
10 Permittee wants, sometimes a Permittee will seek to expand or  
11 change the zone that they are -- the geologic zone they are  
12 allowed to inject into. These are common kinds of requests  
13 made of EPA by permittees that want to change their permit.

14           Q       I'd like to turn your attention to the well that is  
15 at issue in this matter. Mr. Wisner, do you have personal  
16 knowledge of the Respondent Dara Ferguson No. 1 well?

17           A       Yes, I do.

18           Q       Where is the well located?

19           A       The well is located on the Southern Ute Indian  
20 reservation just north of the state divide between New Mexico  
21 and Colorado.

22           Q       And based on your previous testimony, does EPA  
23 regulate this well because it is in Indian country?

24           A       Yes.

25           Q       What type of well is it?

1           A       It is a commercially operated Class II disposal  
2 well. This means it injects waste fluids that are brought to  
3 the surface in connection with oil and gas production. The  
4 word "commercial" simply means it does so as -- for a benefit.  
5 That is to say, it injects other people's wastewaters and  
6 charges them for or receives a benefit for that.

7           Q       And what kind of fluids typically are disposed of  
8 downhole in a Class II well?

9           A       The types of fluids injected into Class II disposal  
10 wells are typically produced water. It is water brought to  
11 the surface in connection with oil and gas production. And  
12 there may also be spent hydraulic fracturing fluids, fluids  
13 that are injected into wells for the purpose of stimulating or  
14 fracturing that well.

15                   And then when that well is finished with the  
16 hydraulic fracturing episode, that wastewater is flowed back  
17 to the surface, and these are types of fluids that would be  
18 brought to the Dara Ferguson No. 1 saltwater disposal well in  
19 that well.

20           Q       Other than that particular constituent, are there  
21 any other chemicals or contents included in produced water,  
22 other than just water that is coming from deep ground?

23           A       Yes. Wastewater that comes to the surface in  
24 connection with oil and gas production does bury in terms of  
25 the contents in it, but it typically contains high levels of

1 salinity. Based upon records submitted to EPA by Maralex  
2 Disposal, some of the higher salinities are in the vicinity of  
3 35,000 milligrams per liter of total dissolved solids or salt.

4 The wastewater that is brought to the surface in  
5 connection with oil and gas also frequently contains so-called  
6 BTEX components. BTEX is an acronym standing for benzene,  
7 toluene, ethylbenzene, xylene, and these are common  
8 contaminants that are found in water associated with oil and  
9 gas production.

10 And then hydraulic fracturing wastewaters can  
11 contain many other chemicals that are dependent upon what type  
12 of fracturing fluids were used in the first place.

13 Q Mr. Wiser, was there a document prepared in  
14 conjunction with the permit that lays out specifically with  
15 regard to this well the types of fluids that may be injected  
16 and subsurface geology that may be impacted by that disposal?

17 A Yes. EPA is required when it issues a permit to  
18 develop what is called a Statement of Basis. This is a  
19 document that lays forth the foundation for why EPA is  
20 authorizing this well.

21 It describes a number of things, including whether  
22 there are underground sources of drinking water in the  
23 vicinity of the proposed injection well. That was prepared.

24 MS. SWANSON: Thank you. Your Honor, Mr. Wiser is  
25 referring to the statement and basis for Maralex Disposal,

1 LLC, Dara Ferguson well, and this document has been stipulated  
2 to and is in the notebook as Stipulated Exhibit No. 33.

3 Q (Continued by Ms. Swanson) Mr. Wiser, do you know  
4 how many gallons of wastewater are injected into the well  
5 typically or on average on a monthly basis?

6 A Based upon the monitoring reports submitted to EPA  
7 by Maralex, this injection well disposes of something in the  
8 vicinity of 60,000 or 65,000 barrels of wastewater every  
9 month. A barrel is 42 gallons. This works out roughly to  
10 about 90 to 100,000 gallons per day.

11 Q And based on your knowledge of other disposal  
12 wells, can you describe these just generally? Does this  
13 constitute small, medium, or large-sized disposal wells?

14 A In terms of capacity, the amount of wastewater that  
15 goes into this well, this is a large well. I would place it  
16 in the top 10 percent of the injection wells by that metric  
17 that EPA has in its direct implementation program in Region 8.

18 Q Do you have knowledge whether there are underground  
19 sources of drinking water that have been identified in the  
20 vicinity of this well?

21 A Yes. The Statement of Basis identifies at least  
22 six and possibly as many as eight underground sources of  
23 drinking water in the subsurface in the vicinity of this well.

24 Q And are any of these underground sources of  
25 drinking water currently providing drinking water for human

1 consumption?

2 A According to the SDWIS database -- SDWIS stands for  
3 Safe Drinking Water Information System. There are within a  
4 5-mile radius around the Dara Ferguson well seven public  
5 drinking water systems -- seven public drinking water wells.  
6 And the nearest of these wells is about a mile and a half  
7 away. There are two public drinking water wells approximately  
8 a mile and a half away from this well.

9 Q And just to clarify, these wells, are they using as  
10 their source water groundwater?

11 A Yes. These are groundwater-based sources for  
12 public drinking water.

13 MS. SWANSON: Your Honor, the parties have  
14 stipulated to the admission of the map of groundwater-based  
15 public drinking water wells in the vicinity of Maralex  
16 Disposal. This is included in the book as Stipulated Exhibit  
17 No. 32.

18 Q (Continued by Ms. Swanson) Mr. Wiser, I'm going to  
19 have you describe the physical features of the well and how it  
20 interfaces or interacts with subsurface geology.

21 MS. SWANSON: And to do so, with Your Honor's  
22 permission, I would like to ask Mr. Wiser to highlight the  
23 well's components on the diagram that has been stipulated to  
24 as Exhibit No. -- Complainant's No. 2(A)2.

25 JUDGE SUTIN: Do I have that?

1 MS. SWANSON: You do. It originally was -- let me  
2 double-check the log.

3 JUDGE SUTIN: Exhibit 2 looks, to me, as though  
4 it's the permit.

5 MS. SWANSON: Right. Your Honor, it's Stipulated  
6 Exhibit 31, which is the specific diagram of the well  
7 schematic that was taken from Appendix A of the permit.

8 JUDGE SUTIN: Okay. I have it.

9 MS. SWANSON: We prepared a blowup of that for  
10 demonstrative purposes. If I may put it on the easel behind  
11 Mr. Wiser, then he can use that to draw any kind of highlights  
12 he would like to establish for the Court and, again, showing  
13 its interaction or interfacing with subsurface geology.

14 Your Honor, may I approach the witness?

15 JUDGE SUTIN: Yes.

16 MS. SWANSON: Thank you.

17 JUDGE SUTIN: Okay.

18 MS. SWANSON: Mr. Wiser, would you mind moving the  
19 coffee pot away so the Respondent can see? Thank you.

20 Q (Continued by Ms. Swanson) So, Mr. Wiser, I'm  
21 turning your attention to Stipulated Exhibit 31, which is  
22 being used for demonstrative purposes, the well schematic,  
23 included in the Respondent's permit and Appendix A, Page 2.  
24 Could you please describe for the Court the well's basic  
25 features or schematics?

1           A       Sure. This is a blowup of a diagram submitted to  
2       EPA by the Permittee in the process of obtaining the permit.  
3       It's a schematic of how the company proposed to drill and  
4       complete this injection well.

5                    It has three concentric strings of casing, steel  
6       casing, and it has an innermost pipe called the tubing that is  
7       also made of steel. And this innermost pipe of tubing is  
8       sealed at its bottom by what is known as a packer or a packer  
9       assembly that forms a seal between the injection tubing and  
10      the casing. And it makes the annulus come into existence in  
11      this well.

12           Q       Mr. Wiser, using your red pen, please maybe outline  
13      what constitutes -- shall we start with the tubing?

14           A       So this injection well was first constructed with  
15      the widest casing 13-3/8 inches in diameter casing set to --  
16      it was originally forecast about 500 feet. I believe it  
17      actually went to 737 feet.

18                    And then inside that, a narrower casing of  
19      9-5/8-inch diameter was placed, and it was set to nearly  
20      3600 feet or 3,600. And the deepest and narrowest hole that  
21      was drilled had 7-inch casing placed in that. It went almost  
22      down to 9,000 feet.

23                    These three casing strings are the casing strings  
24      I refer to. And then inside the casing strings in the middle  
25      of it -- again concentric -- is this 3-1/2-inch diameter steel



1 tubing that is -- this is the pipe through which the  
2 wastewater is actually injected.

3 And at the bottom of the well is this packer. I'm  
4 using a red pen to demark on this exhibit what constitutes the  
5 annular space in this well. So at the bottom, the annulus is  
6 formed by the setting of the packer, and it forms the seal  
7 between the 7-inch casing and the 3-1/2-inch tubing.

8 The inside of the annulus is formed by the outside  
9 of this 3-1/2-inch injection tubing. That is inside of the  
10 7-inch casing, and so that 7-inch casing forms the outside of  
11 the annulus.

12 So what I have done here is, I have drawn in red on  
13 this cutaway slice of the injection well the annular space  
14 that is formed between the injection tubing and the 7-inch,  
15 what is called production or long string casing. I'll just  
16 make a little hash here so you can see what that is.

17 This is an enclosed space -- the annulus. And it's  
18 enclosed at the top when the wellhead is finally bolted onto  
19 the well. That forms the top seal. So the annulus is formed  
20 at the top by the wellhead, at the bottom by the packer, and  
21 throughout its length by the casing that it is -- that  
22 surrounds it.

23 This annulus is designed as a fail-safe system with  
24 this injection well. It's very important that this annulus be  
25 present. The permit requires that this annulus be maintained.

1 And I'm drawing a little symbol for a pressure gauge, which is  
2 a little circle. You put a gauge on the annulus.

3 It is supposed to be at zero. So when you place a  
4 gauge on this annulus, it's supposed to be zero. As opposed  
5 to -- and I'm just drawing this in green just to distinguish.  
6 This is the injection tubing.

7 The injection tubing, again being the tubing  
8 through which the wastewater is injected, this goes all the  
9 way through the packer, through perforations that have been  
10 placed in the bottom of the well. These are holes that are  
11 blown into the casing to allow communication to the geologic  
12 formation that comprises the approved injection zone for this  
13 well.

14 And so to get wastewater to flow into that  
15 injection zone at the rate that the Permittee wants, they  
16 inject with pressure. So if you were to place a gauge on the  
17 tubing, it will typically show pressure at the surface of the  
18 well.

19 So this annulus space is supposed to be maintained  
20 at zero, and this injection tubing has a limit of 2,000 pounds  
21 per square inch.

22 I will draw your attention that this whole well,  
23 approximately 9,000 feet, passes through a number of different  
24 geologic formations, and it's these geologic formations,  
25 several of them, that have aquifers in them that are defined

1 as underground sources of drinking water, the deepest of which  
2 is about 5,000 feet deep below the surface.

3 Q Thank you, Mr. Wiser. Mr. Wiser, does the Dara  
4 Ferguson well --

5 MS. SWANSON: Excuse me, Your Honor.

6 Q (Continued by Ms. Swanson) Before I move on to the  
7 permit, Mr. Wiser, is there anything else you would like to  
8 add, or does that document reflect your handwritten notes in  
9 terms of the features of the well and its relationship to  
10 different formations?

11 A All I would -- I won't add any more to it, other  
12 than I will say that it's imperative that this annulus be  
13 allowed to serve its job as a fail-safe leak detector.

14 The reason it's here is that it can detect whether  
15 there are leaks occurring in this injection tubing, in this  
16 packer, or in the casing wall outside, or even in the  
17 wellhead. Any communication into or out of this annular space  
18 would comprise a leak either into or out of it, and the  
19 annulus is supposed to remain in a leak-free condition.

20 That's a principal of a well having mechanical  
21 integrity. And this is the fail-safe system that I was  
22 referring to. When a well is in use, this wastewater goes  
23 through the tubing, into the perforations of the well, and  
24 because you can only see the surface, it's very important that  
25 you know it's going through the tubing and into the subsurface

1 and not leaking along the way.

2 Q What did you mean by "communication"? Can you  
3 describe what you mean by that term, please?

4 A It's important that the well, when it's injected,  
5 have its injected contents go through the tubing and not leak  
6 into some other place, such as what is called communicating  
7 with the annulus. Communicating with the annulus simply means  
8 leaking into it.

9 Q Okay. And in terms of being able to determine  
10 whether, in fact, there is a leak going on subsurface, what  
11 are the indicators for that?

12 A Well, the principal indicator is seeing pressure  
13 that is on this annulus. So if I came to this -- or the  
14 Permittee were to come to this well and put a gauge on the  
15 annulus, the pressure observed was nonzero, or as we'll learn  
16 later, significantly higher than zero, that's an indication  
17 there is a leak in the annulus, unless the well annulus is, in  
18 fact, closed, it remains closed, and the only reason for this  
19 pressure is that it is being -- the annular liquids in here  
20 are being heated and expanding and causing surface pressure at  
21 the wellhead.

22 MS. SWANSON: Your Honor, at this time I would like  
23 to move into evidence the Complainant's Exhibit 2(A)2  
24 containing Mr. Wiser's handwritten drawings and Complainant's  
25 Exhibit 2(A)2-W.

1 JUDGE SUTIN: Are there any objections from  
2 Respondent, Mr. Zimsky?

3 MR. ZIMSKY: No objections, but I think one of our  
4 experts will probably want to use it and make their own  
5 markings on it.

6 JUDGE SUTIN: That's fine. At this time,  
7 Exhibit 2(A)2W is received into evidence.

8 MS. SWANSON: Thank you.

9 Q (Continued by Ms. Swanson) Mr. Wiser, I believe  
10 you stated previously, but could you please remind the Court  
11 whether this well operates pursuant to a permit?

12 A Yes. This well operates pursuant to a permit.

13 Q And when was the permit issued?

14 A The permit was issued on May 22, 2006.

15 MS. SWANSON: Your Honor, the parties have  
16 stipulated to the admission of the UIC Class II permit issued  
17 to this well as Stipulated Exhibit No. 2.

18 JUDGE SUTIN: Okay.

19 Q (Continued by Ms. Swanson) Mr. Wiser, why did the  
20 EPA issue the permit?

21 A The EPA issued the permit in response to a request  
22 from the Applicant to get a permit, and the Applicant met the  
23 standards for receiving a permit and so was issued the permit.

24 Q And, again, specific to this permit, can you please  
25 describe its key provisions?

1           A       This permit contains key provisions, as I have  
2 earlier explained, that addressed the well's construction, the  
3 well's operation, the well's testing, monitoring on the well,  
4 and reporting on the well.

5           Q       And why is reporting a key provision?

6           A       Reporting is very important because EPA needs to  
7 have the information in hand to know that compliance has been  
8 established.

9           Q       And same question for monitoring. Why is that  
10 considered a key permit provision?

11          A       Monitoring of the well is important in order to  
12 determine that the well is operating in compliance with permit  
13 conditions.

14          Q       And are there any other key permit conditions  
15 associated with this well?

16          A       Yes. It has an important provision about  
17 mechanical integrity. I had said earlier and I will say  
18 again, the permit, that actually Part 2(C)6 requires that this  
19 annulus be maintained at zero pounds per square inch when  
20 measured at the surface of the well.

21          Q       Mr. Wiser, please describe what mechanical  
22 integrity means.

23          A       It means the well has no significant leak into or  
24 out of this annular space and that it has no significant leak  
25 through vertical channels adjacent to the outside of the

1 casing into underground sources of drinking waters.

2 JUDGE SUTIN: I would remind everyone to speak  
3 slowly for the court reporter.

4 Q (Continued by Ms. Swanson) What are the permit's  
5 primary mechanical integrity requirements?

6 A The permit requires that this well maintains zero  
7 pressure on this annulus, and the permit further acknowledges  
8 that there may be situations where the Permittee is unable to  
9 maintain zero pounds on the annulus.

10 And in that event, the permit, again at Part 2(C)6,  
11 directs the Permittee to follow an Underground Injection  
12 Control Program Guidance No. 35. That Guidance is designed to  
13 determine whether the reason for annulus pressure may be  
14 because of the heating of this closed annulus and if that  
15 liquid is in an enclosed space and warmed up, it will expand,  
16 and that will cause pressure.

17 So the purpose of the Guidance is to determine  
18 whether that is the cause of the annulus pressure. And if  
19 it's not the cause of the annulus pressure, then the Guidance  
20 directs the Permittee to follow procedures for a loss of  
21 mechanical integrity. Loss of mechanical integrity is covered  
22 in the permit at Part 2(B)4.

23 And at that point in the permit, it directs the  
24 company to shut down the well or shut in the well within  
25 48 hours of discovery and to notify EPA within 24 hours and

1 to not resume injection until the well has demonstrated  
2 mechanical integrity and has received -- the Permittee has  
3 received written authorization to resume injection.

4 MS. SWANSON: Your Honor, the EPA Guidance 35  
5 referred to by Mr. Wiser has been stipulated to by the parties  
6 as Stipulated Exhibit No. 34.

7 Q (Continued by Ms. Swanson) Mr. Wiser, I would like  
8 to turn your attention to the inspection of the well.

9 A Uh-huh.

10 Q Did you inspect the well on May 5, 2010?

11 A Yes, I did.

12 Q And what was the purpose of that inspection?

13 A It's a routine inspection to ascertain whether the  
14 well was operating in compliance with its permit.

15 Q And can you describe the scope of or how you  
16 conducted your inspection?

17 A So I was accompanied by my EPA colleague,  
18 Ms. Trish Pfeiffer, and we met Mr. Dennis Reimers at the well  
19 pad location. And as with all inspections, I inspect the pump  
20 to see whether the pump is -- whether it's in operation or  
21 not, the well is actively injecting, whether the pump has any  
22 settings to shut down the pump automatically if certain  
23 pressure triggers are hit, so-called kill settings.

24 I inspect the wellhead, the injection wellhead, and  
25 using EPA's gauges that we bring that are calibrated gauges,



1 we have the operator place the gauges on the well's tubing,  
2 injection tubing, and on the well's annulus.

3 Q Can you describe what you observed during your  
4 inspection of the well?

5 A Yes. During that inspection, using our gauges, we  
6 observed tubing pressure of about 1,910 pounds per square inch  
7 and an annulus pressure of 1,725 pounds per square inch.

8 Q And what, if any, significance did you determine  
9 from the annulus pressure being at -- I'm sorry.

10 A 1,725 pounds.

11 Q 1725, thank you.

12 A The significance was, you know, that's a lot of  
13 pressure on the annulus. Mr. Reimers and I talked about what  
14 might be causing that annulus pressure, and we discussed the  
15 possibility that it might be related to the warming of this  
16 liquid in the annulus; that if it was a closed system and it  
17 was leak-free, that if this liquid that had been introduced  
18 into the well was more or less at room or surface temperature,  
19 as it was introduced in the well and was then in the deepest  
20 portions of the well, which is quite warm down in the  
21 subsurface, that it might be causing this liquid to heat up  
22 and expanding and causing surface pressure.

23 And the well at that time didn't have -- it wasn't  
24 easy to try to bleed off that annulus pressure. You can  
25 simply open the valve to the annulus at the wellhead, and it

1 will expose you to that annular liquid.

2 But there was no receptacle into which to place the  
3 liquids, but Mr. Reimers suggested that he arrange for such  
4 liquids -- to bring some receptacles or maybe a vacuum truck  
5 to the site. And I suggested the next day that I be  
6 telephoned to see what happened when he did that.

7 Q Mr. Wiser, did you prepare an inspection report  
8 from your May 5, 2010 inspection?

9 A I did.

10 MS. SWANSON: Your Honor, this document is  
11 stipulated to by the parties, and is Stipulated Exhibit No. 8  
12 in your notebook.

13 JUDGE SUTIN: Thank you.

14 Q (Continued by Ms. Swanson) So following your  
15 discussion with Mr. Reimers on May 5th, did you have any  
16 follow-up discussion with him?

17 A Yes. The next day, May 6, 2010, we happened to be  
18 driving past this well again, and later in that day, we came  
19 back to the well and, again, met Mr. Reimers.

20 At that time the well was actually being logged.  
21 There was a wire-line logging truck on the site, and the area  
22 around the wellhead had been cordoned off for safety reasons.  
23 Mr. Reimers told me that he had bled about a barrel or  
24 42 gallons off the annulus in order to have the annulus  
25 pressure restored to zero.

1 Q Were you able to measure for yourself the annulus  
2 pressure at the time of this visit?

3 A No. I didn't approach the wellhead because it was  
4 cordoned off being underneath a lubricator and a fireline  
5 truck, so I didn't want to endanger myself.

6 Q Okay. So just to summarize, at that time, having  
7 bled off about a barrel of liquid, I believe you testified the  
8 annulus pressure was measuring zero?

9 A That is what I was told, yes.

10 Q Did you have occasion to reinspect the well?

11 A Yes. On May 26th, we happened to be in the area  
12 again, and we reinspected the well on May 26, 2010.

13 Q And what was the purpose of that inspection?

14 A Again, it was meant to serve to see whether  
15 compliance with the permit was being achieved -- very similar  
16 to the previous inspection. This time I was accompanied by my  
17 EPA colleague, Cynthia Peterson, and we met Mr. Reimers at the  
18 wellhead and conducted an inspection very much like the  
19 previous one.

20 Q And what were your observations during the May 26,  
21 2010 inspection?

22 A So when EPA's gauges were placed on the wellhead on  
23 May 26th, the injection tubing pressure here was about 1,950  
24 pounds, and the annulus pressure was 1,840 pounds.

25 Q Was the well currently being operated at that time?

1           A       No.

2           Q       Mr. Wiser, did you prepare an inspection report  
3 based on that May 26, 2010 inspection?

4           A       Yes.

5           MS. SWANSON: And, Your Honor, the parties have  
6 stipulated to the admission of the May 26, 2010 inspection  
7 report. It's referred to as Stipulated Exhibit No. 9.

8           JUDGE SUTIN: Thank you.

9           Q       (Continued By Ms. Swanson) So, Mr. Wiser, what  
10 happened next? What happened following the May 26, 2010  
11 inspection?

12          A       I returned to the office and looked at the permit  
13 for this well and found the provision in this permit that  
14 requires that the well's annulus shall be maintained at zero  
15 pounds per square inch.

16                I identified the fact that it had been far in  
17 excess of zero pounds, nearly approaching the injection  
18 pressure, that that was a violation of that permit condition  
19 and wrote a letter that contained that statement, that  
20 allegation of violation for failure to maintain pressure at  
21 zero.

22                This letter also requested that the company,  
23 Maralex, respond in writing within 30 days with a plan of what  
24 it was going to do about this annulus pressure and when.

25          Q       In that letter that you're referring -- and let me

1 back up. Can you please provide the date that that letter was  
2 issued.

3 A That letter was issued on June 7, 2010.

4 Q And in that letter, did EPA at that time allege  
5 that the well had failed to maintain mechanical integrity?

6 A The letter stated that it might be a loss of  
7 mechanical integrity. It still allowed for the possibility  
8 that this pressure was -- might be induced from thermal  
9 heating.

10 MS. SWANSON: Thank you. Your Honor, the witness  
11 is referring to the June 6, 2010 Notice of Violation letter  
12 issued by the Environmental Protection Agency, and that  
13 document is included as Stipulated Exhibit No. 10, having been  
14 stipulated to by the parties.

15 JUDGE SUTIN: Okay. Thank you.

16 Q (Continued by Ms. Swanson) Mr. Wiser, what, if  
17 any, response did Maralex provide to the Notice of Violation?

18 A Maralex authored a letter dated July 6, 2010, and  
19 wrote back to EPA and described that they, too, had noted that  
20 the well had had annulus pressure. They had initially thought  
21 it was related to thermal effects, as we have been talking  
22 about, but owing to the nature of how fast the pressure was  
23 recurring in the annular space, that they now believed it was  
24 a leak.

25 And they said that they -- they laid out a series

1 of steps starting with shutting down the well and lowering a  
2 plug into the tubing of the well and placing that plug in the  
3 bottom and performing a series of different pressure tests on  
4 components of the well to determine which component of the  
5 well was leaking.

6 They said they would -- might need to use a  
7 completion rig to be present when this was taking place, and  
8 they forecast that they could get a rig in the early part of  
9 August 2010, the next month.

10 Q And was there anything mentioned by Maralex in that  
11 letter to keeping EPA informed of its activities?

12 A Yes. The letter stated that they would keep EPA  
13 apprised of these activities and the results of these  
14 activities as they became known to Maralex.

15 MS. SWANSON: Your Honor, the parties have  
16 stipulated to the Respondent's response letter to the Notice  
17 of Violation. That letter is dated July 6, 2010. It's  
18 included as Stipulated Exhibit No. --

19 JUDGE SUTIN: 11?

20 MS. SWANSON: 11? Thank you.

21 Q (Continued by Ms. Swanson) Mr. Wiser, did you have  
22 any follow-up conversations with Maralex regarding this  
23 activity and proposed plan?

24 A No.

25 Q Mr. Wiser, do you have an expert opinion concerning

1 whether or not the well failed to maintain mechanical  
2 integrity in accordance with the permit provision?

3 A Yes. This permit requires that the well maintain  
4 pressure at zero on the annulus. The permit, as I have gone  
5 over this just now, it does direct the Permittee to follow a  
6 Guidance if pressure is above zero and cannot be maintained at  
7 zero.

8 The purpose of that Guidance is to follow  
9 procedures to determine whether it might be thermally induced  
10 pressure. The Permittee, by letter of July 6th, stated they no  
11 longer believed it was thermal. It was a leak. Because of  
12 that, that permit provision, the Permittee is then directed to  
13 follow steps as though the well had lost mechanical integrity  
14 due to a leak.

15 And, therefore, my opinion about the well is that  
16 this annulus had a leak in it somewhere. It was being  
17 operated in this condition where this fail-safe system in the  
18 annulus was compromised because of the persistent pressure  
19 that kept coming into the annulus, and that that is an unsafe  
20 injection practice in light of the fact that there are  
21 underground sources of drinking water through which the well  
22 passes through the vicinity.

23 MS. SWANSON: Thank you, Mr. Wiser. Your Honor,  
24 I have no further questions for this witness at this time.

25 MR. ZIMSKY: Your Honor, may I proceed?

1 JUDGE SUTIN: Yes.

2 CROSS-EXAMINATION

3 BY MR. ZIMSKY:

4 Q Good morning, Mr. Wiser, William Zimsky on behalf  
5 of Maralex. We met yesterday on the site inspection.  
6 Although we probably should put that on the record that there  
7 was a site inspection.

8 MR. ZIMSKY: Your Honor, do you want to make a  
9 statement or something?

10 JUDGE SUTIN: Sure. I'll do that. For the record,  
11 the parties and myself met on the site of the Dara Ferguson  
12 No. 1 injection well. We viewed the area, the wellhead, as  
13 well as the various aspects of the operation. We'll just  
14 leave it at that. And the inspection -- or excuse me, not the  
15 inspection. The visit took about 15, 20 minutes. You may  
16 proceed, Mr. Zimsky.

17 MR. ZIMSKY: Thank you, Your Honor.

18 Q (Continued by Mr. Zimsky) Now, returning to that  
19 diagram, the schematic of the well, that schematic is from the  
20 permit application, correct?

21 A That's right.

22 Q And would you agree with me -- or do you have any  
23 knowledge whether the well was constructed differently than as  
24 shown there?

25 A Yes. It's my understanding the well was



1 constructed slightly differently, mostly in terms of depth.  
2 Again, this was proposed at the time of the permit  
3 application, so the well had not yet been drilled. So the  
4 depth of formation tops and the depth to which casings were  
5 actually going to be set were not at that time known and  
6 couldn't have been known.

7 Q Okay. So you indicated in your testimony that the  
8 13-3/8-inch casing originally on the permit went -- set at  
9 500 feet, but it was actually 737 feet, correct?

10 A That's my understanding, yes.

11 Q And do you have any understanding about the next  
12 casing on the permit? It says 9-5/8 inch? Do you have any  
13 recollection whether it was actually constructed at  
14 10-3/4-inch?

15 A I don't. I'm sorry.

16 Q Okay. If you could, refer to Stipulated Exhibit  
17 No. 11. Do you have a copy of that in front of you?

18 MS. SWANSON: I can provide him with one.

19 MR. ZIMSKY: Your Honor, if I could approach,  
20 I have the EPA exhibits that we have.

21 JUDGE SUTIN: Go ahead.

22 Q (Continued by Mr. Zimsky) If you could, open that  
23 to Exhibit No. -- Complainant's Exhibit No. 11, which is  
24 Stipulated Exhibit No. 11.

25 A I have that open. That's the July 6, 2010 letter.

1 Q From Maralex?

2 A Yes. I have that.

3 Q And attached to that is a schematic?

4 A Yes.

5 Q Do you see that?

6 A Yes, I do.

7 Q And that schematic shows the 10-3/4-inch casing?

8 A Indeed it does.

9 Q So Maralex overbuilt the well as compared to what  
10 the permit was, correct?

11 A Well, built it differently, yes.

12 Q It was built differently, but the casing was -- the  
13 first string of casing was an extra 237 feet, correct?

14 A Yeah. The extra -- the surface casing, the  
15 13-3/8-inch casing was set 237 feet deeper than originally  
16 forecast.

17 Q And the second casing was a larger casing. It  
18 wasn't 9-5/8. It was 10-3/4?

19 A It was 10-3/4 inch, and it was set at 3,568 feet.  
20 That is not 3,600.

21 Q Okay. So you would agree with me that it was built  
22 stronger than as required under the permit?

23 A I don't know if I would say stronger. It was built  
24 differently.

25 Q Well, thicker casing, longer string of casing --

1 would that help and assist the concerns of the EPA about  
2 protecting underwater drinking sources if that leaks?

3 A So, for instance, the surface casing being 237 feet  
4 deeper than had originally been forecast means that when it  
5 was set, it was casing (sic) off more of the subsurface  
6 geology than it would have been had it been 500 feet. That's  
7 correct.

8 Q And protecting it more than required?

9 A I don't know that I would use the word "protecting"  
10 other than -- the reason surface casing is set to the depth  
11 that it's typically set at has to do with the types of things  
12 that are encountered as the well was being drilled, as the  
13 hole was being drilled and also the supply of materials on  
14 hand when the well is being drilled.

15 So it's quite conceivable that when the well --  
16 when the hole was being drilled for the surface casing, that  
17 the anticipated geology didn't come out as anticipated. It  
18 turned out that it needed to go deeper.

19 Q Okay.

20 A So that would be a good thing to protect -- that  
21 was the reason for the deeper surface casing, and that would  
22 be good to set the surface casing and be more protective than  
23 leaving the bottom 237 feet uncased. Yes, I would agree with  
24 that.

25 Q And the thicker casing on the second string of

1 casing, slightly thicker casing than originally required by  
2 the permit -- again, the casing protects any fluids from  
3 escaping the injection well where they shouldn't be escaping,  
4 correct?

5 A Well, the use of 10-3/4-inch casing as opposed to  
6 9-5/8-inch casing is merely a wider casing. I'm not sure that  
7 it's intrinsically more protected.

8 Q So a thicker -- okay. A wider casing is --

9 A It's bigger around. It allows for the  
10 accommodation of a bigger drill bit to drill the next hole.

11 Q And on the schematic, there is a shaded area. What  
12 is that? Is that the cement?

13 A Yes. The shading on this exhibit is what the  
14 Permittee proposed in terms of where they would place cement,  
15 how they would cement the casing to the bore hole that they  
16 had just drilled the rock wall.

17 It was proposed, therefore, to have this surface  
18 casing cemented up to the surface, to have this intermediate  
19 that we know as 10-3/4-inch cemented to the surface and have  
20 this 7-inch or long string production casing cemented up into  
21 the intermediate casing. That was how it was proposed.

22 Q You have no reason to believe it wasn't constructed  
23 as proposed, do you?

24 A I do have reason to believe it was not constructed  
25 that way.

1 Q And what reason is that?

2 A The Permittee provided information shortly after  
3 the well had been drilled that actually described where the  
4 cement -- where it was placed and how high up in the well it  
5 went to.

6 Q And it was cemented?

7 A It was cemented, but not according to this.

8 Q Okay.

9 A In fact, there are gaps of cement. There's a gap  
10 here below the intermediate casing, and there's a gap her  
11 below the use of what is called the DV tool where this long  
12 string was cemented in two different stages.

13 And so there's approximately -- I have written or  
14 drawn on the other easel over there. It has the zones that  
15 are not cemented pursuant to the information submitted to  
16 EPA by Maralex. I can't quite see it from this angle, but  
17 there are gaps.

18 Q Now, let's go to Stipulated Exhibit No. 8. That  
19 would be No. 8 in the Complainant's exhibit.

20 A You're referring to the May 5th inspection?

21 Q May 5, 2010 inspection. Are you there?

22 A Yes.

23 Q Now, prior to this time, when did you first -- when  
24 were you first assigned this area to -- my understanding is  
25 this is Region 8. When were you assigned to oversee this area

1 including this injection well?

2 A September of 1999 when I accepted the position with  
3 Region 8.

4 Q Were there other people who conducted inspections  
5 of this well?

6 A Yes.

7 Q And do you know -- who were they?

8 A There was one prior inspection of this well. It  
9 was conducted by two gentlemen named -- one named Ken Phillips  
10 and the other Clark Davenport.

11 Q Do you recall that was?

12 A Not off the top of my head. I believe it was 2008.

13 MS. SWANSON: Your Honor, I'm going to object to  
14 this line of testimony as being immaterial and outside the  
15 scope, not only of this proceedings, but also to this witness'  
16 knowledge.

17 MR. ZIMSKY: Well, Your Honor, they're  
18 indicating -- well, near let me build a foundation.

19 JUDGE SUTIN: Okay.

20 Q (Continued by Mr. Zimsky) Are you familiar with  
21 the results of that inspection?

22 A Yes.

23 Q And what were the results of that inspection?

24 A The results were that those inspectors similarly  
25 observed annulus pressure. I believe the number was 800

1 pounds per square inch on the annulus and the well's injection  
2 tubing was observed at 790 pounds per square inch.

3 Q And do you know whether there were any  
4 recommendations made by those gentlemen?

5 A My understanding is that based upon the inspection  
6 report that I have seen, is that they recommended that the  
7 company attempt to bleed off this annulus pressure and get in  
8 touch with EPA about what had transpired in that process.

9 Q Now, at one point, did the EPA lose the well file  
10 in this case?

11 MS. SWANSON: Your Honor, I'm going to object to  
12 the relevance of this particular line of questioning.

13 JUDGE SUTIN: Mr. Zimsky?

14 MR. ZIMSKY: Well, Your Honor, he testified about  
15 an inspection that occurred at this well that was similar in  
16 nature to what is set forth in Exhibit No. 8. It was never  
17 provided to us. So I was wondering -- we have been told that  
18 the well file was lost. I'm just trying to see if we have a  
19 complete record here.

20 JUDGE SUTIN: All right. I'll allow it.

21 THE WITNESS: I'm not aware that the well file was  
22 lost, but I don't know if it was.

23 Q (Continued by Mr. Zimsky) Okay.

24 A It might have temporarily been misplaced, but  
25 certainly we have it.

1 Q And do you have a copy of that inspection that  
2 they --

3 A I have seen that inspection report just recently,  
4 yeah.

5 Q In preparation for this testimony?

6 A Uh-huh.

7 Q And that's a "Yes" for the court reporter?

8 A Yes. I'm sorry.

9 Q And did you do any other inspections yourself after  
10 they inspected? And your memory is in 2008, they did an  
11 inspection?

12 A Yeah. I'm not remembering the exact date of their  
13 inspection. And no, I did not do an inspection after their  
14 inspection up until this one in of May of 2010.

15 Q Now, I want to direct your attention to Stipulated  
16 Exhibit No. 34. It is groundwater Section Guidance No. 35.  
17 I don't think it's going to be in there.

18 MR. ZIMSKY: Your Honor, may I approach?

19 JUDGE SUTIN: Yes.

20 Q (Continued by Mr. Zimsky) Placing before the  
21 witness the Stipulated Exhibit book and Stipulated Exhibit  
22 No. 34, which is Groundwater and Section Guidance No. 35.

23 You testified about this earlier. Do you recall  
24 that?

25 A Yes, I do.



1 Q Now, the purpose of this procedure -- this is a  
2 procedure promulgated by the EPA to all section staff to  
3 follow when they observe excessive annular pressure on the  
4 well, correct?

5 A That's what the title of the Section Guidance is,  
6 yes.

7 Q And if you go down to the fourth paragraph, it  
8 instructs people who its directed to use Section Guidance  
9 No. 35 to determine if -- and the word "if" is underlined --  
10 the well has experienced a loss of mechanical integrity.  
11 Do you see that?

12 A Yes.

13 Q And I think you testified you would agree that at  
14 times, a well, an injection well, can have some annulus  
15 pressure build up, but that does not necessarily mean the well  
16 has lost mechanical integrity, correct?

17 A That is correct.

18 Q Now, there's a flow chart that is part of that. It  
19 starts on the second page. It says Procedures to follow when  
20 Excessive annular pressure is observed."

21 Do you have that?

22 A Yes. I'm on Page 2. Is that where you are?

23 Q Yes. There's a flow chart. It's like a table.  
24 Yes, you have it there. And it instructs the person during  
25 field inspections to follow this procedure, correct?

1           A     It does.

2           Q     And they ask some questions, and if it's a yes or  
3 no, you're instructed to do certain things depending  
4 whether -- like a typical flow chart, if yes, proceed to this.  
5 If no, follow this flow of decision-making or procedures,  
6 correct?

7           A     That's how this is typed up. That's correct.

8           Q     Okay. So the third row on the far left-hand column  
9 of this table, "Did annular pressure bleed to zero within  
10 60 seconds" -- now you talked about a previous inspection of  
11 the well. Do you know whether they followed this guideline?

12          A     I don't know.

13          Q     Let's talk about your May 10th or May 5, 2010  
14 inspection. Did you follow this guideline?

15          A     I did not have this guideline with me and did not  
16 follow it verbatim, no.

17          Q     Okay. Did the annular pressure bleed to zero  
18 within 60 seconds?

19          A     The time in which I was able to observe the annulus  
20 being bled down was during the May 26th inspection.

21          Q     Okay. So I'm just concentrating on May 5th. So  
22 you didn't observe it, whether it bled down or not?

23          A     No.

24          Q     Did you observe -- in the next row, it stays, "See  
25 if pressure returns within 15 minutes." Did you observe that?

1           A       No. I'll remind you that, you know, during that  
2 May 5th inspection, the reason there was no bleeding off of  
3 the annulus was there was no place to put the annular fluids  
4 so -- you know, it was the Permittee -- the Permit instructs  
5 the Permittee to follow these procedures. That's part of the  
6 permit.

7                       And during my inspection, I'm not required to  
8 follow this series of steps, if that's what the line of  
9 questioning is leading to.

10                      MR. ZIMSKY: Well, I appreciate you anticipating  
11 where my line of thought here, but just please answer the  
12 questions. Thank you.

13                      Q       (Continued by Mr. Zimsky) So this guideline is of  
14 no real value to the EPA. I mean, you previously testified  
15 that you relied on this guideline, but now you're testifying  
16 that you don't have to?

17                      MS. SWANSON: Objection. Counsel is misquoting the  
18 witness.

19                      MR. ZIMSKY: I think his earlier testimony was that  
20 he relied on Guideline 35. Now he's saying that he doesn't  
21 have to rely on Guideline 35.

22                      JUDGE SUTIN: Can you please read that question?  
23 Will you read back the question?

24                      (The last question was read back by the Reporter.)

25                      THE WITNESS: Is that the question?

1 Q (Continued by Mr. Zimsky) That's the question  
2 pending.

3 A Okay. Can you restate the question for me, please.

4 Q What don't you understand about that question?  
5 It's pretty clear to me.

6 A I'm sorry. Could you repeat the question?

7 Q Is there a certain word in there that you don't  
8 understand?

9 A Would you please repeat the question for me.

10 MR. ZIMSKY: I would like to have the court  
11 reporter read it back.

12 (The last question was read back by the Reporter.)

13 THE WITNESS: I guess I'm still not hearing what  
14 the question is.

15 Q (Continued by Mr. Zimsky) Okay. You previously  
16 said that Guideline 35 -- you testified about Guideline 35.  
17 Do you recall that testimony?

18 A Yes. I recall that I said that it's contained in  
19 the permit and that it direct the Permittee to follow the  
20 procedures in this guideline.

21 Q Now, this guideline is directed for all section  
22 staff in the Montana operations office, correct -- on the  
23 first page of this Guidance?

24 A The Guidance or the guideline has a title that is  
25 "Procedures to Follow When Excessive Annulus Pressure Is

1 Observed on a Well." And it's to all section staff including,  
2 Montana operations.

3 Q That would include you, correct?

4 A Yes.

5 Q And you testified you didn't have this guideline  
6 with you when you did your inspection, correct?

7 A That's correct.

8 Q And the bottom of this first page, it indicates  
9 "A flow chart for Guidance No. 35 is included for quick  
10 reference in the field."

11 Do you see that?

12 A Yes.

13 Q And you would agree with me, it's important for the  
14 EPA to have a standard protocol when you're doing inspections  
15 of injection wells or any other type of inspections. You want  
16 every field inspection person to be following a similar-type  
17 of guideline. You don't want some cowboys out there who are  
18 going off the script and are not following promulgated  
19 guidelines, correct? It's yes or no or not --

20 A I agree inspections should be standard.

21 Q And the purpose of this Guidance is to have  
22 standard inspections, correct?

23 A This is one of the features of this.

24 Q One of the features. And that's something that is  
25 a benefit for both the EPA and the Permittee, correct?

1 A Yes.

2 Q And the Permittee is, you just indicated, is  
3 supposed to be knowledgeable about this guideline and rely on  
4 this guideline, correct?

5 A That's right. They're supposed to follow it.

6 Q Supposed to follow it. And you're supposed to  
7 follow it -- or you don't have to follow it?

8 A Well, that's where I'm not sure -- that I agree  
9 with you.

10 Q Okay. So you don't agree that you have to follow  
11 this?

12 A That's correct.

13 Q But the Permittee has to follow it?

14 A That's correct, because it's in the permit.

15 Q And the reason you have a Guidance is so across the  
16 board for the EPA is that you have consistent inspections and  
17 consistent outcomes, correct?

18 A It's meant to be to be for that purpose, yes.

19 Q Now, if you go to Page 3 on the left-hand column,  
20 "Does pressure return to the annulus within 14 days?" And  
21 there's a yes row, a yes column, and a no column.

22 And if it does return in 14 days, it says, "EPA  
23 technical expert will design a proper mechanical test.

24 Compliance officer will require the operator to conduct a test  
25 within 14 days."

1 Do you see that?

2 A I do.

3 Q Were you the EPA technical expert?

4 A No.

5 Q Who was the EPA technical expert?

6 A To my knowledge, EPA was never contacted to develop  
7 a procedure by an EPA technical expert.

8 Q In this case or ever?

9 A In this case.

10 Q Okay. It says, "EPA expert will design a proper  
11 mechanical integrity test."

12 Did I read that correctly?

13 A It does, in answer to the question, "Does pressure  
14 return to the annulus within 14 days?"

15 Q Okay. So if it doesn't return in 14 days, end of  
16 procedure, correct? That's the flow chart -- end of  
17 procedure. That means no problems.

18 A I'm not sure that this flow chart is purely, as you  
19 say, sequential. There are procedures that this flow chart  
20 describes that don't necessarily have to take place in  
21 sequential order, but you're right. Where it says that, then  
22 it says, "If the answer to 'Does pressure return to the  
23 annulus within 14 days,' the answer is no, then it does say  
24 the well doesn't have mechanical integrity."

25 Q Let's go to the last page of this guideline.

1 There's a 14-day pressure monitoring. Did you or anyone at  
2 the EPA advise Maralex to -- did you ever give them this form?

3 A No. I did not give them this form.

4 Q Did you advise them to record it for 14 straight  
5 days?

6 A No.

7 Q So as of your May 5, 2010 inspection, even though  
8 it did show annulus pressure, that did not necessarily mean  
9 that the well had lost mechanical integrity; is that correct?

10 A I think that's correct, yes.

11 Q Let's go to your May 26th inspection. That's  
12 Stipulated Exhibit No. 9. Now I'm going to ask you the same  
13 questions I asked you about the May 5th inspection.

14 At that time, did you have the Guidance No. 25 with  
15 you?

16 A No.

17 Q At that time, did you follow Guidance No. 35 in  
18 connection with the flow chart attached thereto?

19 A You mean as an EPA inspector did I follow it?

20 Q Yes?

21 A No.

22 Q You did not provide Maralex with the 14-day  
23 monitoring chart, correct?

24 A That's correct.

25 Q Instead, 12 days later, you sent Complainant



1 Exhibit 10, Stipulated Exhibit 10. Do you see that?

2 A Yes. I see that.

3 Q And you testified and as this letter states -- now,  
4 you didn't sign this, correct?

5 A No.

6 Q Who is Phillip Strobel?

7 A He was the acting director of the Technical  
8 Enforcement Program.

9 Q How did he come to sign this letter?

10 A I handed it to him to sign.

11 Q You drafted it?

12 A I did.

13 Q Is there any indication on this letter that you  
14 drafted this letter? You know, sometimes on the bottom  
15 left-hand side, there's a little mark and initials of who was  
16 involved in drafting.

17 A No. There is no such mark.

18 Q But you drafted this verbatim for his signature?

19 A Yes.

20 Q And at that time, you observed annulus pressure on  
21 May 26, 2010, and 12 days later, this letter got sent,  
22 correct?

23 A That's correct.

24 Q There was no 14-day monitoring period, correct?

25 A That's correct.

1           Q       Now, you testified about the Plaintiff's exhibit or  
2 Complainant's Exhibit No. 11, Stipulated Exhibit No. 11. Is  
3 Exhibit No. 11 in that binder, the EPA exhibits?

4           A       Yes.

5           Q       Now, you received this letter, correct?

6           A       Yes.

7           Q       Do you have a tickler system to track wells and a  
8 tickler system -- at least that I'm familiar with is, you have  
9 your secretary, assistant, or you, yourself, as the case might  
10 be -- you say "Okay. I received this letter. I've got to  
11 follow-up on this letter within a month or two months or, you  
12 know, two weeks."

13                   Do you have any type of system like that?

14           A       We have a Region 8 database that has some capacity  
15 like that, but it is not a detailed tickler system as you  
16 described.

17           Q       Did you tickle this letter that you received --

18           A       No.

19           Q       -- July 6th?

20           A       No.

21           Q       When was the next time that you had any contact  
22 with Maralex concerning this well?

23           A       Me, personally?

24           Q       Yes.

25           A       I would have to say it had to have come after the

1 EPA issued its complaint.

2 Q Okay. Was responsibility for overseeing this well  
3 inside the EPA passed from you to Sarah Roberts?

4 A Yes, it was.

5 Q Do you recall when that occurred?

6 A That happened approximately the end of 2010,  
7 beginning of 2011.

8 Q During that handoff, did you just dump a bunch of  
9 files on her desk and say, "See ya, I'm going to D.C.," or did  
10 you say, "Sarah, let's go through these files," or did you  
11 write a memo saying, "Okay. This is everything that is active  
12 out there."

13 Did you have meetings? What was the mechanics of  
14 the transition?

15 A I made myself available to Ms. Roberts when she  
16 would need assistance. I sat in on, you know, many a meeting  
17 with Ms. Roberts to explain what types of appropriate actions  
18 would be needed in response to certain circumstances. It was  
19 a handoff of responsibilities in general. It was not a  
20 handoff of this well and this well and this well.

21 Q So there was no, like, red flags or yellow tab  
22 saying, "Okay. Follow up on this well. I had an inspection  
23 on this well, so you need to follow up"?

24 I'm not talking about this particular well, but any  
25 well in general. There was nothing specific about the handoff

1 and specific as to any particular well or any particular  
2 matter you were working on at that time?

3 A I don't know that I would say that. There might  
4 have been a few that were in my immediate thoughts that  
5 I needed to let her know about.

6 Q And you would have let her know about anything that  
7 you thought was pressing, correct? Something that was  
8 important, you wouldn't have let slide -- or would you have?

9 A There's a lot of things that go through my desk, so  
10 whether something was important and I didn't tell her about it  
11 or not is -- you know, it's possible that something that was  
12 important and would have been communicated -- had I remembered  
13 it, I would have said something. But if you're asking if --

14 Q Again, you're anticipating my question, and I  
15 didn't ask that question.

16 A Okay.

17 Q Okay. Thank you. Did you keep for your own  
18 organization -- you had a lot of wells that you were  
19 overseeing, correct?

20 A Yes, that's correct.

21 Q Did you keep a chart for your own self that listed  
22 statuses of like when the next MIT -- there's a requirement  
23 that an MIT be performed every five years?

24 A Every five years.

25 Q Did you have a tickler system for that that would

1 pop up and say, "Oh, we have got to get this MIT done on  
2 Injection Well Smith No. 2."

3 Did you have something like that?

4 A Yes. As I mentioned, we have a Region 8 database  
5 that does track when things have occurred, and one can use it  
6 to calculate when things are due.

7 Q Now Guidance No. 35 refers to in the fourth  
8 paragraph, second sentence, it says, "If you find that there  
9 is" -- and "is" is underlined -- "a loss of mechanical  
10 integrity, use headquarter's Guidance No. 76."

11 Do you see that?

12 A You're talking about the first page of this  
13 guideline? Is that right?

14 Q Yes.

15 A Yes. I see it.

16 Q Are you familiar with that Guidance?

17 A Yes, I am.

18 Q And that Guidance indicates that if there is a loss  
19 of mechanical integrity that the EPA is to direct the  
20 Permittee, the operator to shut in the well within 48 hours;  
21 is that correct?

22 MS. SWANSON: Your Honor, I'm going to object.  
23 Counsel is assuming facts not in evidence. We did not talk on  
24 Direct about Guidance No. 76.

25 MR. ZIMSKY: Well, Your Honor, we talked about

1 Guidance No. 35. And 35 says if there is mechanical -- okay.  
2 Well, let me go this way.

3 Q (Continued by Mr. Zimsky) You never -- you,  
4 yourself, during your supervision of this well never found  
5 that it lacked mechanical integrity, correct.

6 A I did not author a letter that stated that. That's  
7 correct.

8 Q In fact, the letter did you write said "It may lack  
9 mechanical integrity," correct?

10 A That's correct.

11 Q And if you thought it did lack mechanical  
12 integrity, you would have followed the guidelines and told  
13 them to shut the well in, is?

14 A That's correct.

15 Q There is no evidence that you're aware of that  
16 indicates there was any leakage from the injection well into  
17 the surrounding formations, correct, other than the  
18 perforations where it was permitted to be dispersed, injected  
19 into, correct?

20 A That's correct.

21 Q And if there had been, you would have required --  
22 the EPA would have required some sort of remediation of that  
23 spill, correct?

24 A Remediation of a spill? I'm not sure I'm following  
25 what you're asking.

1           Q     If you had thought there was a well failure --  
2     first of all, if you thought -- if you come to the conclusion  
3     that there was mechanical integrity failure, you would have  
4     ordered them -- them being Maralex Disposal -- ordered them to  
5     shut in the well; is that correct?

6           A     That's correct.

7           Q     If there was loss of fluid from the well into the  
8     surrounding formations through the casing where it spots areas  
9     where they were not permitted to inject the water, there would  
10    have been a remediation of the well failure, correct?

11          A     That's possible. It's not necessarily true.

12          Q     But there was no remediation ordered ever on this  
13    well, correct, to your knowledge?

14          A     There was no order remediating the surrounding  
15    groundwater, no. I think that's the question you were asking.

16          Q     Well, remediation of the well -- of any well  
17    failure, correct?

18          A     Correct.

19          Q     To your knowledge, this well never failed, correct?

20          A     It never lost mechanical integrity during the sets  
21    of facts I observed.

22                JUDGE SUTIN: Mr. Zimsky, how much longer do you  
23    think you have?

24                MR. ZIMSKY: Just a couple minutes, if I could look  
25    at my notes here.

1 JUDGE SUTIN: That's fine.

2 Q (Continued by Mr. Zimsky) Now, do you have any  
3 knowledge about the weight of the 7-inch casing in the permit  
4 as opposed to the as-built well? And a higher weight casing  
5 would indicate a stronger well?

6 A The 7-inch casing that was proposed was proposed to  
7 be built with 23 pounds per foot of casing, and when it was  
8 actually constructed, apparently pursuant to Exhibit 11, it was  
9 built with differing amounts of either 29 pounds or 32 pounds  
10 per foot casing.

11 Q And you would agree that is stronger casing?

12 A It is thicker casing, yes.

13 Q And thicker would be stronger?

14 A It's thicker, and it has a higher burst strength,  
15 yes.

16 MR. ZIMSKY: That's all the questions I have.  
17 Thank you, Your Honor. Thank you, Mr. Wiseman.

18 JUDGE SUTIN: Ms. Swanson, I will allow Redirect.  
19 I'm wondering if we should take a break for maybe ten minutes  
20 unless your questions are quick.

21 MS. SWANSON: Your Honor, my questions are quick.  
22 I have approximately eight questions for Redirect of Mr.  
23 Wiser.

24 JUDGE SUTIN: And I have a few questions myself, so  
25 why don't we take a ten-minute break and come back, and we can



1 Redirect, and we'll go from there.

2 MS. SWANSON: Thank you.

3 JUDGE SUTIN: Let's be back at 11:05. We'll go off  
4 the record.

5 (A recess was taken from 10:56 a.m. to 11:05 a.m.)

6 JUDGE SUTIN: Okay. Just for preparation for the  
7 day, before we start up again, I think we will -- if possible,  
8 Ms. Swanson, we'll go until 12:15 and then break for lunch for  
9 an hour. Does that work for the parties?

10 MR. ZIMSKY: Yes, Your Honor.

11 MS. SWANSON: Your Honor, I believe that's fine.

12 JUDGE SUTIN: Okay. Great. So Ms. Swanson, would  
13 you like to Redirect?

14 MS. SWANSON: I would, Your Honor. Thank you.

15 Mr. Wisner, just a few questions on Redirect, please.

16 REDIRECT EXAMINATION

17 BY MS. SWANSON:

18 Q You stated during your Cross-Examination that the  
19 actual construction of the well differs slightly than the  
20 proposed construction; is that correct?

21 A I did.

22 Q Does the fact that the Respondent constructed the  
23 well with gaps in the cement casing make it more or less  
24 protective?

25 A Less protective.

1 Q And with regard to the question that was asked to  
2 you regarding prior inspections of the facility, did the  
3 Respondent ask for the well file or, specifically, the  
4 historical inspection report at any time in preparation for  
5 this hearing?

6 A Not to my knowledge.

7 Q Thank you. With regards to Guidance No. 35,  
8 although the Guidance originally was written for EPA field  
9 inspectors, isn't it true that this Guidance is regularly  
10 recommended to well owners and operators to follow?

11 A Yes. It's contained in permits.

12 Q I'm sorry. Can you repeat that?

13 A It's contained in the permits that are issued for  
14 injection well operators.

15 Q So following on that, isn't it true that the permit  
16 itself requires that the Permittee follow the procedures that  
17 are set forth in Guidance 35 when they either cannot maintain  
18 zero annulus pressure and suspect there may be a thermal  
19 fluctuation?

20 MR. ZIMSKY: Objection. It's a bit of a leading  
21 question.

22 JUDGE SUTIN: Sustained. If you can, rephrase the  
23 question, Ms. Swanson.

24 Q (Continued by Ms. Swanson) Mr. Wisner, does the  
25 permit refer to Guidance 35?

1           A       Yes, it does.

2           Q       And in what capacity?

3           A       It directs the Permittee to follow the procedures  
4 laid out in Guidance 35 if they cannot maintain zero pounds  
5 per square inch on the annulus.

6           Q       And who is required to follow the conditions of a  
7 permit?

8           A       The Permittee is.

9           Q       And what are -- what are EPA's responsibilities  
10 with regard to the permit?

11          A       EPA's responsibilities are to ensure that it's  
12 complied with.

13          Q       Thank you. Mr. Wiser, after receiving the proposed  
14 plan for Maralex to determine the source of the leak and the  
15 steps to repair it on July 6th of 2010, to your knowledge, did  
16 EPA receive any further communications from Maralex until EPA  
17 initiated the inspection in April of 2011?

18          A       Not to my knowledge, no.

19                   MS. SWANSON: Okay. Thank you. No further  
20 questions, Your Honor.

21                   JUDGE SUTIN: Thank you, Ms. Swanson. Mr. Wiser,  
22 I have a couple questions for you.

23          Q       (By Judge Sutin) With respect to the permit -- do  
24 you still have the book there? I think it's Stipulated  
25 Exhibit No. 2.

1                   Can you tell me on Page 2 of the permit, it says  
2                   that the permit is effective on May 22, 2006. Is the permit  
3                   still effective?

4                   A        Today?

5                   Q        Yes.

6                   A        Yes, it is.

7                   Q        Okay. And did you write this permit?

8                   A        No, I did not.

9                   Q        Do you know who did?

10                  A        I believe the primary permit writer was  
11                  Ms. Trish Pfeiffer.

12                  Q        Thank you. And then just one other question about  
13                  your exhibit here. Can you show me where the underground  
14                  drinking water sources are? I think it's -- is it noted on  
15                  there? I see different formations. Can you show me which  
16                  ones are the --

17                  A        According to the Statement of Basis accompanying  
18                  this permit, the following are underground sources of drinking  
19                  water: The San Jose, the Farmington, the Fruitland, the  
20                  Picture Cliffs, the Cliff House, and the Menafee formations.

21                  Q        So say that again. The San Jose --

22                  A        San Jose, the Farmington, the Fruitland, Pictured  
23                  Cliffs, the Cliffs House, and the Menafee formations.

24                  JUDGE SUTIN: Okay. Thank you. I have no further  
25                  questions. Do you have any follow-up question to my

1 questions?

2 MR. ZIMSKY: No, Your Honor.

3 MS. SWANSON: No, Your Honor.

4 JUDGE SUTIN: Thank you, Mr. Wiser.

5 THE WITNESS: You're welcome.

6 JUDGE SUTIN: Ms. Swanson, your next witness.

7 MS. SWANSON: Next, I would like to call Sarah

8 Roberts, environmental scientist for the United States

9 Environmental Protection Agency Region 8.

10 **SARAH MAUREEN ROBERTS,**

11 the witness herein, having been first duly sworn, was examined  
12 and testified as follows:

13 DIRECT EXAMINATION

14 JUDGE SUTIN: Ms. Roberts, are you ready to begin?

15 MS. SWANSON: I am.

16 Q (By Ms. Swanson) Can you please state and spell  
17 your full name for the record.

18 A Sarah Maureen Roberts, S-A-R-A-H, M-A-U-R-E-E-N,  
19 R-O-B-E-R-T-S.

20 Q Ms. Roberts, describe your education, please.

21 A In 2007, I received a bachelor's of science in  
22 geology from James Madison University in Virginia, and in  
23 2009, I received a master's of science in hydroelectric  
24 science and engineering from the Colorado School of Mines in  
25 Colorado.

1 Q Where are you currently employed?

2 A At the United States Environmental Protection  
3 Agency in Region 8.

4 Q And how long have you worked for the Region 8  
5 office?

6 A Since January of 2010.

7 Q What is your position?

8 A I am an environmental scientist, and I work in the  
9 Underground Injection Control program for the Office of  
10 Enforcement, Compliance, and Environmental Justice.

11 Q Would you describe your training as it relates to  
12 your position.

13 A I would include my degrees in geology and hydrology  
14 at EPA. I have received training, various trainings -- ethics  
15 training; environmental justice training; UIC program  
16 training; basic inspector training; UIC specific inspector  
17 training; and on-the-job training with the UIC program.

18 Q Would you please provide a little bit more detail  
19 regarding your UIC inspector training.

20 A That was a week-long course that included education  
21 in the UIC program in general, the applicable regulations, and  
22 statutory requirements, as well as permitting conditions,  
23 background about underground injection wells, how to conduct  
24 inspections, how to write inspection reports, and then  
25 experiences from current and former EPA UIC employees.

1 Q And can you tell us who sponsored that training?

2 A That training was put on by the agency, EPA, and it  
3 was instructed by the various experienced UIC employees.

4 Q Describe, please, your on-the-job UIC training.

5 A That involved accompanying more experienced  
6 inspectors on inspection trips to learn standard inspection  
7 processes and also working with experienced UIC employees on  
8 case development.

9 Q And did these type of wells you received training  
10 on include Class II wells?

11 A Yes.

12 Q Ms. Roberts, have you supplied a resume in  
13 connection with this matter?

14 A Yes.

15 MS. SWANSON: Your Honor, this document has been  
16 stipulated to the parties as Stipulated Exhibit No. 6.

17 JUDGE SUTIN: Thank you.

18 Q (Continued by Ms. Swanson) Ms. Roberts, please  
19 summarize your work experience in the EPA Region 8 UIC  
20 program.

21 A On the UIC program, I review deep wells. That's  
22 Class I, II, and III, and some Class V wells for compliance  
23 with permits and regulatory requirements. To do this,  
24 I conduct inspections, review reports, and other  
25 correspondence from operators.

1           And I also aid in enforcement cases in the case  
2 development process such as penalty assessments.

3           Q     Do you have experience in conducting Class II  
4 inspections?

5           A     Yes. I've conducted over 900 deep well  
6 inspections, and the majority, over 800 of those, were  
7 Class II wells.

8           Q     And what do your Class II well inspections  
9 typically involve?

10          A     They'll include a site visit to the well site.  
11 I typically inspect the pump, whether it's currently running,  
12 the pressure at which the pump is operating at. At the  
13 wellhead, I'll observe the injection pressure, whether the  
14 pump is -- whether the well is actively injecting, and I'll  
15 observe the annulus to see whether that has pressure on it  
16 typically.

17                   And then I'll create an inspection report and  
18 follow up in the office to review for compliance with permit  
19 requirements.

20          Q     Approximately how many Class II well enforcement  
21 cases have you participated in?

22          A     Ten. And those ten address noncompliance at over  
23 50 Class II wells.

24          Q     And can you, please, describe your role in a  
25 typical enforcement action.



1           A       I'll typically review the facts of the case and the  
2       statutory factors, how they apply to the statutory factors and  
3       permit requirements. And then I'll aid in the process of  
4       penalty assessment, as well.

5           Q       And, Ms. Roberts, have you any prior enforcement  
6       experience in dealing with the inaccurate reporting?

7           A       Yes.

8           Q       And also with regard to the failure to observe  
9       weekly annulus pressure? Have you had any prior experience  
10      with that violation?

11          A       Yes.

12          Q       With regard to mechanical integrity, have you had  
13      experience in prior enforcement actions, alleged violations,  
14      or had experience?

15          A       Alleged failure to maintain mechanical integrity,  
16      yes.

17          Q       Thank you. Ms. Roberts, with regard to the case  
18      specific background and your involvement in this case, are you  
19      familiar with the Dara Ferguson No. 1 well?

20          A       Yes, I am.

21          Q       Can you please describe how you became involved in  
22      this case.

23          A       In early 2011, I was contacted by Victoria Schmitt  
24      of La Plata County Engineer's office and Josh Joswick, the  
25      San Juan Citizens Alliance. In phone telephone and e-mail

1 correspondence, both Ms. Schmitt and Mr. Joswick inquired as  
2 to the status of the well.

3 Ms. Schmitt referred to the noncompliance observed  
4 in the May 26, 2010 inspection, and inquired as to EPA's  
5 follow-up. And both parties, both Ms. Schmitt and Mr. Joswick  
6 expressed that the well appeared to still be injecting.

7 Q And did either Ms. Schmitt or Mr. Joswick express  
8 any concerns with regard to the well's continued operation?

9 A My understanding was that they were both concerned  
10 that the well was operating in a way that may present risk to  
11 the underground sources of drinking water in the area.

12 MS. SWANSON: Your Honor, the Respondent has  
13 stipulated to the e-mail exchange between Ms. Schmitt and  
14 Ms. Roberts referred to as Exhibit No. 14.

15 JUDGE SUTIN: Thank you.

16 Q (Continued by Ms. Swanson) Ms. Roberts, why did  
17 you respond to the phone call from Ms. Smith and Mr. Joswick  
18 as opposed to Mr. Wiser?

19 A At that point in time, Mr. Wiser was working on  
20 another assignment with EPA.

21 Q And can you tell us when generally that transfer of  
22 the duties took place?

23 A I don't know specifically. I worked alongside  
24 Mr. Wiser until his work transferred. I'm not sure which  
25 month.

1 Q He testified earlier that he transferred duties  
2 around February 2011. Would you agree that that's when you  
3 inherited responsibilities for the Maralex case?

4 A Yes, yes. We shared responsibilities prior to that  
5 with him as the lead, but yes. So after February of 2011, the  
6 responsibility was on me.

7 Q What, if anything, did you do in response to the  
8 phone calls received from Ms. Schmitt and Mr. Joswick?

9 A After the well had been brought to my attention or  
10 by this correspondence, I pulled the well file and did a well  
11 file review.

12 Q And can you please describe what documents were  
13 included in your review.

14 A Both the inspection reports from the May 2010  
15 inspection; the follow-up Notice of Violation that EPA issued  
16 on, I believe, June 7th of 2010; the answer that Maralex  
17 mailed to EPA that they made on July 6, 2010. I believe we  
18 received it on July 8th.

19 I also reviewed the 2010 annual monitoring report  
20 submitted by Maralex in early 2011, and I reviewed the permit  
21 and applicable regulatory requirements.

22 Q What of any significance did you note in the  
23 May 2010 inspection report?

24 A I noted that annulus pressure was observed on the  
25 well in both cases. I also noted that cause of this annulus

1 pressure, discussions of cause of this annulus pressure  
2 including loss of mechanical integrity and thermal fluctuation  
3 as potential causes. And I -- yes, that's what I noted.

4 Q With regard to the June 7, 2010 Notice of  
5 Violation, when you reviewed that, did you note anything of  
6 significance?

7 A Yes. I noted that the letter -- the Notice of  
8 Violation once again referenced annulus pressure. It  
9 referenced the potential explanation of thermal fluctuation  
10 being the cause, and it referenced the -- or I think it stated  
11 that the well may -- this annulus pressure may be an  
12 indication that the well had failed to maintain mechanical  
13 integrity and required follow-up by the company.

14 Q And when you reviewed the July 6, 2010 response  
15 from Maralex what, if anything of significance did you note.

16 A In the response from Maralex, I noted that the  
17 company stated that they had believed that thermal  
18 fluctuations was the cause of the annulus pressure, but at the  
19 time the letter was sent, they believed that the annulus  
20 pressure may be due to a leak.

21 I also noted that Maralex outlined the steps that  
22 they planned to take to identify the location of the leak and  
23 repaired the well.

24 I noted that Maralex stated that they would inform  
25 EPA of the actual date, but that some of the steps to identify

1 the location of the leak could be taken at that time.  
2 However, a rig was required to take the steps needed to --  
3 some of the steps needed to repair the well, and that they  
4 expected that rig to be available for the repairs in August  
5 of 2010.

6 Q And with regard to the 2010 annual monitoring  
7 report that you said you reviewed as part of your file review,  
8 did you note anything of significance in that document?

9 A Yes. In the annual monitoring report that the  
10 operator is required to submit, the annulus pressure for the  
11 average and maximum annulus pressures for the months of 2010  
12 were reported to be zero pounds per square inch.

13 And that was -- I noted that because through the  
14 correspondence with Maralex and through EPA inspection,  
15 EPA knew that to not be true.

16 Q And what did you determine after reviewing the  
17 permit and applicable regulations?

18 A That the well had failed mechanical integrity and  
19 that the 2010 annual monitoring report submitted was  
20 inaccurate.

21 Q Ms. Roberts, how did you determine that Maralex  
22 had failed to maintain mechanical integrity based on your file  
23 review?

24 A First of all, the permit at Part 2B requires that  
25 the Permittee establish and maintain mechanical integrity on

1 the well.

2 Secondly, the permit at Part 2(B) 2 states that if  
3 loss of mechanical integrity becomes evident during operation,  
4 such as presence of pressure on the annulus, that the  
5 Permittee is required to take a set of steps.

6 They are to notify EPA within 24 hours, shut in the  
7 well within 48 hours, and they're required to keep the well  
8 shut in until mechanical integrity is restored, and they have  
9 received written notification from EPA.

10 Additionally, the permit at Part 2(C)6 requires  
11 that the tubing casing annulus be maintained at zero pounds  
12 per square inch. And then it continues to say that if that is  
13 not possible, that the Permittee is required to follow the  
14 procedures that are outlined in Guidance 35.

15 And Guidance 35 outlines procedures that can be  
16 used to determine whether annulus pressure is caused by  
17 thermal fluctuation or loss of mechanical integrity.

18 Maralex indicated in their 2000 -- July 6, 2010  
19 letter to EPA that they believed that the annulus pressure was  
20 due to a leak. According to following this procedure and  
21 following the permit at Part 2B, if annulus pressure is  
22 determined to not be due to thermal fluctuation, then the  
23 procedure and permit determines that the annulus pressure is  
24 due to loss of mechanical integrity, and the Permittee is  
25 directed to take those steps that I outlined previously.

1           Q       Does the Guidance offer a third option for pressure  
2       in the tubing casing annulus, other than fluctuations or loss  
3       of mechanical integrity?

4           A       No.

5           Q       So, Ms. Roberts, to your knowledge, other than the  
6       procedures actually set forth in Guidance 35, do you know  
7       whether the procedures for determining if thermal fluctuations  
8       were causing the observed annulus pressure were described to  
9       Respondent in any other way?

10          A       Guidance 35 offers procedures for determining if  
11       annular pressure is caused by thermal fluctuation. My  
12       understanding is that Mr. Wiser also communicated with the  
13       operator about thermal fluctuations and steps that they may  
14       take to determine whether or not that annulus pressure was  
15       caused by thermal fluctuations. That's my understanding.

16          Q       Ms. Roberts, based on your review of the files and  
17       the permit, what was your understandings of the well's  
18       condition?

19          A       According to compliance requirements in the permit,  
20       the well had lost mechanical integrity.

21          Q       And did you have knowledge of any other  
22       correspondence from the Respondent, other than the  
23       July 6, 2010 proposed plan that they submitted?

24          A       I have no knowledge of any additional  
25       correspondence before the inspection I conducted on

1 April 13, 2011.

2 Q So in conducting your file review, did you identify  
3 any other areas of noncompliance, other than loss of  
4 mechanical integrity?

5 A Yes. The inaccurate reporting is evident in the  
6 2010 annual monitoring report.

7 MS. SWANSON: And, Your Honor, the parties  
8 stipulated that Maralex inaccurately reported the annulus  
9 pressure in the 2010 annual monitoring report. That is set  
10 forth in the Stipulation of Fact. It's in testimony.

11 JUDGE SUTIN: Thank you.

12 Q (Continued by Ms. Swanson) Ms. Roberts, please  
13 describe what followed, what you did next.

14 A At that point in time, I had identified that the  
15 well had lost -- failed to maintain mechanical integrity and  
16 that the operator had -- in order to address the leak, had set  
17 forth a plan, including steps to take to identify the leak and  
18 repair it.

19 So at that point in time, I didn't know if the  
20 operator had taken those steps and just hadn't notified EPA  
21 and had not requested authorization to inject, or if the  
22 operator had failed to act on those steps. I also wasn't  
23 aware of whether or not that well was active at the time.

24 Q So what, if anything, did you do to confirm this  
25 information?



1           A       Conducted a site visit on April 13, 2011.

2           Q       And who was present during that inspection?

3           A       On behalf of EPA, I was present, along with my  
4       coworker, Don Breffle. From the Southern Ute Tribal  
5       Environmental office, Brett Francois was present, and from  
6       Maralex, Pete Tree, who was -- who I was told was their  
7       pumper, and Christi Reid, who I told was an engineer with  
8       Maralex.

9           Q       At the time of your inspection, was the well  
10       injecting?

11          A       Yes, it was.

12          Q       Were you able to observe the annulus pressure  
13       during that inspection?

14          A       Yes. I was able to observe the annulus, and it did  
15       have pressure on it. I believe we measured it at  
16       approximately 1,670 pounds per square inch.

17          Q       And what was the significance of the pressure on  
18       the annulus at that time?

19          A       The pressure on the annulus had nearly equalized  
20       with the pressure on the injection stream, on the tubing. For  
21       a tubing leak at the annulus could not be higher than the  
22       injection pressure, and it was only 80 pounds below it.

23                 Additionally, Guidance 35 states that excessive  
24       annulus pressure is to be considered at 100 pounds per square  
25       inch or 10 percent of the injection pressure. And at that

1 time of the inspection, the annulus pressure was over  
2 95 percent of the injection pressure.

3 Q And can remind the Court, please, what the  
4 allowable pressure is for that well.

5 A The allowable injection pressure is, I believe,  
6 2,000 pounds per square inch. At the time, it was injecting  
7 at 1,750 pounds per square inch. And the allowable annulus  
8 pressure is zero pounds per square inch.

9 Q And what did the pressure level indicate about the  
10 well?

11 A That the well still lacked mechanical integrity.

12 Q Did you discuss these findings with the Maralex  
13 representatives at the time of the inspection?

14 A No.

15 Q Did you have any conversations with either Mr. Tree  
16 or Ms. Reid at the time of the inspection about your findings?

17 A Well, I did have a discussion with Mr. Tree and  
18 Mrs. Reid -- Ms. Reid. I asked Mr. Tree how often he  
19 inspected or observed the annulus pressure, and he stated that  
20 the last time he had observed it was the last time EPA was  
21 inspecting.

22 I said, "So how often is the annulus observed?"

23 And he estimated that it had been six to eight months.

24 I asked Ms. Reid if that sounded accurate, and she stated that  
25 it did.

1 Q Ms. Roberts, did you prepare a written report  
2 detailing your inspection?

3 A Yes.

4 MS. SWANSON: Your Honor, the parties have  
5 stipulated to the admission of Ms. Roberts' inspection report  
6 for the April 13, 2011 inspection. It's referred to as  
7 Stipulated Exhibit No. 13.

8 JUDGE SUTIN: Thank you.

9 Q (Continued by Ms. Swanson) Ms. Roberts, did you  
10 identify any other areas of noncompliance during your  
11 April 13, 2011 inspection?

12 A Yes, the failure to monitor annulus pressure as  
13 required by the permit.

14 Q Okay. We've already talked about that. So what  
15 action, if any, did EPA take after your site visit?

16 A After the site visit, EPA issued a Notice of  
17 Violation, which addressed the previous Notice of Violation,  
18 that response letter for Maralex wherein they stated that the  
19 plans that they had to repair the well and the dates -- the  
20 time frame in which they that had planned to repair the well.

21 It addressed the violations of failure to monitor,  
22 inaccurate reporting, and failure to maintain mechanical  
23 integrity. And this Notice also reiterated the permit  
24 requirements associated with the failure to maintain  
25 mechanical integrity violation.

1 Q Did the Notice of Violation direct Maralex to do  
2 anything?

3 A Yeah. Those are the requirements that it  
4 reiterated from the permit at Part 2(B)2, which are to shut in  
5 the well and to not resume injection until mechanical  
6 integrity is shown to be restored, and written authorization  
7 has been received from EPA.

8 MS. SWANSON: Your Honor, the Notice of Violation  
9 issued by the EPA dated April 19, 2012 has been stipulated to  
10 by the parties as Stipulated Exhibit No. 15.

11 JUDGE SUTIN: Thank you.

12 Q (Continued by Ms. Swanson) Ms. Roberts, following  
13 issuance of the Notice of Violation, did you have any  
14 follow-up conversations with the Respondent?

15 A Yes.

16 Q And who initiated those conversations?

17 A At the point in time of the conversation, I hadn't  
18 received any correspondence from Maralex, so I placed a phone  
19 call to Dennis Reimers with Maralex, I believe, May 3rd of  
20 2011.

21 Q And what was the purpose of that phone call?

22 A I wanted to ensure that that well had been shut in,  
23 that it was not actively injecting anymore.

24 Q And what was Mr. Reimers' response to that  
25 question?

1           A       He stated that the well had been shut in as soon as  
2 they had received the letter.

3           Q       And what other items did you discuss?

4           A       Well, we finished that phone call, and then we  
5 called him immediately afterwards to discuss the results of a  
6 temperature log. And in that discussion -- actually, in the  
7 previous phone call -- I'm sorry.

8           Q       Let's go back to your May 3, 2011 conversation.  
9 Did you talk about Mr. Reimers about the procedures that  
10 Maralex intended to employ?

11          A       Yes. Sorry. Mr. Reimers stated that the well had  
12 been shut in, and he also informed me that the same plans that  
13 were outlined in that July 6, 2010 letter would be the steps  
14 that Maralex would use to address the loss of mechanical  
15 integrity --

16          Q       Okay.

17          A       -- at that time.

18          Q       And following that conversation, did you have any  
19 further phone conversations with Maralex?

20          A       It was literally just after that phone call,  
21 I called him back to discuss the results of a temperature log  
22 that showed a temperature anomaly down by the packer in the  
23 well. One of my colleague at EPA, Chuck Tinsley --  
24 Mr. Tinsley had concerns that the temperature log might have  
25 indicated that fluid was moving out of zone.

1           So a discussion on that was just to discuss the  
2 results of this temperature log, and Mr. Reimers stated that  
3 he believed that that may indicate that some of the fluid was  
4 moving back up through the packer into the tubing casing  
5 annulus.

6           Q       And what is the significance of that?

7           A       If fluid does move through the packer to the tubing  
8 casing annulus, that constitutes a leak and a loss of  
9 mechanical integrity.

10           MS. SWANSON: Your Honor, the parties have  
11 stipulated to the admission of the record of communication  
12 between EPA and Maralex representatives dated May 5, 2011.  
13 It's referred to as Stipulated Exhibit No. 16.

14           JUDGE SUTIN: Thank you.

15           Q       (Continued by Ms. Swanson) Ms. Roberts what  
16 correspondence did EPA and Maralex next have, if any?

17           A       I believe the next item of correspondence was  
18 EPA received a well rework report and follow-up mechanical  
19 integrity test after repairs had been conducted on the well.

20           Q       And did that same correspondence include a  
21 mechanical integrity test for the well?

22           A       Yes.

23           Q       And was that test performed before or after the  
24 repair work was conducted?

25           A       After.

1           Q     Ms. Roberts, can you explain to the Court what a  
2 well rework record is.

3           A     A well rework record is a form that an operator  
4 submits to EPA that summarizes what goes on during repair or  
5 rework of the injection well. It will include information  
6 such as the date and general steps taken and the outcome.

7           Q     And what dates did this particular rework record  
8 cover?

9           A     I believe the rework record covered from May 11,  
10 2011 to May 24, 2011.

11          Q     And what repair work did the rework record cover or  
12 describe?

13          A     Although details weren't given about the repair  
14 work, the outcome of that leak in the tubing had been  
15 repaired, was described in the record.

16          Q     And with regard to the follow-up mechanical  
17 integrity test, what did the results show and what was the  
18 date of that test?

19          A     The date of the test was May 24, 2011. And the  
20 results indicated that the well had passed the mechanical  
21 integrity test.

22                MS. SWANSON: Your Honor, the parties have  
23 stipulated to the admission of the well rework record and  
24 mechanical integrity test documentation referred to as  
25 Stipulated Exhibit No. 17.

1 JUDGE SUTIN: Thank you.

2 Q (Continued by Ms. Swanson) Ms. Roberts what, if  
3 any, action did EPA take in response to the well rework record  
4 and the mechanical integrity test?

5 A EPA issued a permission to review injection letter  
6 based on the fact that the well had passed the mechanical  
7 integrity test.

8 Q And to your knowledge, was the well actively  
9 injecting between the date of EPA's initial inspection on  
10 May 5, 2010 until the date it was taken apart for repairs on  
11 May 24, 2011?

12 A Yes. Well, I'm not certain what date the well was  
13 shut in, but it was -- my indication was that it was actively  
14 injecting between the inspection period conducted by Nathan up  
15 until Maralex received the Notice of Violation, which was  
16 before they started the rework.

17 Q Thank you. Ms. Roberts, let's turn to the penalty  
18 section of this case. What is EPA's authority to impose a  
19 civil penalty for violation in this case?

20 A The Safe Drinking Water Act at 14-23-C.

21 Q And can you please tell the Court what the Safe  
22 Drinking Water Act authorizes as the maximum penalty for an  
23 underground injection control violation.

24 A \$7,500 per violation per day.

25 Q And does Section 14-23 of the Safe Drinking Water



1 Act set forth the maximum administrative enforcement penalty?

2 A Yes.

3 Q And what is that amount?

4 A \$177,500.

5 Q And what is the purpose of assessing a violator  
6 civil penalties?

7 A Assessing penalties addresses three goals. The  
8 first is to remove any economic benefit to noncompliance, to  
9 keep an even playing field among the regulated community.  
10 Assessing a penalty also looks to deter future noncompliance.  
11 And assessing a penalty also looks to promote expeditious  
12 return to compliance.

13 Q Does Section 14-23 of the Safe Drinking Water Act  
14 set forth factors for the Agency to follow when assessing a  
15 penalty under the statute?

16 A Yes. The Safe Drinking Water Act lists six for the  
17 Agency to take into account when assessing a penalty. Those  
18 are the seriousness of the violation, the economic benefit to  
19 the violator, the economic impact on the violator, good faith  
20 efforts to comply, the history of the violator, and then any  
21 other matters as justice may require.

22 Q Has EPA developed Guidance to assist in applying  
23 these statutory factors?

24 A Yes.

25 Q And can you please describe what that Guidance or

1 those Guidances are?

2 A EPA has the general EPA general enforcement policy  
3 No. GM-21, and that document essentially describes the goals  
4 that are looked to achieve by assessing a penalty, and also  
5 outlines an approach to assessing a penalty.

6 There's the EPA general enforcement policy  
7 No. GM-22, which provides Guidance on media specific penalty  
8 assessment. And then the UIC program specific guidance or  
9 policy that is available is EPA's UIC program judicial and  
10 administrative orders settlement policy.

11 MS. SWANSON: Your Honor, let the record reflect  
12 that the parties have stipulated to these three Guidance  
13 documents as Stipulated Exhibit No. -- if you'll excuse me,  
14 I'll double-check the number.

15 So Stipulated Exhibit No. 3 is UIC program judicial  
16 and administrative order settlement penalty policy; Stipulated  
17 Exhibit 4 is the EPA general enforcement policy GM-21, and  
18 Stipulated Exhibit 5 is the EPA general enforcement policy  
19 GM-22.

20 JUDGE SUTIN: Thank you.

21 Q (Continued by Ms. Swanson) Ms. Roberts, were these  
22 Guidance documents used in the penalty assessment for this  
23 case?

24 A Yes.

25 Q Can you describe the agency-developed media

1 specific penalty assessment for the national UIC program?

2 A Yes. And that's what I just referred to as the EPA  
3 UIC program judicial and administrative order settlement  
4 penalty policy.

5 Q Please describe what that is.

6 A This is a penalty assessment policy that provides a  
7 framework for relating the statutory factors, which I listed,  
8 to the facts of a case. And it incorporates them in a way  
9 that the EPA can come up -- can assess and propose penalties  
10 in consistent ways among the regulated community.

11 Q What is the use of the UIC -- excuse me. What is  
12 the UIC policy intended to accomplish?

13 A It's intended to provide a case specific way to  
14 apply the statutory factors in a way that is consistent and  
15 reasonable depending on the facts of the case.

16 Q Did you prepare a penalty assessment in this  
17 matter?

18 A Yes.

19 Q And what was the total amount of the penalty  
20 calculated?

21 A \$111,650.

22 Q And did you use the statutory factors in  
23 calculating this penalty amount?

24 A All of those statutory factors were considered.

25 Q How does the penalty policy apply to the statutory

1 factor of seriousness of violation which was one of those  
2 statutory factors you mentioned earlier.

3 A Correct. So the penalty policy identifies three  
4 levels of seriousness, least serious to more serious. And  
5 that depends on the type of violation and then specifics of  
6 the case, such as how many wells were involved and the  
7 duration.

8 That seriousness depends on potential risk posed to  
9 USDWs, and also how critical the element, the requirement  
10 violated is to the UIC program.

11 Q I apologize if you have just answered this, but can  
12 you explain how the baseline dollar amount --

13 A Sure.

14 Q -- is applied to the facts of the case?

15 A Sure. So each of these levels of seriousness,  
16 which depend on the type of violation, how critical it is, and  
17 the risk it may present, it has a penalty range dollar amount  
18 identified with it. And then that dollar amount is then  
19 adjusted based on economic impact on the violator and also  
20 some case specific facts, such as number of wells in violation  
21 and the duration of the violation.

22 Q And how is the penalty policy applied to some of  
23 the other statutory factors, specifically good faith effort to  
24 comply and history of violation?

25 A That baseline amount that is identified can be

1 adjusted upwards or downward, based on good faith effort to  
2 comply and history of violations.

3 Q Okay. So referring only to the inaccurate  
4 reporting violation, can you please explain how you calculated  
5 a penalty of \$3,900 based on consideration of the statutory  
6 factors and application of the penalty policy?

7 A And that is for --

8 Q Inaccurate reporting.

9 A -- inaccurate reporting? As far as seriousness of  
10 violation goes, accurate information reported to EPA is what  
11 the Agency relies on, partially to determine compliance with  
12 the permit and having knowledge of the conditions the well is  
13 operating in.

14 So inaccurate information is a serious violation.  
15 With use of the policy, it is considered the least serious  
16 category of violation, and that then -- the policy identifies  
17 that penalty range, and the starting point is 50 percent.

18 Q Okay. So you just stated that you use least  
19 seriousness as the baseline for this violation. What was the  
20 duration?

21 A The duration of inaccurate reporting reflected the  
22 12 months in the annual monitoring report that contained  
23 inaccurate information.

24 Q And was there an economic benefit adjustment?

25 A No economic benefit was considered to exist based

1 on this violation.

2 Q Can you explain what economic benefit is for the  
3 Court?

4 A Sure. That's an economic advantage to violating.  
5 So if a noncompliance saved the operator money because they  
6 didn't have to spend it in order to comply with the  
7 requirement, that would be considered an economic benefit.

8 So the statutory factor of economic benefit exists  
9 in order to level that playing field back and not create this  
10 disparity of expense between operators that do comply and  
11 operators that do not.

12 Q Was there adjustment made either up or down for  
13 good faith effort to comply?

14 A No.

15 Q And was there an adjustment made based on the  
16 compliance history of the operator?

17 A No.

18 Q So turning to the failure to monitor or observe the  
19 weekly annulus pressure violation, can you please explain for  
20 the Court how you calculated the penalty amount of \$8,050  
21 using the statutory factors and the penalty policy?

22 A Sure. As far as seriousness of violation goes, the  
23 Agency considers this either a serious violation or a most  
24 serious violation. Routine monitoring of the annulus  
25 specifically allows the operator to identify issues that may

1 occur within their well as they arise.

2 And so it's a critical requirement for protecting  
3 underground sources of drinking water to be able to detect  
4 issues that may arise quickly.

5 In this case, because the operator knew that their  
6 annulus had pressure on it, they had this indication. The  
7 failure to monitor did not obscure that. It did not conceal  
8 the fact that there was an issue with their well. They stated  
9 that they believed they had a leak. So that failure to  
10 monitor for that period was considered a serious violation,  
11 rather than most serious.

12 And then the duration, although we have indication  
13 that the routine monitoring required by the permit was not  
14 being conducted for longer than this, for the duration in the  
15 assessment, I considered the pumper's statement that the  
16 pumper and Mrs. Reid confirmed a time period of six to eight  
17 months, and I used seven months as the duration considered in  
18 the assessment. One well was considered.

19 Q And was there an adjustment made for good faith  
20 effort to comply?

21 A No.

22 Q And what about compliance history of the operator?  
23 Was there an adjustment made for that?

24 A No.

25 Q Was there an economic benefit component calculated?

1           A       Yes. An economic benefit was considered to be  
2 received by the operator in terms of employee time saved for  
3 the weekly monitoring procedure, and that totaled \$141.

4           Q       Ms. Roberts, referring to the last count, failure  
5 to maintain mechanical integrity, can you tell me how you  
6 calculated that amount of \$99,700, again based on  
7 consideration of the statutory factors and the application of  
8 the penalty policy?

9           A       Failure to maintain mechanical integrity is  
10 considered a most serious violation by the Agency. Mechanical  
11 integrity is the way that the Agency is able to ensure that  
12 drinking water resources are protected, and failing to repair  
13 a leak and maintaining mechanical integrity can risk drinking  
14 sources, and it can also conceal other issues that may occur  
15 in the well as they arise. Because of that, the Agency  
16 considers this a most serious violation.

17                   At the time of the penalty assessment, mechanical  
18 integrity had been restored, so of that baseline range, the  
19 lower 25 percent was considered.

20           Q       So you used the lower 25 percent of the range  
21 within the most serious category of seriousness of violation;  
22 is that correct?

23           A       That's correct.

24           Q       Okay. And with regard to duration, can you please  
25 explain how you calculated that amount?



1           A       Yes. The duration -- although EPA has indication  
2 that the well lacked mechanical integrity prior to this, the  
3 duration considers the date that Maralex sent the letter where  
4 they stated that they believed that the annulus pressure was  
5 caused by a leak, to the date that they repaired the well and  
6 showed it to have had mechanical integrity restored, which is  
7 May 24, 2011.

8                       Additionally, EPA forgave three months of the  
9 violation as conceptually an amount of time in which the  
10 operator could reasonably have restored mechanical integrity  
11 in their well. This was conservative considering the operator  
12 had stated that they believed they would be able to make the  
13 repairs in August of 2010, which was one month.

14           Q       Was there adjustment made for good faith effort to  
15 comply?

16           A       No.

17           Q       And was there an adjustment made based on  
18 compliance history?

19           A       No.

20           Q       With regard to economic benefit, was there an  
21 amount calculated for that?

22           A       Yes. And the amount reflects economic benefit that  
23 resulted from differing the cost of a workover. As just a  
24 conservative estimate, I used \$13,000 as the cost of the  
25 workover. The way economic benefits is calculated, if the

1 cost of the workover was more, it would have resulted in a  
2 higher economic benefit to the violation.

3 And considering that cost, that cost that was  
4 delayed, the economic benefit associated with this violation  
5 totaled \$537.

6 Q So to summarize, you considered a delayed cost as  
7 opposed to an avoided cost for economic benefit?

8 A That's correct, because the workover was completed  
9 eventually.

10 Q Okay. Ms. Roberts, did you prepare a penalty  
11 narrative for this case?

12 A Yes.

13 MS. SWANSON: Your Honor, this document has been  
14 stipulated to by the parties as Stipulated Exhibit 1.

15 JUDGE SUTIN: Thank you.

16 Q (Continued by Ms. Swanson) So, Ms. Roberts, having  
17 reviewed all of the materials that you relied on in  
18 calculating the penalty, are there any changes or corrections  
19 you would like to note?

20 A Yes. In the penalty narrative, under failure to  
21 maintain mechanical integrity, there is a misstatement that  
22 the letter from the operator, wherein the operator stated they  
23 believed they had a leak, it misstated that date as,  
24 I believe, June 7, 2010. The actual date was July 6, 2010.

25 That misstatement reflects error in the assessment

1 of the penalty. So based on those dates, 12 months was  
2 considered with three forgiven. However, based on the  
3 corrected date of the letter, 11 months would be considered  
4 with three months forgiven.

5 Q And does this change at all the amount of your  
6 penalty calculation for the mechanical integrity violation?

7 A The penalty proposed would have totaled \$101,700.

8 Q Ms. Roberts, you described the assessment of a  
9 baseline penalty amount using the penalty policy. Did you  
10 adjust the penalty upwards for settlement purposes or any  
11 other purposes?

12 A No. The amount proposed by the Agency reflects the  
13 baseline, the bottom line amount calculated using the  
14 statutory factors and the facts of the case using the  
15 settlement policy.

16 Q And are you familiar with other penalty  
17 calculations for other UIC cases?

18 A Somewhat, yes.

19 Q And, to your knowledge, was the penalty amount that  
20 you prepared consistent with those other calculations?

21 A Yes.

22 Q Ms. Roberts, in your opinion, is the proposed  
23 penalty amount for the UIC violations appropriate?

24 A Yes. It's appropriate as a baseline conservative  
25 assessment of the penalty.

1 MS. SWANSON: Your Honor, I do not have any further  
2 questions at this time.

3 JUDGE SUTIN: Okay. Mr. Zimsky, do you want to  
4 start?

5 MR. ZIMSKY: It's up to you.

6 JUDGE SUTIN: How long do you think your cross will  
7 take?

8 MR. ZIMSKY: Maybe about 20 minutes.

9 JUDGE SUTIN: Okay. Why don't you go.

10 CROSS-EXAMINATION

11 BY MR. ZIMSKY:

12 Q Good morning, Mrs. Roberts. I want to address  
13 something that came up near the end about the calculating  
14 error on the months and the wrong date. Then you came up with  
15 a total figure of \$101,700. My math skills aren't very good.  
16 How much is that -- how much did that decrease the proposed  
17 penalty of, I think, \$99,677 for the material integrity issue?

18 A Mechanical integrity?

19 Q Yeah, mechanical integrity.

20 A So the entire reduction of \$111,650 to \$101,700 is  
21 reflective of the mechanical integrity violation portion -- so  
22 the difference of that. I don't know if you want me to do the  
23 math on the stand.

24 Q About \$10,000?

25 A Yeah. I guess 9,950.

1 Q And I have a question that -- you measured the  
2 duration from the date of that letter, July 6th, until the  
3 repair. Wouldn't a fairer duration be until you sent the  
4 letter and they shut it down, which was about a month earlier?

5 A No. The permit requirement is that the mechanical  
6 integrity be established and maintained.

7 Q And I understand that, but they shut down the well  
8 in April?

9 A That's an additional requirement.

10 Q Yeah. I understand that. So what you're saying  
11 is, if they had shut down the well in April, and it took them  
12 six months to repair it because of lack of equipment or having  
13 trouble locating whatever the issue was, you would have gone  
14 those extra six months as the duration of the violation?

15 A I think that there would be additional facts to the  
16 case to consider, and I can't speculate as to how that would  
17 affect.

18 Q But you agree that they did stop operation of the  
19 well upon receiving the letter that you had sent them in  
20 April 2011?

21 A To my knowledge, from my conversation with  
22 Mr. Reimers.

23 Q I want to look at what has been marked as -- you  
24 have an exhibit book there. It's the Complainant's Exhibit  
25 No. 12. It's also Stipulated Exhibit No. 12, and that's the

1 2010 annual report. Do you see that? Do you have that in  
2 front of you in the other notebook? There's two binders.  
3 Do you have it?

4 A Yeah.

5 Q What you are referring to are the two columns, the  
6 furthest two columns on the right-hand side. It says "Tubing  
7 casing annulus pressure."

8 A Yes.

9 Q Do you see that?

10 A Yes.

11 Q It has all zeros.

12 A Yes.

13 Q Maralex stipulated that that was incorrect. And  
14 you indicated that one of the factors that you look at in  
15 reporting is reliance on information, correct?

16 A Correct.

17 Q But you also note that this -- there was no  
18 reliance. Would it be correct to say there was no reliance on  
19 this because there had been a couple inspections that had  
20 shown more pressure than was reflected here?

21 A I would say that's incorrect.

22 Q Okay. But you did have information -- the EPA had  
23 information that this was inaccurate?

24 A That is correct.

25 Q And there is no requirement to report this

1 information, correct?

2 A That is incorrect. That is incorrect.

3 Q It says optional monitoring. What does that mean?

4 A This form is one form that an operator can use to  
5 report the required information according to their permit.  
6 This is used broadly. Not all permits require all of the same  
7 conditions.

8 However, Maralex's permit at Part 2(D)2 does  
9 require that the annulus pressure be monitored, and in  
10 Appendix D, it is delineated that the Permittee is required to  
11 observe the annulus pressure weekly and report monthly and  
12 include that in their annual monitoring report.

13 Q You also testified that Mr. Reimers or somebody  
14 from Maralex also informed the EPA that there was a return of  
15 annulus pressure going in 2010?

16 A What are you referring to?

17 Q If you look at his letter, July 6th, he notes that  
18 there was annulus pressure.

19 A Yes, yes.

20 Q So Maralex did inform the EPA that there was  
21 annulus pressure?

22 A Right, yes.

23 Q And if I could turn your attention to Complainant's  
24 18, which is Stipulated 18, it's a letter from the EPA dated  
25 November 15th or --

1           A     I think that's right.

2           Q     It's a letter to Christi Reid from the EPA. Do you  
3 have that in front of you?

4           A     Yes.

5           Q     It indicates on November 9, 2001, Maralex -- that  
6 EPA learned from Maralex or learned that the injection well,  
7 according to this letter, had lost mechanical integrity.  
8 Do you see that?

9           A     No. I believe it states November 9, 2011.

10          Q     November 9th. What communication was there from  
11 Maralex -- or how did EPA find out?

12          A     The letter that was sent from Maralex to EPA on  
13 July 6, 2010.

14          Q     But this is referring to November 9, 2011?

15          A     I'm sorry.

16          Q     This is different?

17          A     This is different.

18          Q     Yeah.

19          A     I don't recall specifically how we received that  
20 information.

21          Q     And to your knowledge, at that time when Maralex  
22 had received the information, the well was shut in at that  
23 time, correct?

24                   MS. SWANSON: Your Honor, I'm going to lodge an  
25 objection. It's not a strenuous one because we didn't



1 stipulate to the exhibit, but there wasn't any testimony on  
2 this on Direct. Are we going strictly to the contents of the  
3 letter for purposes of cross-examination?

4 MR. ZIMSKY: Yes.

5 THE WITNESS: I'm sorry. I was confused. I was  
6 thinking of the prior one.

7 Q (Continued by Mr. Zimsky) Are you aware that --  
8 okay. The question I have is, there was no complaint by the  
9 EPA against Maralex when, in November of 2011, they did repair  
10 work on this well, correct?

11 A That's correct.

12 Q And they sent you what has been marked as  
13 Respondent's Exhibit D, a workover daily report indicating  
14 that the repair work -- do you recall receiving that?

15 A Respondent's Exhibit D?

16 Q That's our Exhibit D. I have the -- do you have my  
17 copy of the Stipulated --

18 MS. SWANSON: It's 25.

19 Q (Continued by Mr. Zimsky) It's Stipulated  
20 Exhibit 25.

21 A I have the stipulated exhibit in front of me.

22 Q Okay. Do you recall receiving that?

23 A No.

24 Q Do you recall ever sending a letter to Maralex  
25 authorizing them to continue operations after this?

1 A Yes.

2 Q And even though there was some buildup in annulus  
3 pressure, they reported it to the EPA. They worked it over.  
4 There was no penalty involved with respect to that, correct?

5 A That's correct.

6 Q So is it safe to say that if there's an issue with  
7 an injection well, and the Permittee shuts in the well,  
8 repairs any problems that were caused, passes a mechanical  
9 integrity test, provides that information to the EPA, the EPA  
10 says, "Okay. We have reviewed your documents. You can  
11 continue injecting."

12 There is no penalty for that, is there?

13 A I don't know that I have enough information.

14 Q What more information would you need?

15 A Situations, specific information such as time  
16 frames.

17 Q So in this November time frame --

18 A Right.

19 Q -- Maralex called you up or communicated to you.  
20 Somehow you found out they were working on their well.

21 A Uh-huh.

22 Q And they had shut it in, and they repaired it and  
23 sent you a mechanical --

24 MS. SWANSON: I'm going to object to this. This is  
25 assuming facts not in evidence. We're talking about documents

1 that this particular witness, first of all, did not, herself,  
2 cover on Direct testimony. And furthermore, there's kind of  
3 this narrative with a lot of questions built in and testimony.

4 So I'm objecting to the contents of this  
5 questioning, if that's what it is.

6 MR. ZIMSKY: Well, it is questioning.

7 MS. SWANSON: Okay.

8 MR. ZIMSKY: I'm providing her with a hypothetical  
9 situation, you know, whether EPA imposes a fine and when it  
10 does not.

11 JUDGE SUTIN: If you're inquiring about something  
12 other than the specific dates in this letter as a  
13 hypothetical, that's fine. You can ask about what she would  
14 do under certain scenarios, and if she can, answer the  
15 question.

16 Q (Continued by Mr. Zimsky) Okay. A scenario --  
17 let's just do this scenario. EPA determines a well lacks  
18 mechanical integrity. They inform the Permittee to shut in.  
19 The Permittee shuts in, does repair work, performs a  
20 mechanical integrity test, passes the test, and writes back to  
21 EPA, providing them the document the EPA wants.

22 The EPA then issues a letter saying, "We're  
23 satisfied with what you did. We're satisfied with the  
24 mechanical integrity test results. You can continue injecting  
25 or start injecting again."

1 Under that hypothetical, would there be a penalty  
2 involved?

3 A A penalty proposed?

4 Q Yes.

5 A In my position, I don't -- I don't make decisions  
6 about the Agency taking a case or a final decision on  
7 proposing a penalty, so --

8 Q But under that scenario, you did prepare that  
9 Exhibit No. 1 where you went through the different steps and  
10 how you assess that -- that type of violation, or the  
11 violation in this particular case, correct?

12 A Correct.

13 Q That's part of your job description, part of your  
14 responsibilities. When you're presented with an enforcement  
15 case -- I understand you don't make a decision whether to  
16 prosecute it, but one of your functions -- and correct me if  
17 I'm wrong -- is to calculate an appropriate penalty?

18 A I aid in the assessment, which is then reviewed by  
19 my management, yes.

20 Q Under the scenario I just presented to you a minute  
21 ago, and if somebody said, "Okay. We want to do an  
22 enforcement action based upon these facts," what would your  
23 penalty assessment be?

24 A A penalty assessment requires that there be the  
25 assumption that a case is being taken.

1 Q Yes. We're doing that assumption. Let's assume  
2 the EPA, whoever is in the powers that be, says, "Okay. We're  
3 going to do an enforcement action against this company."

4 They informed us there was a mechanical integrity  
5 problem with their well. They shut it in at that time. Then  
6 they performed some test. They did some repairs. It passed  
7 the mechanical integrity test. They provided the information  
8 to the EPA. The EPA then sent them a letter that they could  
9 begin injection again. And that's sitting on your desk.

10 What would your penalty assessment be for that  
11 scenario?

12 A I don't know I don't understand the premise. That  
13 doesn't constitute a case.

14 Q So that would not constitute a case?

15 A That's correct.

16 Q So based on that testimony, that's why if the  
17 occurrence in the November 2011 never -- it didn't constitute  
18 a case, correct?

19 A Correct.

20 Q Thanks. Now, there was testimony from Mr. Reimers  
21 and/or Mr. O'Hare about their observations of the annulus  
22 pressure to the effect that they may have checked it much more  
23 frequently than every six or eight months, and if the Judge  
24 accepted that testimony as being credible, would that affect  
25 the proposed penalty for failure to monitor?

1           A       I don't know. I'm explaining the proposed penalty.  
2 I'm not speculating.

3           Q       Well, I'm not asking you to speculate. I'm saying  
4 here's the hypothetical --

5           MS. SWANSON: Counsel is assuming facts that aren't  
6 even in evidence. He's talking about what witnesses may, in  
7 fact, testify to. We haven't heard any of that testimony, so  
8 I don't think it's appropriate to ask this witness to  
9 speculate on that.

10          JUDGE SUTIN: Go ahead.

11          MR. ZIMSKY: Your Honor, it's a hypothetical. If  
12 there is no testimony or you don't believe the testimony is  
13 credible, you know, then this is for want. But I think it's  
14 important that the EPA person who is proposing the penalty, if  
15 there are a different set of facts on this monitoring, I think  
16 it assists the Court in deciding, okay. If I believe it's six  
17 to eight months, and I think it's seven months, I believe that  
18 this is fair -- or the Court could say, "Well, some people  
19 testified they checked it once a month." So maybe the issue  
20 is not as severe as the testimony for the \$8,900 fine.

21                 So what we have here is the EPA expert, you know,  
22 on fines.

23          JUDGE SUTIN: I'll stop there for a second, Mr.  
24 Zimsky. I don't think Ms. Roberts has been qualified as an  
25 expert --

1 MR. ZIMSKY: Okay.

2 JUDGE SUTIN: -- here. So she is, to my  
3 understanding, a fact witness --

4 MR. ZIMSKY: Okay.

5 JUDGE SUTIN: -- on the facts as set forth.

6 Q (Continued by Mr. Zimsky) Going back to Exhibit  
7 13, Stipulated Exhibit 13, that's your inspection in  
8 April 2011, correct?

9 A That's correct.

10 Q And did you ever -- did you write everything in the  
11 report that took place that was of any importance?

12 A I documented things of importance in the inspection  
13 report.

14 Q The report doesn't indicate whether the -- it  
15 doesn't state that it was bled off and any readings taken to  
16 determine any pressure reappearance after it bled off?

17 A That's correct.

18 MR. ZIMSKY: And one moment, Your Honor. I think  
19 I'm almost done.

20 JUDGE SUTIN: That's fine. Take your time.

21 Q (Continued by Mr. Zimsky) Do you have any evidence  
22 that there was any contamination of the underground sources of  
23 drinking water from the Ferguson No. 1 well during any  
24 relevant time period?

25 A No.

1 MR. ZIMSKY: That all the questions I have, Your  
2 Honor. Thank you.

3 JUDGE SUTIN: Thank you. Ms. Roberts, I just have  
4 a quick question for you.

5 Q (By Judge Sutin) Exhibit 17, the well rework  
6 record, do Respondents have to notify EPA prior to doing any  
7 work on the well?

8 A I believe that the permit requires that Respondents  
9 notify EPA if a loss of mechanical integrity occurs, so some  
10 repairs inherently involve the loss of mechanical integrity,  
11 so notification is required in that case.

12 Q And did you receive any notification prior to this  
13 work? I know you called them, but did you receive any  
14 notification?

15 A No. I received no response to the NOV, other than  
16 the phone call with Mr. Reimers and then no response after  
17 until this rework.

18 JUDGE SUTIN: Okay. Any follow-up questions based  
19 on mine?

20 MS. SWANSON: Yeah. I have two questions for  
21 Redirect.

22 JUDGE SUTIN: I'm sorry. Go ahead.

23 REDIRECT EXAMINATION

24 BY MS. SWANSON:

25 Q Ms. Roberts, going back to your earlier testimony



1 with regard to calculating the duration for the mechanical  
2 integrity failure, can you please confirm that the duration of  
3 your penalty calculation ended at the time that mechanical  
4 integrity was restored after the rework and mechanical  
5 integrity tests results were shown as passing? Is that what  
6 you testified to?

7 A That's correct.

8 Q Okay. And, lastly, can you confirm whether the  
9 permit requires weekly observations of the well's annulus  
10 pressure be taken?

11 A The permit does require that at Part 2D and  
12 Appendix D.

13 MS. SWANSON: Okay. Thank you.

14 JUDGE SUTIN: Mr. Zimsky, any questions based on  
15 mine?

16 MR. ZIMSKY: Yes, based on yours.

17 RE-CROSS EXAMINATION

18 BY MR. ZIMSKY:

19 Q Ms. Roberts, if you look at Respondent's 16,  
20 Stipulated Exhibit 16, that's your telephone conversation  
21 record?

22 A That's correct.

23 Q And it indicates that Dennis -- referring to Dennis  
24 Reimers, I assume --

25 A That's correct.

1 Q -- stated the same workover procedure that Maralex  
2 submitted to the EPA in July 2010 would be used?

3 A Correct.

4 Q So you remember him informing you that that was the  
5 procedure that they were going to use?

6 A Yes. I believe the Judge asked, not the phone call  
7 that I initiated -- outside of the phone call I initiated.

8 MR. ZIMSKY: Okay. I misunderstood the question.

9 JUDGE SUTIN: That's fine. Okay. Thank you,  
10 Ms. Roberts. You can step down. So it is 12:25. I think we  
11 will break for an hour and resume -- well, an hour and five.  
12 How about if we resume at 1:30, and we will resume with  
13 Ms. Schmitt's testimony; is that correct?

14 MS. SWANSON: Correct, Your Honor. And I  
15 anticipate that taking no more than 10, 15 minutes.

16 JUDGE SUTIN: All right. Thank you.

17 MS. SWANSON: Thank you.

18 (A luncheon recess was taken from 1:25 p.m. to  
19 1:30 p.m.)

20 JUDGE SUTIN: Good afternoon, everyone. Let's go  
21 back on the record. Ms. Swanson, are you ready to call your  
22 next witness?

23 MS. SWANSON: I am, Your Honor. Your Honor, the  
24 Complainant would like to call Ms. Victoria Schmitt with the  
25 La Plata County Engineering Office.

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**VICTORIA LYNN SCHMITT,**

the witness herein, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MS. SWANSON:

Q Good afternoon, Ms. Schmitt. Could you please begin by stating and spelling your full name for the record?

A Victoria Lynn Schmitt, V-I-C-T-O-R-I-A, L-Y-N-N, S-C-H-M-I-T-T -- two T's.

Q What is your occupation?

A I am a civil engineer in the planning department for the County.

Q And how long have you been employed in that position?

A Four years.

Q Please describe your job duties and responsibilities.

A I review land use permits for engineering standards such as water, sewer access, and storm water management.

Q Please describe the County's interaction with oil and gas development.

A We review and the County Commissioners approve land use permits related to wells, pipelines, and kind of centralized facilities.

Q Do oil and gas-related activities have impacts that

1 are of concern to the County?

2 A Yes. The County regulations almost solely address  
3 land use impacts such as surface impacts such as visual,  
4 traffic, noise -- that type of thing.

5 Q Does the County have authority to regulate  
6 Underground Injection Control activities?

7 A No. We'll regulate -- we'll look at the land use  
8 aspects of it, like where it's placed in traffic, but not the  
9 underground. We rely solely on COGCC, Colorado Oil and Gas  
10 Conservation Commission, and EPA for that.

11 Q So if residents come to you with concerns about  
12 downhole activities, you rely on COGCC and EPA to address  
13 those concerns?

14 A Yes.

15 Q Do you have knowledge of Maralex Disposal and the  
16 Dara Ferguson well?

17 A That does hold the County land use permit.

18 Q Thank you. And did you contact the Environmental  
19 Protection Agency in the spring of 2011 regarding the Dara  
20 Ferguson well?

21 A Yes.

22 Q Can you describe the purpose for that call?

23 A I was aware that there had been a 2010 concern,  
24 possible violation, and so I was calling to follow up on that  
25 and see what corrective actions may have been taken.

1 Q Okay. And what specifically was the concern that  
2 alerted the County?

3 A Well, there was the mechanical integrity test,  
4 possible failure of that, which we understand to mean that  
5 that could indicate or lead to groundwater contamination.

6 Q And would a loss or failure of mechanical integrity  
7 pose a significant impact to the County?

8 A Well, residents frequently with oil and gas permits  
9 express concerns about their groundwater quality. And so in  
10 that sense, failure of an injection well could impact them, so  
11 we refer them then and say the EPA or COGCC would be the one  
12 who handles that.

13 MS. SWANSON: Thank you, Ms. Schmitt. Nothing  
14 further.

15 MR. ZIMSKY: No questions.

16 JUDGE SUTIN: Ms. Swanson? Other witnesses?

17 MS. SWANSON: Your Honor, the Complainant has no  
18 additional witnesses to call. We rest at this time. Thank  
19 you.

20 MR. ZIMSKY: Your Honor, at this point, I would  
21 move for a directed verdict on the mechanical integrity test  
22 aspect of this case.

23 Mr. Nathan Wiser was the only expert who testified  
24 on behalf of the Complainant, the EPA. Mr. Wiser testified  
25 that during his oversight of this particular well, the

1 Ferguson No. 1, there was no loss of mechanical integrity.  
2 That was his testimony. And the testimony indicated that  
3 Ms. Schmitt took over -- or excuse me, Ms. Roberts was working  
4 with him on the well and took over responsibility of the well  
5 in February of 2011.

6 Ms. Schmitt did indicate that or -- the problem  
7 with recency here. Ms. Roberts indicated that she testified  
8 about an inspection that she did in 2011 in April. She also  
9 testified she didn't -- there was no bleeding, so there was no  
10 consideration of whether this was due to a temperature  
11 violation. They sent out a notice or a Cease and Desist  
12 shutdown notification on April 19th, I believe it was.

13 She testified that there was a loss of mechanical  
14 integrity from the time of the June or July correspondence  
15 between the parties in 2010 until the problem was -- until the  
16 workover was completed in May of 2011 by Maralex.

17 Now, that testimony is contrary to their expert  
18 witness. She was just merely a fact witness. She interpreted  
19 the facts based upon letters and correspondence and the review  
20 of the file.

21 Mr. Wiser was presented as an expert witness on  
22 injection wells and compliance with EPA rules. He testified  
23 that he opined that there was no violation, there was no  
24 failure of mechanical integrity of the Ferguson No. 1 well.

25 There was nothing that changed by the time of

1 February and April when they did the next inspection. There  
2 was no additional -- nothing happened that would have changed  
3 Mr. Wiser's opinion. More importantly, he didn't opine -- he  
4 never opined a loss of mechanical integrity.

5 That was their only expert that they presented to  
6 the Court. They have the burden of persuasion and the burden  
7 of proof. They went first. They had their expert. He  
8 testified clearly and without contradiction that the well did  
9 not lose mechanical integrity. He never testified that it  
10 did.

11 The only person who testified that it did was  
12 Ms. Roberts. She is a fact witness, and her testimony is  
13 contrary to what their expert said because she said it lost  
14 mechanical integrity back in July of 2010.

15 THE COURT: Ms. Swanson, do you want to address the  
16 directed verdict?

17 MS. SWANSON: May I have one moment? Your Honor,  
18 in responding to the Respondent's moving for a directed  
19 verdict in this matter, the Complainant would point out that  
20 it has very solidly met its prima facie case in terms of both  
21 liability for the mechanical integrity violation and also as  
22 to the appropriateness of its penalty calculation.

23 The testimony that has been provided and the  
24 documents that have been entered into evidence and stipulated  
25 to by the Respondent all collectively demonstrate the fact

1 that this well failed to maintain mechanical integrity.

2 As Mr. Wiser testified, his participation in this  
3 case and inspection activity with regard to the well happened  
4 early on. So he first inspected the well on May 5, 2010;  
5 subsequently on May 24th and 26th of 2010, inspected the well,  
6 observed exceedant annulus pressure, and he pointed out to the  
7 operator what that operator was supposed to do at that time to  
8 determine why there was anything other than a zero pressure on  
9 the annulus and what to do to determine whether that pressure  
10 was caused by one of only two things recognized by the  
11 permit -- either by a thermal fluctuation or loss of  
12 mechanical integrity -- a leak, if you will.

13 Mr. Wiser communicated those procedures to the  
14 operator, and it wasn't until the Notice of Violation response  
15 letter came in from Maralex dated July 6, 2010, that Maralex  
16 indicated to EPA that it, on its own, determined that the  
17 exceedances of annulus pressure were not caused by thermal  
18 fluctuations, leaving the only other option available that the  
19 well had failed to maintain mechanical integrity.

20 Mr. Wiser did not make that assessment but, rather,  
21 he was waiting for the additional work to be done as proposed  
22 by Maralex in that July 6th letter.

23 As put on the record earlier, it was expected that  
24 that work would commence in August when Maralex had the proper  
25 trucks or rigging available to do the work. Subsequently, in



1 February of 2011, Mr. Wiser resumed other -- or took on other  
2 duties.

3 Ms. Roberts took over the case, and it wasn't until  
4 April of 2011 -- many, many months later from when the  
5 pressure exceedance was first observed and Maralex had  
6 indicated what it was going to do to resolve that --  
7 did Ms. Roberts, upon receiving a call from local authorities,  
8 Ms. Schmitt, did she take it upon herself to review the  
9 record, assuming that the company had done what they were  
10 supposed to have done in light of determining that the annulus  
11 exceedance was caused by nothing other than a failure to  
12 maintain mechanical integrity.

13 She scheduled her inspection on April 13, 2011, and  
14 at that time was surprised to learn that the well was  
15 continuing to operate in that condition. There still was an  
16 exceedance of annulus pressure on the well and, furthermore,  
17 that the well had not been shut in.

18 She then, in discussion with her management, had an  
19 additional Notice of Violation sent out in April 2011 sent to  
20 Maralex telling them, "You, indeed, have a failure to maintain  
21 mechanical integrity," and telling them what they needed to  
22 do.

23 And it wasn't until Maralex finally shut the well  
24 in and did the rework necessary to repair the well that EPA  
25 was able to allow it to renew injection.

1           So I would submit to you, Your Honor, in terms of  
2 moving for a directed verdict that the Complainant, in  
3 essence, has fully established its prima facie case, and the  
4 case should be decided in favor of the EPA. Thank you.

5           JUDGE SUTIN: Mr. Zimsky, I appreciate your  
6 argument that there may have been some inconsistency in the  
7 testimony. I do think there's still a factual question,  
8 however, with respect to what Respondents did or didn't do to  
9 show that mechanical integrity had taken place and that a test  
10 had taken place and the well was fit to continue operating.  
11 So I am inclined not to -- to deny the Motion and continue at  
12 this point.

13           MR. ZIMSKY: Thank you, Your Honor. I call Dennis  
14 Reimers to the stand.

15   **DENNIS REIMERS,**

16 the witness herein, having been first duly sworn, was examined  
17 and testified as follows:

18   DIRECT EXAMINATION

19 BY MR. ZIMSKY:

20           Q     Mr. Reimers, could you introduce yourself to the  
21 Court?

22           A     My name is Dennis Ray Reimers. I'm an engineer,  
23 engineering manager for Maralex Resources.

24           Q     And can you spell your last name for the court  
25 reporter?

1           A       Reimers, R-E-I-M-E-R-S.

2           Q       And can you explain the type of work you perform  
3 for Maralex? Can you first explain the difference between  
4 Maralex Resources, Inc., and Maralex Disposal, LLC?

5           A       Yes, sir. Late 1992, I was hired by Maralex  
6 Resources to take over the engineering managing  
7 responsibilities of the company. Maralex Resources operates  
8 wells in the Basin -- this Basin, as well as a few other  
9 areas.

10                    Anytime that we have any work to be done on a  
11 disposal well, that's done through a separate entity, Maralex  
12 Disposal, and I would actually just charge out my time  
13 appropriately to those projects.

14           Q       And what positions have you -- let's go back to  
15 your -- I want to qualify the witness as an expert in  
16 petroleum engineering. Can you inform the Court about your  
17 educational background?

18           A       I would be glad to. I'm a 1978 graduate of  
19 New Mexico Institute of Mining and Technology with a bachelor  
20 of science degree in petroleum engineering. I worked summer  
21 jobs all through school, had quite a bit of experience even  
22 before I hired on out of college. I literally was born in a  
23 company camp about 60 miles east of Farmington.

24                    After getting a petroleum engineering degree,  
25 I hired on with Amoco Production Company, started out as an

1 engineer in Anchorage, Alaska, responsible for the field  
2 operations of two platforms within the Cook inland. I went  
3 through extensive training with Amoco. Basically, the first  
4 year that you're with them, you spend as much time with them  
5 in Tulsa at their research facility, their training facility,  
6 than you do in the field. I received a lot of reservoir  
7 training, operations training, drilling training, water flood  
8 training. It was quite extensive.

9 Stayed in Alaska for 18 months with Amoco,  
10 transferred to Denver. Took several different jobs in Denver  
11 with Amoco. I actually worked as a forecast engineer. I was  
12 also responsible for the company's holdings in the Williston  
13 Basin. Literally we're looking at wells, going through the  
14 various formations.

15 After a year and a half in Denver, I resigned my  
16 position, went to work for an independent, Coseka Resources --  
17 C-O-S-E-K-A. A number of my supervisors with Amoco had gone  
18 to work for that company. It was back in the day when there  
19 was a lot of activity in the area in the Basin, and I hired on  
20 with them as a senior engineer working primarily in the  
21 Piceance Basin, as well as properties in Wyoming.

22 Wanting to get back up to Alaska, an 18-month-stay  
23 wasn't what I really envisioned. I wanted more time up there.  
24 I hired on with Arco Alaska in 1984. I was assigned on the  
25 Lisburne project, spent eight years with Arco. Worked about

1 three years in the Lisburne group, and the final five years  
2 was in the Prudhoe Bay operations group.

3 While employed as an engineer with Arco, I was  
4 co-author of two patents related to well completions. In  
5 1992, I hired on with Maralex Resources out of Alaska.  
6 Initially was in Farmington before we relocated the office to  
7 Ignacio. The end of November, I will have been with Maralex  
8 20 years.

9 Q And you presented a resume that's marked as  
10 Respondent's Exhibit F, and it's identified as Stipulated  
11 Exhibit No. 27. Is that an accurate reflection of your work  
12 experience?

13 A It is.

14 Q And can you explain to the Court what experience  
15 you have in injection wells?

16 A Substantial. I guess anytime you have 34 years of  
17 experience, you're going to have a pretty broad range. With  
18 Maralex Resources, the most recent, the Dara Ferguson isn't  
19 our only disposal well. We operate two wells in Aztec.  
20 Before that, we had a well that was sold to another entity  
21 that we operated just outside of Ignacio.

22 With the other companies, with Arco, I was  
23 personally responsible on a new field startup. We had to do  
24 all of our gas injection where we were disposing of the  
25 natural gas. It's the law. Then, also, any water that is

1 produced in that environment has to be disposed of. So I was  
2 personally responsible for overseeing some of the operations  
3 related to the water disposal on both Lisburne and Prudhoe  
4 Bay.

5 Q And during that time, did you have experience in  
6 working with the EPA and EPA oversight injection wells?

7 A Sure did. That has changed a lot, but I mean,  
8 through those years, we definitely worked with not only the  
9 office in Denver, but the San Francisco office and multiple  
10 EPA offices.

11 Q And have you worked with the Denver office in  
12 relation to work that you have done for Maralex Disposal?

13 A That's correct, both on the Ferguson, as well as on  
14 additional wells.

15 MR. ZIMSKY: Your Honor, I would like to tender  
16 Mr. Reimers as an expert in petroleum engineering with  
17 expertise in injection well operations.

18 JUDGE SUTIN: Ms. Swanson?

19 MS. SWANSON: Your Honor, I would like to voir dire  
20 the witness. I would submit that he has been adequately  
21 qualified as an expert in the area of petroleum engineering,  
22 but as for constituting an expert in Class II disposal  
23 activities -- I'm sorry. Is that -- can you restate what  
24 you're tendering him as?

25 MR. ZIMSKY: As a petroleum engineer and also

1 expertise in operation of injection wells.

2 MS. SWANSON: Okay. Your Honor, I would like to  
3 ask a few questions of the witness with regard to his  
4 expertise in the operation of injection wells, if you don't  
5 mind.

6 JUDGE SUTIN: Sure.

7 VOIR DIRE EXAMINATION

8 BY MS. SWANSON:

9 Q Mr. Reimers, you mentioned you had -- part of your  
10 job responsibilities when you were working for Amoco Alaska  
11 was overseeing the disposal of fluids from the Lisburne and  
12 Prudhoe Bay?

13 A That's incorrect. It's Arco Alaska.

14 Q Arco Alaska. Thank you. Am I correct that you  
15 stated that part of your responsibilities were to organize the  
16 disposal of production fluids relating to Lisburne and Prudhoe  
17 Bay operations?

18 A Yes, ma'am. To give you a little bit of a  
19 background in the Lisburne field, it was actually the target.  
20 It was the interval that was being explored from the discovery  
21 well that was found. They actually drilled the first well  
22 through the Lisburne Formation and found oil. They just found  
23 about 1500 feet a better well above it -- 1500 feet of oil in  
24 the Fruita field is a better way to word it.

25 When Arco got ready to develop that lower target,

1 the Lisburne Formation, I hired on with them. The previous  
2 experience that I talked to you about in the Williston Basin  
3 was in carbonate. Lisburne is a carbonate formation. We were  
4 assigned with the responsibility of going in and designing the  
5 development of that field, which included the drilling of both  
6 water disposal wells, as well as gas injection wells.

7 Q So during that time, you personally were involved  
8 in the disposal operations associated with that?

9 A The planning, the implementation, and the startup  
10 of that. Yes, ma'am.

11 Q Okay. And, similarly, with regard to Lisburne,  
12 Prudhoe Bay when you talked about how you were responsible for  
13 organizing disposal, was that for actual wells that you were  
14 charged with, or was that instead maybe contracting with a  
15 disposal company to take the produced water elsewhere?

16 A Everything there was done by the operators -- both  
17 Arco and British Petroleum now.

18 Q And with regard to the time of your employment with  
19 Maralex Resources, in terms of overseeing the disposal well,  
20 can you describe what your daily duties might consist of?

21 A You got a little bit of time ? I supervised the  
22 permitting. We actually had a contract person or the  
23 landowner out there that did a lot of the permitting, but we  
24 had to take that over and do the permitting.

25 Once we got the necessary permits to drill the



1 well, which included EPA, BLM -- excuse me, not the BLM -- the  
2 Oil and Gas Commission and County permits, I arranged for the  
3 drilling of the well, supervised the drilling, and then,  
4 subsequently, the completion and the first two or three years  
5 of operation of the well. It was my well from the beginning  
6 from the drilling to the operations of it.

7 MS. SWANSON: Okay. Thank you, Your Honor.

8 JUDGE SUTIN: So at this time we will accept  
9 Mr. Reimers as an expert in petroleum engineering and  
10 underground injection control.

11 MS. SWANSON: Well, the operation of.

12 MR. ZIMSKY: Operation of.

13 JUDGE SUTIN: Operation of underground injection  
14 control.

15 DIRECT EXAMINATION

16 CONTINUED BY MR. ZIMSKY:

17 Q Mr. Reimers, that's a good point to start is the  
18 drilling of this well. Can you briefly describe to the Court  
19 what occurred when you -- when Maralex Disposal went to drill  
20 this well?

21 A Yes, for sure. The initial part of any program in  
22 a successful program is the planning of it, and we looked at  
23 this one. As you have seen earlier, we submitted a permit to  
24 the EPA. As we got into the well, we started -- you know,  
25 things needed to be upgraded even more than we planned. When

1 you see the discrepancies in the intermediate casing strength,  
2 those are things that we purposely did, trying to make sure  
3 that we were doing the best we could to have mechanical  
4 integrity of that well, the best we could possibly do it.

5           The well was designed to cement the surface on all  
6 casing strings. On the initial 13-3/8 casing that was put on  
7 the hole, we designed the well to put in a 100 percent excess  
8 cement over what is calculated. We actually pumped that. We  
9 bring back a ton of extra cement and circulate cement. We  
10 pressure tested that casing string after it tested tight,  
11 determined that we had mechanical integrity down to roughly  
12 800 feet -- 700 some-odd feet on this well.

13           We drilled down the intermediate string of the  
14 hole -- actually run a larger casing string is what we refer  
15 to, rather than 10-3/4-inch casing. That casing is roughly  
16 50 pounds per foot. We cement it back. We don't use cement  
17 back to the surface. The conversations that we're having with  
18 the EPA, we show them where the projected top is. We refine  
19 with everything. We actually ran a temperature survey to  
20 confirm where that top was.

21           Q       And you inform the EPA along the way about the  
22 progress of the construction of the well?

23           A       That's correct. One of the things that I had  
24 gained through the years is that any rapport we had with any  
25 of the permitting agencies, we try to establish communication

1 with them. We talk to them. We weren't e-mailing back then,  
2 but we establish rapport.

3 It's a good time to address the issue of -- the  
4 person that was assigned that permitting process in Denver was  
5 a Patricia Pfeiffer. In dealing with her on the phone,  
6 I could tell she was new to that. She told me she didn't have  
7 much experience on that side of the EPA.

8 I encouraged her to actually come down and witness  
9 the drilling and the final stages of that well. In the  
10 drilling of that process, she actually came down and stayed in  
11 Durango for close to a week, was out on that rig as much as  
12 I was for the time, just learning what we were doing there.

13 To finish the actual drilling of that well, after  
14 we've set the 10-3/4-inch intermediate casing, one of the  
15 decisions that we had to allow for in the planning of that  
16 well was how do we run the long string, the 7-inch casing?  
17 We actually brought in an exhibit that shows that 7-inch pipe.

18 MR. ZIMSKY: May I approach, Your Honor, for this  
19 demonstrative?

20 JUDGE SUTIN: Yes.

21 THE WITNESS: Don't let me hit the court reporter.  
22 This inner string, I'll talk to a little bit later, but --

23 JUDGE SUTIN: Do we have this marked as an exhibit?

24 MR. ZIMSKY: It's just a demonstrative.

25 JUDGE SUTIN: So you're not planning to --

1 MR. ZIMSKY: No.

2 THE WITNESS: If you want to take it home, I will  
3 give it to you. It's hard to transport. As I was saying  
4 earlier, part of our planning process was, what do we do for  
5 that long string?

6 When you look at the mechanical integrity of that  
7 well, initially, as well as throughout its life, that 7 inches  
8 is key as anything that we do on the well. We permitted an  
9 actual running of 23 pound per foot casing. We debated about  
10 making that casing string a liner string.

11 If you go back, visualize that schematic, that  
12 would be taking this 7 inch from roughly the 9,000-foot TD,  
13 total depth, and taking it back to the 10-3/4 and then hanging  
14 it there.

15 We looked at that and said, "It would save a lot of  
16 money." When you were dealing with pipe back then, it was \$50  
17 a foot, 40-something dollars a foot. We could have saved a  
18 lot of money. But we looked at it and said, "The integrity is  
19 critical out here." We took it from 23 pound to 32 pounds per  
20 foot.

21 There was some earlier testimony about, you know,  
22 the added metal. There is just no question when you increase  
23 the thickness of that steel, it's the same OD, outside  
24 diameter. You're reducing the inside diameter with extra  
25 steel. Reverse pressure, everything is dramatically improved

1 on the integrity of that pipe.

2 Q What is burst pressure?

3 A It's the pressure that that pipe can be pressured  
4 up to before it fails. It's a number that is actually tested.  
5 There's some actual theoretical stuff that goes into it, but  
6 they actually hydrotest it to make sure that it tests to a  
7 total number on that, all published data.

8 We actually test this pipe after it's ran. I think  
9 I brought this one up to about 95 percent of the calculated  
10 burst. The pressure test that we've shown as an exhibit is a  
11 4,000 pounds per square inch test on that 7-inch.

12 The other thing that I need to add on that is that  
13 I don't think I made it clear to you guys that 7-inch ran from  
14 TD all the way back to the surface. We went all the way to  
15 the top with it. Any of communications we had then is in this  
16 annular area between the 3-1/2-inch tube tubing and the  
17 7-inch.

18 MR. ZIMSKY: And if you -- if I may, Your Honor.

19 Q (Continued by Mr. Zimsky) So you have -- this  
20 casing goes from TD, total depth, all the way to the surface?

21 A That's correct.

22 Q And you have additional casing outside of that?

23 A Yeah.

24 Q And that's what was talked about here. Of course,  
25 it's 13-3/8, and it goes down to 723 feet?

1           A     Right at 730 feet, right.

2           Q     And then you have what is actually not -- this is  
3 the schematic from the permit that you actually overbuilt  
4 this, also?

5           A     That's correct, to 10-3/4. Nothing changed on the  
6 permit as far as the 7-inch, so there was no sense to go to a  
7 larger 10-3/4 intermediate, other than wanting to be  
8 overdesigned. If engineers are guilty of anything, it's  
9 probably overdesigning things, but I would rather have that  
10 safety factor in something like this versus being  
11 underdesigned.

12                     So if you can picture on the surface down to  
13 600-some-odd feet, there's two other strings of pipe here.  
14 There's four strings of casing protecting that first 800 feet.

15           Q     And your testimony about cement -- it wasn't  
16 cemented all the way down. Can you explain that?

17           A     Yeah. The design, the procedures that we put in  
18 place -- this is what I had learned from my experiences, as  
19 well as consulting the cementing experts, the service  
20 companies that provide that is that in your best plans, like  
21 when we refer to the 13-3/8-inch surface, we go in with  
22 100 percent excess.

23                     We say that, "Hey, we're calculated x-number of  
24 volume. It's absolutely critical to have that cement." So we  
25 buy a whole lot of extra cement slurry, design extra. Most of

1 that goes back into the drilling pit afterwards because it's  
2 just oversized.

3 We did the same thing on the other strings of  
4 casing. What you get into is cement, the cement slurry is  
5 quite a bit heavier than water. It's heavier than the  
6 drilling mud that we have in the well.

7 So as we are pumping that cement down in the casing  
8 string, coming up to the annular area, it can break down the  
9 formation and actually be lost into it. So we did not  
10 circulate cement on the 10-3/4 or completely on the 7-inch  
11 liner. That's just the mechanics of what happened with the  
12 formation, not the design.

13 Q And all of that has been reported to the EPA.  
14 There was no --

15 A That's correct. We showed them the actual  
16 temperature logs, as well as the cement bond log. We showed  
17 them the calculated cement tops not calculating the actual  
18 cement tops that were observed behind pipe, and they approved  
19 that was adequate to protect this well.

20 There was a reference this morning that, you know,  
21 as the engineer following it, that I took kind of personally  
22 when he said, like, "You purposely weren't doing that," and  
23 I take exception to that.

24 MR. ZIMSKY: Your Honor, may I approach with the  
25 exhibit book?

1 JUDGE SUTIN: Yes.

2 Q (Continued by Mr. Zimsky) I want to first direct  
3 your attention to Exhibit 8 in that binder. It's  
4 Respondent's -- or Complainant's Exhibit 8, Stipulated  
5 Exhibit 8. Do you have that?

6 A I do.

7 Q And this is an inspection report. And you were  
8 here for Mr. Wiser's testimony, correct?

9 A That's correct.

10 Q And you were present at this inspection?

11 A I was.

12 Q Now, to the best of your recollection, was this the  
13 first time that you had met Mr. Wiser at the site?

14 A It was not, and I was talking about it earlier.  
15 Before his testimony, I was 100 percent sure that he was here  
16 in 2009, and he -- we did a field inspection on that well in  
17 2009.

18 His direct testimony this morning was that he was  
19 not there; that that was his first time to the well. So based  
20 on that, there's a level of doubt that it was him. I feel  
21 very, very comfortable that it was.

22 Q But there was an inspection in 2009 that you  
23 recall --

24 A Yes.

25 Q -- prior to the inspection that is reflected in



1 this May 5, 2010 report?

2 A That's correct.

3 Q Can you tell us about that inspection?

4 A Yeah. We'll get to it even earlier. There was an  
5 inspection before that one. The inspection in 2009, it was  
6 unique. It was all I knew at that time.

7 The inspection in 2008 and 2009 is similar to what  
8 happens today is, they'll receive a call that the inspector is  
9 on location, and I'll drop whatever I'm doing and go to the  
10 location and go through the inspection with him.

11 At that time we observed some pressure on the  
12 annulus. There was no record given to me from the EPA on what  
13 that is, not like there is now -- the 2010 inspections.

14 So there was pressure. I was instructed to bleed  
15 it off and see what happened, report back to them, report back  
16 to the EPA. I did that the next day. That pressure bled off  
17 in less than a minute. If memory serves me right, it was less  
18 than 40 gallons of liquid, less than a barrel of water that  
19 came off of it. There is absolutely no flow after that  
20 pressure is dissipated off the annular area between the 3-1/2  
21 and the 7-inch.

22 Q Can you explain that -- no flow?

23 A Yeah. There's a lot of testimony here about leaks.  
24 Anything through even the 2011 -- 2010 inspections is that the  
25 pressure that we see here bleeds off -- bleeds off, and the

1 most I saw was a barrel and a half to get that pressure off.

2           And then even though the liquid level is right  
3 there, we have 9,000 feet of inhibited KCL (sic) water here  
4 protecting that pipe -- potassium chloride water. There's no  
5 flow. The flow stops. So that is a direct indication that  
6 the effects you're seeing with the pressure is  
7 temperature-related.

8           Q     And can you explain how it could be  
9 temperature-related?

10          A     You bet. It goes back to -- I feel sorry for the  
11 court reporter. It goes back to basic physics, but as you  
12 have a liquid packed casing, you know, this casing tubing  
13 environment, any temperature change has a direct correlation  
14 to the pressure.

15                If the temperature of that liquid decreases, the  
16 pressure decreases. If the temperature increases, the  
17 pressure increases. That's science. That's the physics of  
18 it. It happens.

19                In the scenario here, we see it if the well is shut  
20 in. We're injecting water that is basically ambient  
21 temperature. 60, 70 degrees is probably the best number that  
22 you can look at on an annual basis.

23                When you're injecting that, you're cooling down the  
24 injection string. That annular area liquid is actually  
25 decreasing in temperature, so the temperature effect is

1 dropping. When you shut in and allow that temperature to  
2 increase, then that closed fluid system has to build in  
3 pressure. If a valve was open here (indicating), then it  
4 would allow that extra expansion to flow out of the well, but  
5 we don't allow that. We always maintain integrity by keeping  
6 all the valves shut in.

7 Q Now, let's talk about -- you were instructed by  
8 whoever visited in 2009 to bleed it off and report back. Did  
9 you do that?

10 A That's correct.

11 Q And you talked about an earlier inspection than  
12 that?

13 A It was referred to in the testimony this morning  
14 from Mr. Wiser that in 2008 -- again, we weren't given any  
15 written records of it, but two EPA inspectors visited the  
16 well. We actually saw, again, pressure.

17 At this time, the injection pressure was less than  
18 the actual pressure on the 3-1/2-by-7-inch annular, which was  
19 less. He wasn't too alarmed about it, but at the same time,  
20 he told me to bleed it off and report back to him.

21 Q And did you report back to him?

22 A I attempted to. I found out that when he left  
23 location, he was checking other wells. He mentioned to me he  
24 was attempting to get back to Denver that evening. When  
25 I called the EPA office in Denver the next day, I was told

1 that he was involved in a very bad traffic accident on the  
2 drive back to Denver, and they didn't know when he was going  
3 to be back. I don't know who I talked to then, but they were  
4 even fearful of his life, whether or not he would survive  
5 that.

6 Q But you followed his instructions?

7 A Yes, sir. Again, that flowback was -- the pressure  
8 bleeds off. No flow coming out of the annular area after we  
9 bleed off the pressure.

10 Q Now, if I could refer you to Stipulated Exhibit  
11 No. 8, we're going to go back to the May 5, 2010 inspection.  
12 And on the second page, handwritten notes indicate,  
13 "The operator will bleed down to zero and call in the morning  
14 with report."

15 Did you do so?

16 A I did. It was reported back to him. I think it  
17 was when he came back out, and actually they came on location,  
18 and we were doing the logging. On an annual basis, we have to  
19 log on this well -- L-O-G -- both a temperature survey, as  
20 well as a radioactive survey. And Nathan came out then, and  
21 I think it was reported to him then.

22 Q And what did you report to him?

23 A We reported that we had opened it up. We produced  
24 back one barrel of water. The pressure dissipated. There was  
25 no pressure on the surface, and there was no flow, also.

1 Q So was there anything different from this -- what  
2 happened in May -- what was occurring with the well in  
3 May 2010 and what occurred earlier?

4 A No, other than, you know, there was a difference in  
5 the pressure, the magnitude of the pressure, but not on how it  
6 responded after the flowback.

7 Q Mr. Wiser came back about three weeks later, and  
8 I direct your attention to Exhibit No. 9. It's Complainant  
9 Exhibit No. 9, Stipulated Exhibit 9, the inspection report for  
10 May 26th.

11 A That's correct.

12 Q Did you -- again, this was an unannounced  
13 inspection?

14 A That's correct.

15 Q He called you, and then you came to the site?

16 A That's correct. This one started out a little bit  
17 worse because I was two hours away from this location. Nathan  
18 was on location and wanted to inspect it again, and I told him  
19 I was on our trading post project, roughly an hour south of  
20 the New Mexico border, probably even an hour and a half south  
21 of that, and it was going to take a while, but I would be  
22 there.

23 So when I arrived on location, he was visibly  
24 shaken or upset for having to wait for two hours, but that was  
25 part of just where I was at in the Basin.

1 Q And it says, "EPA observed annulus valve was  
2 closed." Was it typically closed?

3 A Yes, sir.

4 Q Can you explain to the Court why it was closed?

5 A In any type of operation, you want security. You  
6 want safety. We don't want spills, even though we're dealing  
7 with relatively fresh water here. The water is disposed of,  
8 and this well is 6,000 TDS.

9 We maintain that if something fails, we want to  
10 have a valve shut so that it doesn't spill into the  
11 surrounding areas. So I do that also with pressure gauges.  
12 I don't want a pressure gauge exposed to that pressure.

13 The only time that gauge is needed is when it's  
14 being read, so we manually open the valve then. We do the  
15 same thing on the casing. In the event that packer failed and  
16 in the event the tubing failed, I don't want something  
17 spilling with an open valve.

18 Q And in this report, it indicates that the annulus  
19 bleeding produced 1.5 barrels of liquid. Do you see that?

20 A That's correct.

21 Q Is that accurate to your recollection?

22 A Yeah. The reference to the 3-1/2 barrels was the  
23 liquid that he saw in the barrels that were on location, and  
24 then with his witness, we produced back roughly 60 gallons of  
25 liquid to bleed off that pressure with no flow afterwards.

1 Q Now, by bleeding that liquid on May 26th, did it  
2 reduce the annulus pressure?

3 A It did. As I noted in my letter back to Nathan,  
4 this was the first time that we had observed that the pressure  
5 had built that quick. That was 21 days, three weeks. The  
6 pressure was actually greater than it was on the May 5th  
7 inspection. So it was the first indication we had that, hey,  
8 this may be something more than just the thermal effects.

9 Q Okay. Now, did you -- let's go to Complainant's  
10 Exhibit No. 10. Do you have that in front you?

11 A I do.

12 Q It's Stipulated Exhibit No. 10. Do you recall  
13 receiving this letter?

14 A Yes, sir. I sure did.

15 Q And what did you do after you received this letter?

16 A Discussed it with the office personnel, with Mickey  
17 O'Hare and with probably even the other people in the office  
18 discussing, you know, the letter we had from the EPA.

19 Q And Mickey O'Hare, is he the manager of Maralex  
20 Disposal?

21 A Yes, sir.

22 Q And did you and Mr. O'Hare devise a response?

23 A We did. We knew that Nathan's letter was very  
24 specific, that they wanted to see a written response in  
25 30 days. That followed protocol for what we had seen with the

1 EPA, as well as any regulatory agency report.

2 Q And will you turn to Complainant Exhibit No. 11,  
3 Stipulated Exhibit No. 11? Is this the letter you sent?

4 A That's correct.

5 Q Can you describe the purpose of this letter?

6 A You know, the testimony that has been discussed  
7 this morning, there's more -- in my mind, there's more  
8 confusion about this letter than anything else that has been  
9 said.

10 It's response to the EPA on what was observed  
11 there. It confirms his numbers as far as the pressures that  
12 were seen. It's very clear, I think, even rereading it a  
13 number of times since this has all developed, that this letter  
14 outlines nothing more than a testing procedure on how Maralex  
15 is going to test the mechanical integrity of that well; that  
16 we do not admit that there is a problem, but we say that,  
17 "Hey, there's indications that there is something happening  
18 here."

19 And this is the test procedure, and I emphasize  
20 "test." It's not a workover procedure. The verbiage is  
21 written in that letter very specifically stating that a  
22 workover procedure will follow once we get this testing  
23 procedure outlined.

24 Q And in that letter, you wrote in the first  
25 paragraph, "The nature of how soon this pressure builds up --



1 builds back now implies that we may have a 'pinhole' leak in  
2 the system.'"

3 Can you explain what you mean by that?

4 A As I referenced earlier, it was the first time that  
5 I inspected the well or anybody had actually observed the  
6 pressure responses that we saw the annulus build that quick.

7 When I go back to the 2008 testing that was done on  
8 it, you know, it would take months before you would see any of  
9 that pressure. There's times that when you check the annulus  
10 pressure, it would be lower than what you saw before. So you  
11 felt comfortable that it was temperature effects that we were  
12 dealing with.

13 This three-week period, the 21 days, the magnitude  
14 of that pressure with knowing that we were pretty much  
15 constant injecting on the well there gave strong indication  
16 that I've got -- I mean, the fact that it won't flow when  
17 I open it up and bleed the pressure off and there is no flow?  
18 That's the reference to the pinhole.

19 What we subsequently found since then is not --  
20 wasn't only just a pinhole-type leak. It was an intermittent  
21 pinhole-type leak. And that intermittent, referring to the  
22 fact that it didn't always leak. We would be out there and  
23 get a rock solid test on it and think we were fine, to find  
24 out later that it built back up again. It truly is sporadic.  
25 It's intermittent.

1 Q Now, after you sent the letter on July 6, 2010,  
2 what was your next dealings with this well?

3 A We had a couple things going on right then. I was  
4 assigned to all our New Mexico properties. We lost an  
5 engineer, and this particular well was reassigned to Christi  
6 Reid, who was kind of, there, I think, the end of August,  
7 first of September of 2010. I knew that we never heard a  
8 response from the EPA on the proposed testing.

9 Q Now, were you waiting for a response?

10 A Very much so. If you can refer back to that  
11 letter, my last line in that letter is, "We appreciate your  
12 review of this."

13 You know, this is standard protocol for any of the  
14 regulatory agencies that I have dealt with. We propose a  
15 procedure. We propose a testing protocol. We want their  
16 concurrence with it. It's the way we were with the BLM, with  
17 the Oil and Gas Commissions both in New Mexico and Colorado.  
18 So we have worked with EPA in years past.

19 Q And the way you worked with the EPA up in Alaska,  
20 is this consistent?

21 A Yeah. And in Alaska, there weren't direct  
22 conversations with the EPA, but in the stuff that we have done  
23 down here with them, it definitely was. We would propose  
24 something, and sometimes it was just a verbal -- you know,  
25 proceed.

1 Q Did you ever get a response back? Did you follow  
2 up on this letter?

3 A I did. It was a phone call. We were estimating  
4 probably early October, late September, I knew that I had not  
5 heard back from them. I was handing off the engineering  
6 responsibilities on this well. I could see something wasn't  
7 adding up here.

8 I personally called Nathan Wiser and said, "Nathan,  
9 something is not right here. We gave you a letter outlining  
10 the proposed testing. We haven't heard back from you."

11 His response to me was, "Let me see. Something  
12 apparently fell through the cracks."

13 Q And did he ever get back to you?

14 A It was roughly two days later that Nathan returned  
15 the call and said, "Proceed with what you have proposed."

16 Q And did you advise Mr. O'Hare of that?

17 A To Christi.

18 Q You talked to Christi Reid?

19 A Yes, sir.

20 Q Now, you're familiar -- Christi Reid took over  
21 responsibility of Ferguson No. 1 August, September of 2010,  
22 correct?

23 A That's correct.

24 Q Are you familiar with any of workover that was done  
25 in May of 2011?

1           A     Help me. That would be the tubing --

2           Q     Yes.

3           A     Yes. You can't help it. Christi and I share  
4 offices. We're right down the hall from each other -- not  
5 share offices. You hear, you know what is going on. We  
6 consult each other. We want to know the expertise of what is  
7 happening there.

8                     This pinhole intermittent communication, we  
9 determined that we had to trip the casing, the tubing, the  
10 3-1/2-inch tubing to see what she had. On that particular  
11 workover, she discovered two or three joints that were loose  
12 on that, and it appeared that that was the source of the  
13 pressure communication between the 3-1/2 and the 7-inch.

14          Q     Were there any other workovers that you were  
15 familiar with on this well or work that was done to address  
16 any issues?

17          A     Yeah. In November of that year when Christi was on  
18 vacation, we observed then that we were seeing some effects on  
19 that annulus that scared us. The way this tubing sets in the  
20 tree, the wellhead itself, it's a mandrel that connects -- a  
21 tubing hanger, excuse me, that sits into a mandrel, the  
22 wellhead itself. It's something that is going to be about  
23 twice the size of the tubing, but that literally is the seal  
24 on the top part of that tubing to the wellhead itself.

25                     We were concerned that that may be the source of

1 that pinhole leak. So we actually brought in a rig. We  
2 didn't have to trip the well. We could just pull up on it.  
3 We've got a plug on the bottom, so we have pressure  
4 containment.

5 We do all of that under a BOP, a blowout preventer,  
6 and actually replaced that mandrel. I supervised that,  
7 witnessed all of it, and at the end of the replacement, that  
8 tubing hanger, we actually pressure tested that annulus. My  
9 report says that it's rock solid. It tests fine.

10 MR. ZIMSKY: Okay. And if I may approach, I have a  
11 schematic that has been stipulated. I think that's Stipulated  
12 Exhibit No. 37.

13 Q (Continued by Mr. Zimsky) And do you have that in  
14 front of you?

15 A I do.

16 Q And can you show the Court -- we're talking about  
17 the hanger and the mandrel that you worked with in November?

18 A Yes, sir. Probably the best way to look at this is  
19 to look at the bottom of the picture, and you'll see the  
20 3-1/2-inch production tubing that is going up into the well.

21 Midway in that diagram of the wellhead, you'll see  
22 the tubing hanger. That's that round piece with a dark line  
23 through it.

24 JUDGE SUTIN: Yes.

25 THE WITNESS: That's what is actually screwed on to

1 the coupling here on the tubing and literally sets or seals in  
2 that flange connection, which is the red shaded area here  
3 (indicating).

4 We can test some of that on the surface. The plugs  
5 that are on the side, we can actually open those, see if  
6 there's pressure there. We never observed pressure on this  
7 well from that indication, so we were thought we were fine  
8 there.

9 So we thought there's got to be something that  
10 happens intermittently, not always, so we elected just to  
11 replace that tubing hanger, and we pulled up on it, replaced  
12 it, and put it in, and it tested fine, just as I previously  
13 testified.

14 Q (Continued by Mr. Zimsky) Now, as an expert in  
15 petroleum engineering and injection well, operation of  
16 injection well control, based on your experience, your  
17 familiarity with the Ferguson No. 1 well, do you have an  
18 opinion as to the cause of the annulus pressure experienced at  
19 the Ferguson No. 1 well?

20 A Yes, sir.

21 Q Okay. Yes. And can you give us that opinion?

22 A You know, I think in hindsight, it's one of those  
23 things that from a pure science standpoint, you're never going  
24 to exactly know where that was. But in my mind, the  
25 experience that I have is that we definitely had a combination

1 of things. The early life of that well, I have no question in  
2 my mind that most of that was temperature effect. It's what  
3 we see constantly. It's what I learned in high school  
4 physics. If that liquid is there, it might change the  
5 temperature on it. There's a corresponding temperature change  
6 on that volume of liquid.

7           Early in the life of the well, as we saw the  
8 workover, we knew that we had tubing connections that quite  
9 possibly could be leaking, and they could be intermittent  
10 leaks. That connection is not tight. We knew it was not up  
11 to the API specs on what the torque should be on that.

12           In certain pressures and certain conditions and  
13 certain harmonics of that tubing string, that you can actually  
14 have a temporary leak that occurs on each one of those loose  
15 connections.

16           I think in hindsight, the one thing that we  
17 probably replaced that never needed replacing was the mandrel.  
18 I think I got lucky from the standpoint that the test after  
19 was fine, but the problem wasn't the mandrel.

20           Q     Now, is your opinion based upon the type of  
21 information and data that an expert in your field of petroleum  
22 engineering and injection well control would rely upon in  
23 formulating such an opinion?

24           A     That's correct. And, you know, I might add that  
25 I hope I emphasized or maybe overemphasized that in the light

1 of everything that happened here, there was never a flow  
2 between that annular area where we replaced -- even up through  
3 the work and up to the end of 2011 that we saw pressure bled  
4 off that there was no flow.

5 Q Flow from where to where?

6 A Yeah. Any kind of a leak you would have in the  
7 system, whether that be the packer, whether that be the high  
8 pressure injection water down the tubing, when you bled off  
9 that pressure, it sustained flow. There's no volume to  
10 anything.

11 Q And is that an opinion that you based upon your  
12 expertise?

13 A It's not opinion. It was what was observed. It  
14 was observed by Nathan, Mr. Wiser.

15 Q Now, have you formulated an opinion as an expert in  
16 petroleum engineering and as an expert in injection control  
17 based on your experience, your education, the facts as you  
18 have observed them, whether the Ferguson No. 1 well maintained  
19 mechanical integrity as defined by the EPA?

20 A When we talk about -- yes, sir.

21 Q Thank you. Can you provide that opinion?

22 A Yes. I do provide that opinion. Yes, sir.

23 Q Okay.

24 A The opinion is such that there was never any loss  
25 of liquid between the annular area, the 3-1/2 production



1 tubing and the 7-inch casing. In the intermittent leak that  
2 we had into that annular area was never lost from that.

3 Let me put it another way that helps me understand  
4 it. Anytime any water ever came from that area was water that  
5 I or whoever was there bled off. We controlled that  
6 40 to 60 gallons coming out to dissipate that pressure. There  
7 was never a loss of that liquid anywhere else.

8 Q And based on observations of this well, were  
9 these -- you indicated there could have been some pinhole  
10 leaks in the seal between the different -- the 3-1/2-inch  
11 tubing, you have different joints, correct? It's not just  
12 one piece of metal?

13 A That's correct.

14 Q And you put in and you tighten each joint. You put  
15 more string down, and you put another section in. You  
16 testified that that got tightened in May 2011?

17 A That's correct.

18 Q Do you consider any leaking from those -- any  
19 leaking that might have occurred to be significant?

20 A No. I mean, it's not even, by my definition, a  
21 leak. It's a ten-point system that builds up the pressure,  
22 but in order to be a leak, there has to be flow. There was  
23 absolutely no flow when you have contained totally in that  
24 annular area.

25 Q But as far as any leak through the seals into the

1 annular area, were those leaks -- would you consider them  
2 significant?

3 A They are what I refer to as pinhole, extremely  
4 minor. I gave the analogy, you know, the other day about  
5 having a problem with your car. You take it in to the  
6 mechanic and say, "Here's what it does some of the time, but  
7 it's not doing it now." And that's what we were faced with on  
8 this one.

9 Q How much fluid gets injected into this well in any  
10 given month?

11 A Yeah. The numbers that were recorded this morning  
12 that were reported are pretty accurate. Barrel basis 2,000 to  
13 2500 barrels a day, 60,000 barrels a month.

14 As I pointed out to our people, this is the  
15 northern part of the Basin. It was referred to earlier this  
16 morning that this well is approved for frac flowback water.  
17 We've never taken frac flowback water here. All we take is  
18 coal seam produced water.

19 The composite test that we take is a sample of the  
20 mixture of all the different wells coming in here. We are  
21 averaging around 6,000 TDS, our total dissolved solvents.  
22 It's extremely fresh produced water.

23 Q Does EPA have a standard for usable water as far as  
24 TDS goes?

25 A I've heard that it's 10,000, that anything below

1 10,000 in their mind is usable water.

2 Q So the water that you were injecting into this well  
3 was usable water?

4 A Yes, sir.

5 Q Did you further filter the water after -- the  
6 trucks come to the site, and the water trucks from coal seam  
7 wells --

8 A Right.

9 Q -- they hook up into your system, and they pump  
10 water into tanks?

11 A That's correct. That's all part of the permitting  
12 process where we outline that procedure, but to make it  
13 simplistic or the way you can understand it, when it is all  
14 said and done, the owners of this well will have a 4-1/2  
15 million dollar investment. We want to protect that.

16 We want that well to have a long, long mechanical  
17 integrity life. We want it to be there. We can plug up the  
18 injectivity into that formation. The Morrison, the Lafferty,  
19 and the Entrada are the three zones that we're injecting into.  
20 We want to prolong that life, so we filter that water down to  
21 initially, it was 1 micron filters, and we've got that down  
22 to, I think, 5 micron. You know, we inject extremely clean  
23 water into the formation.

24 I think on the average, we're changing those  
25 filters two or three times a week. And by the way, this well

1 is still not paid out. We're still economically -- we've got  
2 more money into it than we ever received from it.

3 Q I have another question concerning your expertise.  
4 There was -- we had earlier testimony about cement around the  
5 casing and the use of heavier weight casing. Do you recall  
6 that testimony?

7 A Yes, sir.

8 Q If you had been able to put cement all the way down  
9 on the casing and had used the other weight of casing as  
10 originally proposed instead of the heavier weight, would  
11 that -- I want you to compare the strength of that type of  
12 construction versus how it was actually constructed with the  
13 cement, with some gaps in the cement as you explained, and  
14 with the heavier casing.

15 A Yeah. I think I understand what you're saying.  
16 Anything that you can design heavier, more metal, more cement,  
17 the better off you are. This well, as well as any well, has a  
18 life to it. You're doing everything you possibly can by  
19 putting the best pipe.

20 The representation here of the 3-1/2-inch tubing is  
21 somewhat different. We run a plastic coating inside that pipe  
22 to protect it from corrosion, so the design of that well with  
23 a heavier pipe will build as much life into the system as we  
24 possibly can, the same as with the cementing of the well. So  
25 I don't regret trying to overdesign that.

1           Q       And the gaps in the cement, where the cement was  
2 designed to be that couldn't be because of the various  
3 physical issues, is that compensated by the heavier casing?

4           A       Yes, sir, to a degree. You have that much more  
5 mechanical integrity before it meets the cement. But part of  
6 that was designed -- it was referred to as the DV tool, David,  
7 Victor. It's a diversion tool, although we knew if that  
8 cement wasn't going to come all the way up to that point, that  
9 we mechanically shift that tool open and inject cement down  
10 there and come back up with it. So we compensated for that  
11 cement back up to a safe area. I prefer to have it all the  
12 way back to service, but we compensate with that tool and got  
13 the well adequately cemented.

14           MR. ZIMSKY: Your Honor, if you would just give me  
15 a moment.

16           Q       (Continued by Mr. Zimsky) And, Mr. Reimers, how  
17 often would you monitor the pressure on a well?

18           A       It's a good question. There's been testimony  
19 earlier referring to Pete Tree. Pete was our pumper that was  
20 assigned to this well, as well as a number of our wells in  
21 this area.

22                   All of our pumpers, including Pete, was instructed  
23 to take pressure readings on tubing -- any disposal like this,  
24 you're injecting pressure on a daily basis -- to monitor any  
25 casing pressure whether on a producer or a disposal well at

1 least weekly.

2 Pete was what -- I made the statement earlier -- I  
3 consider him one of my best pumpers originally. But Pete, you  
4 know, his skills, his ability to do what we asked him to do  
5 deteriorated roughly three to four months -- I don't know  
6 exactly for sure the date we terminated Pete's employment with  
7 Maralex because his performance wasn't what we wanted it to  
8 be. He wasn't recording pressures and doing other tasks that  
9 we instructed him and he previously had done.

10 Q And during the time you were in charge of the well,  
11 did you monitor the pressure yourself?

12 A That's correct. It's a well that was in -- you  
13 know, I was assigned to it. I followed it. There was enough  
14 going on at this well that we want somebody to follow it seven  
15 days a week. Pete was employed to follow this one Monday  
16 through Saturday. Most Sundays, I was out there watching --  
17 you know, observing and monitoring the well, also.

18 When it came to actually monitoring the casing  
19 pressure, in light of any type of inspection that I had with  
20 any of the EPA inspectors, you know, we follow their  
21 guidelines. The stipulations are verbal and written things  
22 that they wrote on the report was continued to monitor and  
23 record them, record that.

24 I probably monitored, physically put a gauge on  
25 there and looked at it every other week, twice a month at

1 least, in order to monitor that, and I felt like I had to  
2 bleed some of the pressure off and see what the trend was.

3 When I see an immediate drop in that pressure, and  
4 I know it's going to zero, I know that nothing has changed,  
5 and I leave it the way it is. I don't necessarily bleed it  
6 down to zero. I bled it off and said it was just exactly what  
7 myself and the inspector had observed.

8 MR. ZIMSKY: Okay. No further questions.

9 MS. SWANSON: Your Honor, can I have just one  
10 moment to confer, please?

11 Your Honor, the Complainant does not have any  
12 questions for this witness. Thank you.

13 THE COURT: Mr. Reimers, I do have one question for  
14 you.

15 Q (By Judge Sutin) In the letter you wrote on  
16 July 6th, the last sentence says, "We will keep you posted  
17 after actual days of the testing and the rework is known."

18 You testified that you did call Mr. Wiser to let  
19 him -- to ask if you were okay to move forward.

20 A Yes.

21 Q But did you ever --

22 A Go ahead.

23 Q Go ahead.

24 A I asked him to find out where the response was to  
25 my letter.

1 Q Uh-huh. Did you ever contact the EPA after --

2 A No.

3 Q -- the rework?

4 A It was not my well. I knew -- I had his verbal  
5 then, so I relayed that and didn't call again.

6 JUDGE SUTIN: Okay. Thank you. So why don't we  
7 take a ten-minute break. We'll just come back at 3:00.

8 How's that?

9 (A recess was taken from 2:52 p.m. to 3:00 p.m.)

10 MR. ZIMSKY: I'd like to call Christi Reid, please.

11 **CHRISTI REID,**

12 the witness herein, having been first duly sworn, was examined  
13 and testified as follows:

14 DIRECT EXAMINATION

15 BY MR. ZIMSKY:

16 Q Ms. Reid, can you introduce yourself to the Court?

17 A My name is Christi Reid. I've been working for  
18 Maralex for six years. I'm a petroleum engineer.

19 Q And what is your educational background?

20 A I graduated from Texas A & M University in 2004  
21 with a bachelor of science in petroleum engineering.

22 Q And how long have you worked for Maralex?

23 A Six years.

24 Q And in what capacity? What kind of

25 responsibilities do you have or have you had over these six



1 years?

2 A I have had -- I've worked in every discipline,  
3 really, of petroleum engineering. I've been a drilling  
4 engineer, a completion engineer, a production engineer, some  
5 reservoir engineering, and I've done a lot of field work and  
6 rig supervision.

7 Q And did there -- I want to concentrate on the  
8 Ferguson No. 1 well. You're familiar with that well?

9 A Yes.

10 Q And when did -- are you responsible for overseeing  
11 that well?

12 A Yes.

13 Q When did you take over responsibility for that  
14 well?

15 A August of 2010.

16 Q And was Mr. Reimers the person that was supervising  
17 the well before you?

18 A Yes.

19 Q And when there was a handoff, did you have  
20 discussions with Mr. Reimers about this well?

21 A Yes.

22 Q And what did you guys discuss?

23 A We discussed -- we knew that there -- we had  
24 submitted a letter to the EPA about the testing, so we  
25 discussed that. We knew we might have a pinhole leak, but we

1 were waiting on a response from the EPA.

2 Q And did Mr. Reimers ever talk to you about getting  
3 a response from the EPA?

4 A Yes. He told me when he called Nathan Wiser, and  
5 he said that Nathan had given him an okay to proceed on the  
6 testing procedure.

7 Q And when you got that information, what did you do?

8 A I went to my supervisor, Mickey O'Hare. I talked  
9 to him about it, and he said that we still wanted a written  
10 response from the EPA before we proceeded with anything.

11 Q And you didn't proceed with anything on the  
12 Ferguson No. 1 well based on what Mr. O'Hare told you?

13 A Right.

14 Q Now, I want to direct your attention to -- there's  
15 an exhibit book up there. It would be Exhibit 13. It's an  
16 inspection report --

17 A Yes.

18 Q -- on April 13th. Were you on site at this  
19 inspection?

20 A Yes.

21 Q And was that the inspection with Ms. Roberts?

22 A Yes.

23 Q Was she the inspector from the EPA?

24 A Yes, she was.

25 Q Had you previously had any contact with Ms.

1 Roberts?

2 A No. That was the first time I had met her.

3 Q Now, this inspection report doesn't indicate that  
4 there was any bleeding of fluid from the annulus. To your  
5 recollection, was there any bleeding?

6 A No. We just put a gauge on the annulus and  
7 measured the pressure with that.

8 Q Do you know how long this inspection lasted?

9 A It wasn't very long -- maybe 30 minutes,  
10 45 minutes.

11 Q And then what was the next thing that you did with  
12 respect to this well?

13 A We -- when Sarah Roberts came out and she noticed  
14 pressure on the annulus, she sent me a cease injection letter,  
15 and we shut in our well, and we prepared to test and fix the  
16 problem.

17 Q And if you could go to Exhibit No. 15,  
18 Complainant's Exhibit 15, which is Stipulated Exhibit No. 15,  
19 is that the letter, the cease injection letter?

20 A Yes.

21 Q And when you received it, if you look at the third  
22 page, it's signed by Sue Herrera, maybe?

23 A Yes. She is our secretary that receives the mail.

24 Q Okay. And it indicates the date of delivery of  
25 April 25, 2011, where she signed --

1           A     Yes.

2           Q     And when did you shut in the well or cease  
3 injecting?

4           A     We did it that next morning. We shut the well in.

5           Q     And then what did you do?

6           A     And then I prepared -- or I got ready to do the  
7 testing, so I lined up equipment and services for working on  
8 the well.

9           Q     And how long did that take?

10          A     I believe it took about two weeks to line up a rig,  
11 so we were shut in that whole time.

12          Q     And can you -- did you do any workover on the  
13 rig -- on the well?

14          A     Yes. When we finally got the rig out there, we ran  
15 plugs in our tubing to isolate the well so that we could pull  
16 the tubing out and -- well, first, we tested the tubing, and  
17 it looked like we had a pinhole leak in our tubing. So then  
18 we pulled the tubing with a rig to check for the hole.

19          Q     And what did you find?

20          A     We found -- we checked every connection, which is  
21 where the two pieces of pipe screw together, and we checked  
22 every single connection. We found two very loose connections,  
23 so we tightened those up and retested the tubing, and it  
24 tested fine. So we assumed that we had been leaking through  
25 those loose connections.

1 Q And how loose were the connections?

2 A They were very loose. Usually it takes some force  
3 to unscrew the pipe, and those connections were -- they were  
4 loose, like it didn't take very much force at all with the  
5 tongs on the rig to unscrew them.

6 Q But they were -- they weren't undone?

7 A No. The tubing string was still all connected to  
8 each other or else we would have had a bigger problem. We  
9 would have had a tube that fell in our well, which we didn't.  
10 So it was all connected, but there's a specific torque that  
11 each connection is supposed to be tightened up to, and those  
12 two were definitely not up to the appropriate torquing they  
13 should have been screwed onto.

14 Q And then you took care of that problem, and then  
15 you put the tubing back in the hole?

16 A Yeah. We ran the tubing and the packer and  
17 everything back in, and then we tested the tubing, and we also  
18 tested the casing at that time, and we submitted that MIT to  
19 the EPA and we got good tests on both.

20 Q On both?

21 A The tubing and the casing.

22 Q And if you could look at Exhibit 17, it's  
23 Stipulated Exhibit 17.

24 A Yes.

25 Q What is that first page?

1           A       This is the well rework record that we submitted to  
2       the EPA after we do our workover, and we showed that we  
3       repaired a leak in the tubing. We assumed that was our  
4       problem, a pinhole leak on those joints. And then we also  
5       submitted the MIT details.

6                   And the EPA requires you do a 30-minute test  
7       recording the pressure every five minutes, so that's what  
8       we're showing in the description box on the first page.

9           Q       And after sending this in to the EPA, did you get a  
10      letter back from them authorizing you to continue operations?

11           A       Yes. We didn't start reinjection until we got  
12      approval from them to start reinjecting.

13                   MR. ZIMSKY: Give me one moment, Your Honor.

14                   That's all the questions I have. They may have  
15      some questions, and the Judge may have some questions.

16                   JUDGE SUTIN: Ms. Swanson?

17                   MS. SWANSON: If I could just have one moment to  
18      collect my thoughts. Thank you. Okay. Thank you.

19                   JUDGE SUTIN: Proceed.

20                   MS. SWANSON: Ms. Reid, just a few questions for  
21      you.

22

23

CROSS-EXAMINATION

24           BY MS. SWANSON:

25           Q       Is it your testimony that the permit requires EPA

1 approval before doing any testing on the well?

2 A When I first started the well, I believed that we  
3 needed approval on our procedures to do a workover or testing,  
4 but Sarah told me that they don't usually approve our  
5 procedures, and I learned that at our first inspection.

6 Q So are you familiar with what, if any, requirements  
7 in the permit actually requires EPA-approved testing before it  
8 is conducted?

9 A I'm not familiar.

10 Q Okay. So, Ms. Reid, with regard to the well rework  
11 that was done, we've heard testimony that the well rework  
12 record was performed on May 24, 2011; is that correct?

13 A Yes.

14 Q And you provided a copy of that rework to EPA?

15 A Yes.

16 Q And would you agree that the date that EPA approved  
17 the reauthorization of injection for that well was  
18 May 27, 2011?

19 A I don't have the letter with me, but I -- that  
20 sounds right.

21 Q And is it correct that the permit does, in fact,  
22 require EPA approval of reinjection or reauthorization?

23 A I believe so. I believe so.

24 MS. SWANSON: Okay. Thank you. Your Honor, that's  
25 it.

1 JUDGE SUTIN: Mr. Zimsky, any Redirect?

2 MR. ZIMSKY: No, Your Honor.

3 JUDGE SUTIN: Okay. I just have a quick question.

4 Q (By Judge Sutin) Are you given a copy of the  
5 permit?

6 A Yes. There's one in our file.

7 Q And where is the well file?

8 A The well file is stored in our file room where we  
9 have all the files for all of our wells.

10 JUDGE SUTIN: No further questions.

11 MR. ZIMSKY: Your Honor, I would like to call  
12 Mr. A.M. O'Hare.

13 **ALEXIS MICHAEL O'HARE,**

14 the witness herein, having been first duly sworn, was examined  
15 and testified as follows:

16 DIRECT EXAMINATION

17 BY MR. ZIMSKY:

18 Q Mr. O'Hare, can you state your name and spell it  
19 for the record, please?

20 A My full name is Alexis Michael O'Hare --  
21 A-L-E-X-I-S, M-I-C-H-A-E-L, O - apostrophe - H-A-R-E. That's  
22 capital H.

23 Q You're commonly referred to as Mickey?

24 A Yes, sir.

25 Q Can you tell the Court where your current



1 employment is?

2 A Maralex Resources, Inc. I also run about a dozen  
3 other companies.

4 Q And can you, first of all, explain the difference  
5 between Maralex, Resources, Inc., and Maralex Disposal, LLC?

6 A Yes. Maralex Resources, Inc., was formed on  
7 December 1, 1989. It was incorporated as a Subchapter S  
8 corporation. And Maralex Disposal was organized as a limited  
9 liability company in 1995. I'm the sole owner of Maralex  
10 Disposal, but I have a partner in Maralex Resources.

11 Q And can you describe your educational history?

12 A Yes, sir. I graduated with a bachelor of science  
13 degree in petroleum engineering from the New Mexico Institute  
14 of Mining and Technology in 1981. I worked summer jobs in the  
15 oil field from my -- after my freshman year through my senior  
16 year, and then went to work for Amoco Production Company in  
17 the Farmington district office in 1981. There I started off  
18 as an engineer in charge of production of gas wells in the  
19 Blanco area.

20 After a couple of years, I was promoted to district  
21 engineer or district drilling engineer responsible for the  
22 drilling of wildcats in most of the western United States, and  
23 I ended up drilling wells, designing and supervising and being  
24 in charge of the drilling of wells in California, New Mexico,  
25 Colorado, Utah, Nevada, Oregon, Washington, most of the

1 western states.

2           After that, I was transferred to the reservoir  
3 department in the Denver office of Amoco Production Company,  
4 and I spent about a year and a half there before I was laid  
5 off.

6           I went to work for a medium-sized independent  
7 company called National Cooperative Refinery Association.  
8 I started off there as the joint operations supervisor and was  
9 promoted to district engineer over both the Four Corners  
10 district and the west Texas district. There I was in charge  
11 of drilling completion operations and supervised a number of  
12 personnel. And after about three years, I formed Maralex  
13 Resources and have been the president and CEO for that company  
14 for nearly 23 years now.

15           Q     And during the course of your experience in the oil  
16 and gas business, have you been involved in injection wells?

17           A     Yes, sir.

18           Q     Could you explain that to the Court?

19           A     I've had experience with injection wells in West  
20 Texas, Colorado, New Mexico, and Wyoming. So those -- as a  
21 field operator, particularly in Wyoming. I also supervised  
22 the drilling and completion and operation of disposal wells in  
23 addition to waterflood injection wells in both Texas and  
24 Wyoming.

25                     I've been drilling and completing disposal wells

1 for disposal companies off and on and operating disposal wells  
2 for other operators during my tenure as president of Maralex  
3 Resources, as well.

4 Q And can you give us currently how many injection  
5 wells that you are supervising?

6 A Currently we have three injection wells and five  
7 injection -- or five disposal facilities that are operated by  
8 Maralex Disposal. Two of those are commercial facilities.  
9 The others are private facilities.

10 Q And over the course of your career, how many  
11 injection wells have you been involved with as far as the  
12 operation of those wells go?

13 A I'd say more than two dozen.

14 Q And during this time, are you familiar with the  
15 state and federal regulations and laws governing injection  
16 wells?

17 A Yes, sir.

18 Q And have you dealt with the EPA and EPA regulations  
19 involving the Safe Water Act in the course of that experience?

20 A Yes, sir.

21 Q And we have submitted what has been marked as  
22 Respondent's Exhibit H, which is Stipulated Exhibit No. 29.  
23 That's a copy of your resume. Is that an accurate, correct  
24 summary of your education and achievements and work history?

25 A I don't see it in this book, but I believe so.

1 Q You provided it to us. Let me show you, and I'll  
2 just make sure --

3 A Yes, sir. Also, I'm a registered professional  
4 engineer in the State of Colorado. I have been accepted as an  
5 expert witness in front of district courts in Santa Fe,  
6 New Mexico and Denver, Colorado, along with other courts in  
7 the State of Colorado.

8 Q And are you a member of the joint committee to  
9 establish field rules for coalbed methane fields in New Mexico  
10 and Colorado?

11 A I was, yes.

12 Q And can you explain what that committee did?

13 A Back before there was a field designation for  
14 coalbed methane, the states of New Mexico and Colorado got  
15 together and requested industry help to determine the best  
16 rules for developing coalbed methane in the two states. I was  
17 selected to be on that committee.

18 Q And as an expert witness before the Colorado  
19 Oil and Gas Conservation Commission, and in New Mexico, the  
20 Oil Conservation Division, what kind of expertise did you  
21 testify regarding?

22 A One of them had to do with the coalbed methane  
23 development and theft of coalbed methane reserves through  
24 conventional wells in New Mexico. I testified in spacing  
25 hearings and field rules and various other sundry -- I can't

1 remember specifics now, but various other topics.

2 Q And in the district courts in Santa Fe, New Mexico,  
3 you were accepted as an expert in -- what field did you  
4 testify?

5 A That was also on a reservoir engineering basis with  
6 regard to the theft of coalbed methane reserves.

7 MR. ZIMSKY: Your Honor, I tender Mr. O'Hare as an  
8 expert in petroleum engineering and also as an expert in the  
9 operation in injection wells and injection control.

10 JUDGE SUTIN: Ms. Swanson?

11 MS. SWANSON: Your Honor, I would concur that the  
12 witness has established himself as an expert with regard to  
13 petroleum engineering. I would, however, object to him being  
14 tendered as a witness with regard to underground disposal  
15 activities.

16 JUDGE SUTIN: What is your basis?

17 MS. SWANSON: My basis is I don't believe we have  
18 heard sufficient foundation for that.

19 JUDGE SUTIN: Would you like to voir dire?

20 MS. SWANSON: Your Honor, I honestly don't have any  
21 additional questions to ask him based on my review of his  
22 resume and his testimony so far. I just do not think that it  
23 meets the Federal Rules of Evidence 702 requirements for being  
24 an expert in this particular matter.

25 JUDGE SUTIN: Mr. Zimsky, I think you should

1 probably lay a little more foundation with respect to the  
2 objection.

3 MR. ZIMSKY: Okay.

4 Q (Continued by Mr. Zimsky) Let's start from your  
5 first experience with underground injection wells. Can you  
6 recall when you were first exposed to injection wells and  
7 operating them?

8 A Yeah. My first exposure was up in Wyoming in the  
9 Little Buffalo field. That was a very active waterflood  
10 field, and there were a number -- there's probably upwards of  
11 a hundred injection wells in that field.

12 Q How many -- what company were you working for at  
13 that time?

14 A I was working for Amoco Production Company at that  
15 time.

16 Q And how many injection wells was Amoco operating at  
17 that time in that field?

18 A In that field? It was probably more than a hundred  
19 wells.

20 Q Injection wells?

21 A Right.

22 Q And what was your involvement in those wells?

23 A My involvement was basically daily upkeep and  
24 maintenance of those wells, both the production wells and the  
25 injection wells.

1 Q Did you have occasion to do site visits to those  
2 wells?

3 A Every day.

4 Q And can you tell us exactly what your  
5 responsibility was -- a little bit more specific terms.

6 A Primarily monitoring and production reporting and  
7 injection reporting on those wells. So I would monitor the  
8 casing and injection pressures and note the amount of water  
9 that had been injected into each well at that time.

10 Q Did you take any annulus pressure measurements as  
11 part of that?

12 A Yes, sir.

13 Q Did you ever have any issues with annulus pressure  
14 in those wells?

15 A Occasionally, yes. And, generally, my  
16 responsibility was to report that to the field office, and  
17 then they would determine what the next step was.

18 Q And did you -- were you involved in taking any next  
19 steps with respect to those wells?

20 A I did get to do some of the preliminary work to  
21 prepare them for workovers, yes.

22 Q And Amoco would hire a third party vendor who would  
23 come in and work over the well?

24 A That's right.

25 Q And did you supervise that work?

1           A       No, I did not at that time.

2           Q       Okay. After that, what was your next exposure to  
3 injection wells?

4           A       I believe the next exposure came when I was  
5 assigned at a oil field outside of the Four Corners area  
6 outside of Cortez, Colorado, called Cash Field. It was also a  
7 waterflood field.

8           Q       Can you explain what a waterflood field is?

9           A       A waterflood is when we inject water into the oil  
10 zone to push oil to the producing wells. So it is also -- it  
11 also comes under the jurisdiction of the EPA as a Class II  
12 injection well.

13          Q       So when you are doing the waterflooding, that is  
14 considered an injection well?

15          A       Right.

16          Q       So tell us -- tell the Court exactly what your  
17 responsibility was with respect to those wells.

18          A       My responsibility then was the overall injection  
19 profile. We wanted to make sure that we had water going into  
20 the zones that had oil in it and not into the thief zone. We  
21 wanted to make sure that there was proper conformance, meaning  
22 that the water was evenly distributed into the producing zones  
23 and we didn't have a single zone taking the majority of the  
24 water.

25                   So my job was to try -- if I found an occasion



1 where it looked like we had a thief zone or we had poor  
2 conformance, then I would work over that injection well to  
3 improve the injection and the profile of that injection.

4 Q During that time, were you monitoring the pressure,  
5 the casing pressure, the annulus pressure of those wells?

6 A We had our field people that were doing that. That  
7 information was reported to me on a regular basis, and I used  
8 that information to determine whether or not we had mechanical  
9 integrity or if there were any other problems with the well.

10 Q And during that course of that work -- what years  
11 were they?

12 A That would have been in the early '80s.

13 Q And you worked -- was there anybody at the EPA in  
14 particular you worked with or did you just file reports with  
15 the EPA?

16 A Yeah. I'm terrible with names, so I could not give  
17 you a name. But, yes, there were particular individuals we  
18 would work with, but I just don't recall names.

19 Q And they would conduct site inspections of those  
20 wells?

21 A On occasion, yes.

22 Q Were you there on occasion when they did these site  
23 inspections?

24 A Yes.

25 Q Did they ask you questions about the well and the

1 operations of the well?

2 A Occasionally, yes.

3 Q And were you able to respond to their inquiries?

4 A Yes, sir.

5 Q And did they direct any action to be taken with  
6 respect to those wells?

7 A On occasion. I remember one in particular where we  
8 had a radioactive tracer survey that showed that our water was  
9 going into a thief zone and something that we would have  
10 caught anyway. But they did direct that we correct that  
11 problem.

12 Q And thief zone is a euphemism for water going into  
13 a zone where it is not supposed to be going?

14 A Correct.

15 Q And the EPA was concerned about that?

16 A Yes.

17 Q Were you able to resolve or to meet their concerns?

18 A Oh, yes.

19 Q Okay. About how many wells were involved in this  
20 field that you were supervising?

21 A I don't recall an exact number, but I'm guessing  
22 somewhere less than ten.

23 Q For how long did you do that?

24 A It was almost two years.

25 Q And then what was your next experience with

1 injection wells?

2 A I believe my next experience was in West Texas.  
3 I was working for a national cooperative refinery association.

4 Q And where in West Texas?

5 A The Midland/Odessa area.

6 Q And was this also waterflood?

7 A We did have one small waterflood there, and we also  
8 had some disposal wells there.

9 Q Were you disposing produced water?

10 A Yes, sir.

11 Q And can you explain to the Court how many wells  
12 were involved with that?

13 A I think we only had a couple of disposal wells, and  
14 we may have had five or six injection wells.

15 Q And were you responsible for the oversight of those  
16 wells?

17 A Yes, sir.

18 Q And were those wells ever inspected by the EPA?

19 A No, sir.

20 Q And did you personally take any measurements,  
21 pressure measurements, on those wells?

22 A I believe on one occasion, I did.

23 Q You had pumpers who did that, took those readings?

24 A Yes, sir.

25 Q And did you review those readings?

1           A     Yes, sir.

2           Q     And what did you review those readings for?

3           A     Well, basically to determine if there was a problem  
4 with the well, if there was any mechanical integrity issue or  
5 any kind of other issue with the well.

6           Q     And after West Texas, when is your next experience  
7 with injection wells?

8           A     It was in the Four Corners area, again.  These were  
9 disposal wells for the National Cooperative Refinery  
10 Association.  We had a little coalbed methane program we  
11 developed, and we produced lots of water and had to get rid of  
12 it, so we permitted -- I think it was two separate disposal  
13 wells at that time.

14          Q     And were you involved in the permitting of those  
15 wells?

16          A     Yes, sir.

17          Q     Were you involved in the drilling of those wells?

18          A     One of those wells was recompletion of an existing  
19 wellbore, so I designed the recompletion, and I supervised the  
20 work.  The other well was a new well that I designed and  
21 supervised the drilling, completion, and installation and  
22 operation of the well.

23          Q     And how long did you -- were you with that company  
24 supervising those wells?

25          A     About three years.

1 Q And during that time, were there EPA inspections of  
2 those wells?

3 A Yes, sir.

4 Q And were you there for any of those inspections?

5 A I don't believe I was. I think our field people  
6 were there for the inspections.

7 Q But you were the -- were you the person overall  
8 responsible for the operation of those wells?

9 A Yes, sir.

10 Q Did you review data and monitoring pressure  
11 readings from those wells?

12 A Yes, sir.

13 Q And what were you looking for when you were doing  
14 those pressure readings?

15 A Again, for mechanical integrity issues or possible  
16 problems with the wells.

17 Q And were there any problems that developed or  
18 presented themselves?

19 A We had a problem on one of the wells, and to be  
20 honest, I don't recall exactly what it was, but I remember  
21 that we had attempted to cement a liner inside of the casing  
22 and that our cement locked up on us before we got it through  
23 our tubing or through our casing and back up around the  
24 outside, and we had to go out and drill out the cement on the  
25 outside of the pipe.

1 Q And what was your next experience with injection  
2 wells?

3 A After that, I started -- I'm sorry. I started  
4 Maralex Resources, and we had -- very early on, we designed  
5 and permitted a disposal well for two different clients of  
6 ours.

7 Q Two different clients?

8 A Right.

9 Q And they were -- they owned the wells, and you  
10 designed them?

11 A They owned them, but we operated the wells.

12 Q And were you involved in the permitting process for  
13 those?

14 A Yes, sir.

15 Q And permitting -- when I'm asking these questions  
16 about the permitting process, and you have responded you were  
17 involved in the permitting process, would that include the  
18 permitting process with the EPA?

19 A Yes, sir.

20 Q And with these particular wells -- how many wells  
21 were there? Two?

22 A No. This one was a single well, but two owners.

23 Q All right. Single well with two owners? And were  
24 you in charge of supervising the operation of that well?

25 A Yes, sir. I shared the supervision with one of my

1 engineers at the time.

2 Q And how long did you do that?

3 A We called that well The Well From Hell, and it was  
4 an extended period of time -- at least a couple of months.

5 Q And what happened? Describe the hell to us.

6 A Well, there was one of our early adventures in  
7 trying to do something on a turnkey basis, and what we mean by  
8 that is, we set the price. We tell the owners, "This is the  
9 total price. If it goes over that, we're responsible for it.  
10 If it goes under that, then we keep the difference."

11 Unfortunately, we underestimated problems on that  
12 well, and we went way over that estimated cost. So that all  
13 came out of my pocket.

14 Q So the hellish part was a financial hit upon you?

15 A Yes, sir.

16 Q It wasn't hellish as far as the final product?

17 A No.

18 Q The well came out -- how did the well function?

19 A The well turned out to be one of the best disposal  
20 wells in the San Juan Basin for a number of years, but it was  
21 very costly for me. The owners benefited. I did not.

22 Q Okay. And did you supervise the operation of that  
23 well?

24 A Indirectly. I had engineers under me that  
25 supervised it directly.

1 Q And they reported to you?

2 A Yes, sir.

3 Q Were there any problems with that well?

4 A Occasionally there were problems. There were  
5 issues with -- in fact, I believe there was an individual that  
6 was killed on that well site, and I don't remember the  
7 details, but there was a water truck that was hijacked, and  
8 the person that hijacked it shot somebody -- maybe not on that  
9 well site, but there was an issue with that.

10 Q As far as the pressure and the functioning of that  
11 well, were there any issues with that?

12 A Not that I recall. I believe that well -- we had a  
13 very good rapport with EPA at that time, and there was an  
14 individual in Denver that we had great communication with.  
15 And if we ever had any kind of issue, he was easy to get ahold  
16 of, and we usually worked out within a few minutes on a phone  
17 call any issues that arose.

18 Q Do you recall his name?

19 A No, sir.

20 Q And how long ago was that?

21 A That was probably 1995, I'm guessing.

22 Q So since then, what was your next -- since '95,  
23 since that well, what was your next experience with disposal  
24 wells?

25 A I believe that the next experience came on our



1 trading post project. That's a coalbed methane project in the  
2 southern part of the Basin. And we decided -- actually, we  
3 took over an existing wellbore and converted it to an  
4 injection well.

5 Q And when you say "we," was it Maralex Resources?

6 A That was Maralex Disposal.

7 Q So that's the -- is that the first well for Maralex  
8 Disposal, first injection well?

9 A Yes, sir.

10 Q And when did you rework that well?

11 A I'm guessing early 2000, 2001, somewhere in that  
12 time frame.

13 Q And that's been online since then?

14 A Yes, sir.

15 Q And are you the person who is responsible -- not  
16 necessarily the immediate supervisor, but is that within your  
17 responsibilities as the manager of Maralex Disposal?

18 A Yes, sir.

19 Q You review the reports from that well?

20 A Occasionally, yes.

21 Q Has that well had any experience, had any problems  
22 with pressure?

23 A No, sir.

24 Q What was your next experience with injection wells?

25 A The next project -- there's actually two of them

1 that we did at the same time for Maralex Disposal was our  
2 commercial facilities, the Ferguson well. That's the topic  
3 today, and the Center Point disposal facility that's on the  
4 other side of the border in New Mexico.

5 Q And were you involved in the drilling and -- have  
6 you been involved? Were you involved in the drilling --  
7 design and drilling of that?

8 A Yes, sir. I had two different engineers that were  
9 answering to me on the design of those wells. So the final  
10 approval was mine. I also did some of the onsite supervision  
11 of the drilling of both wells.

12 Q And what is your responsibility as far as  
13 overseeing operation of both of those wells?

14 A The buck stops here. Maralex Disposal is, again,  
15 100 percent owned by myself, so the final responsibility is  
16 mine.

17 MR. ZIMSKY: Your Honor, I tender Mr. O'Hare as an  
18 expert in petroleum engineering and as an expert in injection  
19 wells and injection control.

20 JUDGE SUTIN: Do you have any objection?

21 MS. SWANSON: Your Honor, I do not, based upon Mr.  
22 O'Hare's testimony. I withdraw my previous objection.

23 JUDGE SUTIN: At this time we'll receive  
24 Mr. O'Hare as an expert in petroleum engineering and operation  
25 of UIC wells.

1 THE WITNESS: Thank you.

2 Q (Continued by Mr. Zimsky) Let's start off --  
3 there's been some testimony about the difference between  
4 Maralex Disposal and Maralex Resources. Are they separate  
5 entities?

6 A Yes, sir.

7 Q Do they have different ownership structure?

8 A Yes, sir.

9 Q When you do the financials for them, are there  
10 separate books and records?

11 A Yes, sir.

12 Q Do they have -- do they share any assets?

13 A Indirectly, yes. Maralex Resources is an investor  
14 in both Ferguson and the Center Point facilities.

15 Q What's the purpose of Maralex Resources? If you  
16 could, just generally describe in general terms what its  
17 business is.

18 A Well, Maralex Resources started out as an  
19 engineering consulting firm. We built into an operating  
20 company and ultimately into a production company. So its  
21 focus today is production of natural gas and oil resources,  
22 primarily coalbed methane and conventional natural gas.

23 Q Where are the wells that you own and operate?

24 A The majority of the wells that we operate are  
25 located in the San Juan Basin and Piceance Basin. The San

1 Juan, we own wells in both the New Mexican side, northwestern  
2 New Mexico and southwestern Colorado.

3 We also have operations in Kansas, and we're  
4 starting some operations in California.

5 Q And Maralex Disposal, LLC, what is the focus of  
6 that company?

7 A That company focuses on handling produced water,  
8 primarily from coalbed methane wells. We do handle some  
9 conventional gas production water, but it's minimal compared  
10 to the coalbed water.

11 Q Now, does Maralex Disposal have any employees?

12 A No, sir.

13 Q And there's been testimony about Ms. Reid and  
14 Mr. Reimers working on -- and Pete, the pumper, working on the  
15 Ferguson well. Can you explain to the Court how that works?

16 A Yes. Maralex Resources still does some consulting  
17 and primarily for other companies that I own. And Maralex  
18 Resources bills the time of engineers and field people back to  
19 Maralex Disposal through monthly invoices, and Maralex  
20 Disposal pays Maralex Resources for that time.

21 MR. ZIMSKY: If I can approach with an exhibit  
22 binder?

23 JUDGE SUTIN: Uh-huh.

24 Q (Continued by Mr. Zimsky) I'm going to refer you  
25 to what has been marked as Respondent's Exhibit E. It's

1 Stipulated Exhibit No. 26. Can you tell the Court what these  
2 documents represent?

3 A Yes, sir. These documents represent increment  
4 expense statements and balance sheets for Maralex Disposal  
5 from 2008 through 2011. There's also an income and expense  
6 sheet for the Ferguson disposal well for three of those years.  
7 I'm sorry -- 2008, 2009, and 2010.

8 Q So the first page is a 2008. That's Maralex  
9 Disposal --

10 A Yes, sir.

11 Q -- and it shows an \$88,000 loss?

12 A That's correct.

13 Q And the next page is the -- this is income  
14 statement for the Ferguson disposal well?

15 A Yes, sir.

16 Q Okay. And that shows an income of \$208,000?

17 A Yes, sir. It does.

18 Q And the next sheet is the balance sheet for the  
19 company?

20 A Correct.

21 Q And --

22 A For 2008.

23 Q And what is the main asset of the company?

24 A The main assets are the lease and well equipment  
25 from the disposal wells and facilities that we own.

1 Q And in the business model, you charge people --  
2 explain how the business works, briefly.

3 A Basically, we take in and produce the water to the  
4 facility and charge the owners of that water a disposal fee.  
5 So for every barrel we take in, we charge them a fixed rate.

6 Q Then how many companies do you contract with to  
7 dispose of their water?

8 A I think the latest count is five currently.

9 Q And who accesses the well site? Is it the  
10 companies or some other entity?

11 A No. We have hired -- actually, we have insisted  
12 that they hire a particular trucking company, and only their  
13 water can only be hauled by that trucking company. We have  
14 one owner, a part owner, of our disposal facility that also  
15 has his own water trucks and produces his own water. So he  
16 also brings in water with his own company-owned trucks.

17 Q And going to the fourth page -- fourth, fifth, and  
18 six pages are similar balance sheets and income statements  
19 for -- okay. I'm a little confused here. The first page is  
20 December 31, 2008. That's for Maralex Disposal, LLC.

21 The next page is for Ferguson disposal well, and  
22 then the third page is the asset --

23 A It's the first part of the balance sheet showing  
24 the assets.

25 Q The next page is the liabilities and equity for

1 2008 for the LLC?

2 A Correct.

3 Q So the next page is for 2009?

4 A Right.

5 Q And first is the income statement for the company,  
6 which shows \$363,000 income. And the next page is the  
7 Ferguson disposal well, which shows an income of \$230,000 for  
8 2009.

9 A Correct.

10 Q And the next page is the assets balance sheet for  
11 the LLC for 2009 showing assets of \$1.9 million, and then the  
12 next page is the liabilities and equity for the LLC for 2009?

13 A Yes, sir.

14 Q The next page is the 2010 income statement for the  
15 LLC showing an income of \$63,000. Is there a reason why there  
16 was a decrease in income that year?

17 A Yeah. Primarily the volumes of fluid that we were  
18 able to take in that year were reduced, and some of that had  
19 to do with the -- I believe the gas price had fallen somewhat  
20 in that year.

21 Q The next page is for the Maralex Disposal, which  
22 shows an income of \$195,000 for the Ferguson No. 1 well?

23 A Ferguson.

24 Q Correct?

25 A Correct.

1 Q And the next sheet is the assets for the LLC as of  
2 December 31, 2010.

3 A Yes, sir.

4 Q And the next page is liabilities and equity --

5 A Correct.

6 Q -- as of 2010?

7 A Correct.

8 Q If you go to the very back of the stipulated  
9 exhibit book -- actually, I don't think I have that in that  
10 book. This is Stipulated Exhibit 37, I believe. Can you tell  
11 the Court what that is?

12 A This is the income statement for 2011 and the  
13 balance sheet for Maralex Disposal as of December 31, 2011.

14 JUDGE SUTIN: I think this is Exhibit 38.

15 MR. ZIMSKY: 38. Thank you.

16 Q (Continued by Mr. Zimsky) And the income is  
17 \$19,000, almost \$20,000 in 2011?

18 A Yes, sir.

19 Q Is there a reason why that decreased somewhat?

20 A I believe the majority of that came from the work  
21 that we did on the Ferguson well, the loss of revenue during  
22 the shut-in periods on that well and the increased costs.

23 Q Now, I want to direct your attention -- there's  
24 been some testimony earlier about there was some annulus  
25 pressure on the well in 2008, 2009. During that time, were



1 you aware of that pressure?

2 A Yes, sir. Mr. Reimers made me aware of that  
3 pressure after the first inspection with the EPA.

4 Q And what steps did you take to address any issues  
5 that were presented by them?

6 A At that time I don't believe I took any steps  
7 because Mr. Reimers assured me that it was the temperature  
8 variations that were causing the pressures.

9 Q Did there come a time where you would monitor the  
10 annulus pressure?

11 A Yes, sir. I believe I started monitoring those  
12 pressures myself in late 2009.

13 Q And how often would you do that?

14 A I'd say on average every three to four weeks.

15 Q And what did you observe when you -- what did you  
16 see when you observed those pressures during that time period?

17 A Generally there was a wide variety of pressures  
18 when I would stop to check on them. Sometimes the pressures  
19 were as low as zero to 200 pounds. Sometimes they were as  
20 high as 1600 pounds. I don't think I saw any of the higher  
21 pressures until sometime in 2010.

22 Q And if there was pressure -- what would you do if  
23 you saw some pressure that was higher than --

24 A Generally, if the pressure was higher than a  
25 thousand pounds, I would bleed it off.

1 Q And what happened when you would bleed it off?

2 A It would go to zero, and it did not return for some  
3 period of time. As Dennis -- or Mr. Reimers testified  
4 earlier, there was no flow once the pressure was bled off.

5 Q I want you to look at Exhibit No. 10 in the book.  
6 It's Complainant's Exhibit 10. It's also Stipulated  
7 Exhibit 10. Have you seen this letter before?

8 A Yes, sir.

9 Q And is it addressed to Mr. Reimers? Did you  
10 discuss this letter with him?

11 A Yes, sir.

12 Q And what did you guys discuss?

13 A We determined that we needed to submit a testing  
14 procedure to the EPA to get their approval to determine the  
15 source of the pressures.

16 Q And did you work with Mr. Reimers in devising that  
17 testing?

18 A I think we had a brief discussion on it, but I  
19 don't think I had a lot of input into it.

20 Q And if I could direct your attention to the next  
21 exhibit, Complainant's Exhibit 11, Stipulated Exhibit 11 -- do  
22 you have that?

23 A Yes, sir.

24 Q And did you -- did you see this document before?

25 A Yes.

1 Q And how did you come to see this?

2 A Mr. Reimers presented it to me before he mailed it  
3 off.

4 Q Okay. And this met with your approval?

5 A Yes, sir.

6 Q Now, if you could go to the next exhibit, which  
7 I believe is 12, what is this exhibit or what is this  
8 document?

9 A This is the annual disposal injection well  
10 monitoring record that we submit to the EPA.

11 Q Okay. Let's go back to 11. Now, after this letter  
12 is sent off, when was the next time you became aware that  
13 anything was happening with Ferguson No. 1 well as far as  
14 addressing the issue that was raised by Mr. Wiser?

15 A I believe I had spoken to Mr. Reimers sometime in  
16 September or October to see if he had heard back from  
17 Mr. Wiser with regard to this letter.

18 Q And what was -- what did you find out?

19 A I don't believe he had heard anything at that time.  
20 I think shortly after that, he called Mr. Wiser to determine  
21 what kind of response we were going to get from the EPA.

22 Q And what did Mr. Reimers tell you?

23 A He came back several days later and said he got  
24 verbal from Mr. Wiser to proceed.

25 Q And did you discuss this -- now, at this time

1 Christi Reid was supervising the well?

2 A That's correct.

3 Q And did you give any instructions to Ms. Reid?

4 A Yes. Let me retract what I said before. I believe  
5 Ms. Reid was the one that came into my office and indicated  
6 that we had gotten verbal approval from Mr. Wiser through  
7 Dennis and asked me whether or not to proceed.

8 Q And what did you instruct Ms. Reid to do?

9 A I told her I thought we needed some written  
10 verification on that.

11 Q What was the basis for your thinking that you  
12 needed written verification?

13 A There had been a number of episodes with the EPA  
14 prior to that; whereas, Mr. Reimers testified, things may have  
15 fallen through the cracks. We had at least a couple phone  
16 calls that I'm aware of to Mr. Reimers requesting information  
17 from us because it appeared that they had misplaced the well  
18 file.

19 Q And then in the past, where you were dealing with  
20 the EPA, would you receive written communications from them?

21 A Yes, sir.

22 Q Written communications about testing proposals?

23 A Yes, sir.

24 Q Is that what you were waiting for?

25 A Yes, sir.

1           Q     At this time, did you have any concern that the  
2 well had lost mechanical integrity?

3           A     No, sir.

4           Q     And why not?

5           A     Well, the definition of mechanical integrity, as  
6 Mr. Wiser testified earlier, is, there's two conditions.  
7 Number one, there has to be a significant leak in the tubing  
8 packer or casing, and number two, there has to be evidence of  
9 fluid flow into an underground source of drinking water.

10                   We saw neither one of those conditions being met.  
11 It was never a significant leak. And by that I mean, you  
12 know, at most, we were bleeding off 60 gallons of water to get  
13 our pressure down to zero, and there was no flow after that.  
14 This is from an annulus that contained easily 10,000 gallons  
15 of water.

16                   At the same time we were injecting somewhere around  
17 100,000 gallons a day. So 40 gallons is not significant.  
18 It's very insignificant. In addition, we had performed a  
19 number of mechanical integrity tests, some of which were never  
20 reported to the EPA that gave us great assurance that there  
21 was no possible way that water could be leaking into an  
22 underground source of drinking water.

23           Q     Now, if you thought that the well had lost  
24 mechanical integrity, what would you have done?

25           A     We would have shut down the well, reported it to

1 the EPA, and then proposed a remediation procedure.

2 Q Now, as an expert in petroleum engineering, based  
3 on your education and your experience, based on the facts as  
4 presented in this particular well, do you have an opinion as  
5 to whether fluid from the Ferguson No. 1 well ever migrated or  
6 flowed from the wellbore into the surrounding formation, other  
7 than where allowed -- it was allowed to under the permit?

8 A Yes, sir. My opinion is that that was impossible,  
9 and it never occurred.

10 Q And what is the basis of that opinion?

11 A Again, what I just stated was that, number one,  
12 there was never a significant flow of fluid from the well, and  
13 the only flow that came from it was controlled by us as we  
14 were bleeding that fluid at the surface.

15 We showed mechanical integrity for the well in the  
16 7-inch casing, both before any evidence of pressure on the  
17 back side occurred and at various times afterwards. And at no  
18 time did it ever fail a mechanical integrity test, and at no  
19 time did we ever do any work on that 7-inch casing.

20 The only way that there could have been fluid  
21 flowing into an underground source of drinking water is if  
22 that 7-inch casing had failed a mechanical integrity test. It  
23 never did, and we never did any work on the 7-inch casing.

24 Q And you just described the basis of your opinion.  
25 Is that the type of information that an expert in your field

1 would rely upon in formulating that opinion?

2 A Yes, sir.

3 Q And let's talk about the significant leak aspect of  
4 mechanical integrity definition. Ms. Reid was here, and she  
5 spoke a little bit about the loose tubing in the workover in  
6 May of 2011. Do you recall that?

7 A Yes, sir.

8 Q And would that be a -- have you read and reviewed  
9 the workover report for that?

10 A Yes, sir.

11 Q And in your opinion, sitting here as an expert in  
12 petroleum engineering and operation of injection wells and  
13 injection control, and based on your education and experience  
14 and the facts as presented in this particular situation, do  
15 you have an opinion as to whether the loose -- those two loose  
16 fittings could have caused a significant leak of fluid into  
17 the annular space?

18 A Yes. I do have an opinion.

19 Q And what is that opinion?

20 A My opinion is that it could not have caused a  
21 significant loss of fluid into that annular space. As  
22 Mr. Reimers testified, it appeared to be an intermittent type  
23 of leak, and even at that, the leak was never significant.

24 As he testified, and as I observed myself, when we  
25 bled the pressure off the casing, it never flowed. Once the

1 pressure was bled off, the well remained static on the back  
2 side. If that had been a significant leak, the well would  
3 have continued to flow even though the pressure had been bled  
4 off, especially while we were injecting.

5 Q And is the basis, the information, and observation  
6 that you made based to formulate your opinion -- is that the  
7 type of information an expert in your field would use to make  
8 such an opinion?

9 A Yes, sir.

10 Q During the course of the operation of the Ferguson  
11 No. 1 well, did you ensure that Maralex Disposal followed any  
12 specific instructions given to you by the EPA?

13 A Yes, sir. When I realized from Ms. Reid's  
14 testimony or from her comments to me after meeting with  
15 Ms. Roberts that we were not going to get any kind of written  
16 follow-up to our July letter, I instructed our engineers to do  
17 everything we could to meet any of the verbal requirements the  
18 EPA placed on us.

19 Q And previously in your earlier inspections that  
20 Mr. Reimers talked about, where the EPA inspectors advised you  
21 or directed you to bleed off the annulus pressure as needed,  
22 did you ensure that that was performed?

23 A Yes, sir. I did that on my own on occasion, as  
24 well as knowing that Mr. Reimers was doing it himself.

25 Q How often would you stop by this particular well to



1 bleed off the pressure or to read the pressure and make sure  
2 if it needed to be bled off?

3 A It was at least every three weeks.

4 Q And not every time you were there, it didn't need  
5 to be bled off, did it?

6 A That's correct. There were occasions when I was  
7 there and if it had 200 pounds, I wouldn't bleed it off.

8 Q And when you bled it off, did it bleed to zero?

9 A Every time.

10 MR. ZIMSKY: Just give me a moment, Your Honor,  
11 please.

12 That's all the questions I have.

13 JUDGE SUTIN: Okay. Ms. Swanson, would you like to  
14 Cross?

15 MS. SWANSON: Yes, Your Honor. Thank you.

16 CROSS-EXAMINATION

17 BY MS. SWANSON:

18 Q Mr. O'Hare, can I direct your attention to -- it's  
19 Stipulated Exhibit 38, and it's the 2011 financials for  
20 Maralex Disposal. Do you know which notebook --

21 A I found it. I have it.

22 Q Do you have it?

23 A Yes.

24 Q Okay. Can you tell me, please, if the cost of the  
25 May 2011 rework is included in Maralex's either 2011 income

1 statement or balance statement?

2 A I believe those charges are going to be listed  
3 under the lease operating expense -- not listed, but included  
4 under that expense.

5 Q I'm sorry. Is that on the balance statement or --

6 A No, ma'am. It's the income statement.

7 Q Income statement? And can you tell me what the  
8 total cost of that rework was?

9 A I don't know that off the top of my head.

10 Q Okay. But you're testifying that the cost would  
11 have been paid by Maralex Disposal out of this lease operating  
12 expense line item?

13 A It would be included -- Maralex Disposal's share of  
14 that cost would be included in that line item, yes.

15 Q Okay. And just a couple questions about pressure.  
16 If a well has a leak from the tubing into the annulus, and the  
17 well is injecting at 1700 pounds per square inch, what is the  
18 maximum pressure that can be observed in the annulus from the  
19 leak?

20 A If the leak is only in the tubing, generally  
21 speaking, that maximum pressure should be something less than  
22 the injection pressure.

23 Q Okay. And when you bled the annulus, did you bleed  
24 all of the fluid or all of the pressure off of the well?

25 A That's kind of a trick question because the

1 pressure will only decline as you remove the fluid. Once no  
2 more fluid comes, there's no pressure.

3 MS. SWANSON: Okay. Thank you.

4 JUDGE SUTIN: Mr. Zimsky?

5 MR. ZIMSKY: Just to clarify on that.

6 REDIRECT EXAMINATION

7 BY MR. ZIMSKY:

8 Q About bleeding, there's approximately  
9 10,000 gallons in the annular space?

10 A Correct.

11 Q And so when you would bleed it off, once the  
12 pressure got to zero, no more water could come out?

13 A Correct.

14 Q Because the pressure was zero?

15 A Exactly.

16 Q So you might have a barrel, half a barrel, a barrel  
17 and a half, but you're not taking it up to 10,000 gallons?

18 A Correct.

19 Q Okay.

20 A The most we ever took out was probably 60 gallons,  
21 65 gallons.

22 MR. ZIMSKY: Okay. Thank you.

23 JUDGE SUTIN: I have no questions. Thank you.

24 Mr. Zimsky?

25 MR. ZIMSKY: Your Honor, we have no more witnesses.

1 JUDGE SUTIN: Are you resting?

2 MR. ZIMSKY: Yes, I am.

3 JUDGE SUTIN: Well, I believe both sides have put  
4 forth their case, so we are done for now. We should make sure  
5 that all of the exhibits that want to be entered into the  
6 record have been.

7 According to my notes, we have Stipulated  
8 Exhibits 1 through 38 in the record, as well as Exhibit 2A,  
9 2W, which has been included into the record. Were there any  
10 other exhibits?

11 MR. ZIMSKY: Is 38 the schematic? Is that the --

12 JUDGE SUTIN: 38 is the bill.

13 MR. ZIMSKY: 2011.

14 JUDGE SUTIN: Yes. The income statement that is  
15 marked as exhibit -- I guess it's Stipulated Exhibit 31,  
16 Complainant's Exhibits 2(A)2.

17 MR. ZIMSKY: Okay.

18 JUDGE SUTIN: Correct?

19 MS. SWANSON: Correct.

20 MR. ZIMSKY: I think so.

21 MS. SWANSON: Your Honor, copies of the stipulated  
22 exhibits that previously were not in the record will be  
23 provided to the regional clerk, the original and one copy,  
24 upon my return to the office.

25 JUDGE SUTIN: I do have a logistics question

1 regarding this particular exhibit. Is it okay with you,  
2 Mr. Zimsky, if the Complainant takes that exhibit back and  
3 delivers it to the clerk?

4 MR. ZIMSKY: Yes, Your Honor. It would be nice to  
5 get -- and we'll pay our share -- a color copy of it.

6 JUDGE SUTIN: Okay. We can do that, absolutely.  
7 I can probably do that if need be. I'm flying, so it's  
8 easier, I think, for -- I believe you drove, correct?

9 MS. SWANSON: We did.

10 JUDGE SUTIN: So if that's okay, logistically it  
11 will be easier.

12 MR. ZIMSKY: Yes. That's okay.

13 JUDGE SUTIN: Would the parties like to make  
14 closing remarks?

15 MS. SWANSON: Your Honor, the Complainant is not  
16 going to make closing argument. We will just save our  
17 argument for the brief.

18 MR. ZIMSKY: Same with the Respondent, but thank  
19 you for the option.

20 JUDGE SUTIN: Okay. Well then, we will finish  
21 early. Thank you, everyone, for being concise and flexible  
22 and available. We will now close the Maralex hearing. It is  
23 20 after -- excuse me, 10 minutes after 4:00.

24 MR. ZIMSKY: Your Honor, one last thing on the  
25 briefing schedule. Do you want to talk about that now?

1           JUDGE SUTIN: Well, I was going to go off the  
2 record. And if that's okay with you, we'll do that off the  
3 record. Okay. So the hearing is now closed.

4           (Discussion off the record.)

5           JUDGE SUTIN: We're back on the record to briefly  
6 discuss the briefing schedule. Once the parties receive the  
7 transcript -- let's allow two weeks for the transcript. And  
8 then the parties will have 30 days to file their briefs.

9           If you need additional time, please submit a Motion  
10 to the court, but I will plan on -- why don't we have briefs  
11 due on November 30th -- Friday, November 30th. And, again, if  
12 you need more time, please submit a Motion with explanation as  
13 to why. Thanks, everyone.

14           (Proceedings were concluded at 4:15 p.m.)

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