AGO Exhibit 48

2007 testimony of Mary Ann Menetrey, vol. 9, pp. 2408-31 [direct examination]; vol. 10, pp. 2500-2662 [cross-examination by Tyrone] and pp. 2663-65 [redirect examination]

STATE OF NEW MEXICO

WATER QUALITY CONTROL COMMISSION

WQCC 03-12(A) and WQCC 03-13(A)

IN THE MATTER OF:
APPEAL OF SUPPLEMENTAL DISCHARGE
PERMIT FOR CLOSURE (DP-1341) FOR
PHELPS DODGE TYRONE, INC.

PHELPS DODGE TYRONE, INC.,

Petitioner.

TRANSCRIPT OF PROCEEDINGS

BE IT REMEMBERED that on the 4th day of September, 2007, the above-entitled matter came before the New Mexico Water Quality Control Commission, taken at the New Mexico State Capitol Building, Room 309, 490 Old Santa Fe Trail, Santa Fe, New Mexico, at the hour of 8:49 a.m.

VOLUME 9

EXHIBIT
48

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1 I N D E X

2 PAGE

3 WITNESSES:

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1 If anyone wants to get up and stretch, I'm
2 sure we can do that for a couple minutes, check E-mails,
3 make some phone calls.
4 (Proceedings in recess from 3:57 p.m. to
5 4:03 p.m.)
6 MS. PADILLA: I think we can all come back to
7 our seats now. I think we're ready for our next
8 witness.
9 MARY ANN MENETREY
10 having been first duly sworn or affirmed, was
11 examined and testified as follows:
12 MS. PADILLA: Ms. Fox.
13 MS. FOX: Thank you.
14 DIRECT EXAMINATION
15 BY MS. FOX:
16 Q. Would you please state your name?
17 A. My name is Mary Ann Menetrey.
18 Q. And what is your current position with the
19 Environment Department?
20 A. I am the Program Manager of the Mining and
21 Environmental Compliance Section of the Groundwater
22 Quality Bureau.
23 Q. How long have you been employed with the
24 Environment Department, and how long have you held the
25 position of program manager?

1 A. I have been employed with the Environment
2 Department for the past 16 years, and I have been the
3 Program Manager of the Mining and Environmental
4 Compliance Section for the past seven years.
5 Q. And what are your responsibilities in that
6 position?
7 A. I oversee all aspects of groundwater discharge
8 permitting under the Water Quality Act and Commission
9 Regulations for mining operations, including the review
10 of discharge permit applications, the issuance of
11 discharge permits, approval of closure plans, abatement
12 of contaminated groundwater, and enforcement of the act
13 and Commission Regulations.
14 And I am also the Mining Act Team Leader for
15 the Department -- thank you -- and am therefore
16 responsible for coordination of the Department's role in
17 implementing the New Mexico Mining Act.
18 Q. What experience do you have, Ms. Menetrey,
19 with the discharge permits that have been issued to
20 Tyrone by the Department?
21 A. I was the discharge permit lead for two of the
22 Tyrone operational permits while employed in the
23 Groundwater Pollution Prevention Section from 1994 until
24 2000, and those permits were DP-166, which covers the
25 Main Pit area, the Number 2 Leach Stockpile and the

1 SX/EW plant, and DP-27, which covers the tailing
2 impoundments.
3 I was also the permit lead for another mine
4 discharge permit issued to Tyrone, DP-1236, the Little
5 Rock Mine, which is not covered under DP-1341.
6 And also as program manager, I have oversight
7 responsibility for all Tyrone discharge permits, and,
8 therefore, I've been involved in the review, preparation
9 and enforcement of all the mine's current permits.
10 Q. Ms. Menetrey, what areas will you be providing
11 testimony for today?
12 A. Today I'll discuss the history and purpose of
13 the operational permits issued to Tyrone by the
14 Department and explain the interrelationship between the
15 Tyrone operational permits and the closure permit.
16 There is an approximately 30-year history of
17 permitting the Tyrone Mine under the Water Quality Act,
18 and that history shows that the Department and its
19 predecessor agencies have treated the groundwater
20 beneath the site as protected as a place of withdrawal
21 for present or reasonably foreseeable future use under
22 the Water Quality Act and the Commission Regulations.
23 I will also discuss some of the provisions of
24 the operational permits under which Tyrone currently
25 operates, all of which require pollution prevention

1 measures and abatement of contaminated groundwater. And
2 I will give specific examples relating to the
3 Department's groundwater protection history at the mine
4 site.
5 And finally, I will describe the potential
6 effect on the Tyrone operational permits if the
7 groundwater underneath the mine site is found not to be
8 a place of withdrawal and the potential effect on the
9 protection of groundwater in the state.
10 Q. Ms. Menetrey, using the map depicted on NMED
11 Exhibit 13, which is in the Commission's exhibit books,
12 and which is blown up here, as well, would you please
13 generally describe the discharge permits held by Tyrone?
14 A. Yes, I will.
15 Tyrone currently holds nine operational
16 permits for the Tyrone Mine and the closure permit.
17 And I'll point to NMED Exhibit 13 on this map
18 to explain areas of the various permits.
19 Starting at the northern portion of the -- the
20 mine facility in general, this is the area of the Tyrone
21 tailing impoundments, and the tailing impoundments were
22 covered under DP-27, which was first issued in 1978.
23 Discharges of tailings to the tailing
24 impoundments ceased altogether in 1992; however, there
25 were some continued discharges after the tailings such

1 as excess mine dewatering water and seepage water and
2 things like that.
3 But in 2003, the Department denied renewal of
4 this discharge permit because of concerns that those
5 ongoing discharges would result in groundwater
6 contamination. And so any remaining discharges to the
7 impoundments are now being addressed under a settlement
8 agreement.
9 Moving to the northern portion of what I'm
10 going to refer to as the main mine complex is the Number
11 3 Leach Stockpile system. And you'll notice on Exhibit
12 NMED Exhibit 13 it says the Number 3A Stockpile, but
13 that's due to a change in terminology by Tyrone. But at
14 any rate, the Number 3 Stockpile system is regulated
15 under DP-286, which was first issued in 1985.
16 And moving to the western perimeter of the
17 main mine complex is the Number 2A Leach Stockpile
18 system, and that's covered under DP-435, which was first
19 issued in 1986.
20 Moving then to the interior of the main mine
21 complex in the southwest portion is the area covered
22 under DP-166, which covers the largest area in the main
23 mine complex. And DP-166 was first issued in 1981, and
24 the facilities covered under that permit include the
25 SX/EW plant, which is actually in between the Number 3

1 and the Number 2A Stockpiles, the Main Pit and several
2 other open pits, and the Number 2 Leach Stockpile
3 system, as well as some waste rock piles.
4 Moving to the southeast perimeter of the main
5 mine complex, there's several waste rock piles,
6 including the Numbers 1C Waste Rock Pile, the 7A and the
7 South Rim, and those are covered under DP-396, which was
8 first issued in 2000.
9 Moving over to the eastern perimeter of the
10 main mine complex are the Number 1A and Number 1B Leach
11 Stockpile systems, and those are covered under DP-363
12 and DP-383, which were both first issued in 1985.
13 Heading -- let's see. Proceeding west of the
14 Number 1A Leach Stockpile is the Gettysburg Pit and the
15 Gettysburg Leach system, and those are covered under
16 DP-455, which was first issued in 1988.
17 To the north of that area is the Savannah Pit
18 and the East Main Leach system, and those are covered
19 under DP-670, which was first issued in 1990.
20 I believe that covers the permits in the main
21 mine complex.
22 Moving to the east of that area is the Number
23 1 Leach Stockpile, and that's covered under DP-896,
24 which was first issued in 2007.
25 Q. Thank you.

1 Ms. Menetrey, is there a distinction under the
2 Water Quality Act or the Commission Regulations between
3 what you refer to as operational permits and a closure
4 permit?
5 A. No. Generally a facility's operating
6 requirements and closure plan are contained in one
7 facility discharge permit. The WQCC Regulations provide
8 that discharge permits may include closure plans to
9 ensure water quality standards are not exceeded after
10 permitted operations cease.
11 Q. Is this the case for Tyrone?
12 A. No. As I mentioned, Tyrone currently has nine
13 permits dealing primarily with the operational phase of
14 the mine, and then there is also the general closure
15 permit, which is a supplement to each of the operational
16 permits.
17 Q. Why does Tyrone have nine operational permits
18 instead of just one?
19 A. The Tyrone Mine is a much more complex site
20 than most, and, therefore, for regulatory efficiency, it
21 has made sense to have numerous operational permits to
22 address the different discharge areas onsite.
23 And also, over the last 30 years, operations
24 have significantly expanded at the mine, and new
25 operational permits were issued by the Department as

1 Tyrone sought to expand operations.
2 Q. Generally, what types of conditions do the
3 Tyrone operational permits contain?
4 A. The Tyrone operational permits include
5 requirements for pollution prevention measures during
6 operations, groundwater monitoring, contingency plans,
7 abatement of groundwater contamination and corrective
8 action in the event of unauthorized discharges.
9 Q. And generally, what types of conditions does
10 the closure permit contain?
11 A. The Tyrone closure permit broadly addresses
12 closure requirements for the Tyrone Mine that generally
13 apply on a site-wide basis, including requirements for
14 regrading and covering of tailings and stockpiles,
15 general closure of open pits and surface impoundments,
16 closure of buildings and pipelines, site-wide abatement
17 of groundwater contamination, and long-term water
18 treatment, postclosure monitoring, financial assurance,
19 and studies that need to be conducted to address certain
20 closure requirements.
21 Q. What is the relationship between the Tyrone
22 operational permits and the closure permit?
23 A. The closure permit supplements each of the
24 operational permits and, therefore, is a part of the
25 operational permits. The closure permit represents the

1 primary closure plan portion of the operational permits.
2 Where groundwater is required to meet standards under
3 the operational permits, the closure plan needs to
4 demonstrate that same groundwater will meet standards
5 after operations cease.
6 A different standard for groundwater
7 protection should not apply for the closure plan. This
8 is particularly important at the Tyrone Mine, where the
9 existing abatement requirements under the operational
10 permits can only be fully achieved following closure of
11 individual facilities.
12 The Department should not renew permits for
13 operations that are causing groundwater contamination
14 without a plan for cleaning up that contamination and
15 preventing future contamination. And that is the
16 purpose of DP-1341.
17 The closure permit is dependent on the
18 conditions and requirements of each of the operational
19 permits, and, therefore, any decisions affecting DP-1341
20 have the potential to significantly affect the existing
21 terms and conditions of the operational permits, many of
22 which have now been in place for decades.
23 The requirements of the operational permits
24 cannot be separated from the requirements of the closure
25 permit, and this should be considered in the context of

1 whether the Tyrone Mine is a place of withdrawal.
2 Q. Why did the Department decide to issue a
3 separate supplemental permit for closure for the Tyrone
4 Mine?
5 A. There were technical and administrative
6 reasons for this decision.
7 First, the technical aspects of determining
8 how best to close and achieve source control for a large
9 copper mine with leach stockpiles and tailing
10 impoundments are very challenging. It would have been
11 inefficient and unwieldy for the Department to readdress
12 closure issues at the five-year renewal of each of the
13 nine operational permits.
14 And second, there is widespread groundwater
15 contamination throughout the Tyrone Mine site, and
16 contamination from the various individually permitted
17 facilities has commingled to a large extent. Therefore,
18 it made sense to issue a site-wide closure permit to
19 require comprehensive source control and abatement
20 measures to prevent future contamination after closure.
21 And third, following passage of the New Mexico
22 Mining Act in 1993, Tyrone was required to submit a
23 site-wide closeout plan for the Tyrone Mine to the
24 Mining and Minerals Division of the Energy, Minerals and
25 Natural Resources Department.

1 In order to coordinate the requirements of the
2 operational discharge permit closure plans with the
3 Mining Act closeout plan, and to review and approve
4 these plans more efficiently, it made sense to have one
5 discharge permit for the entire site that dealt
6 exclusively with closure measures.
7 Q. Ms. Menetrey, what is the basic purpose of the
8 Tyrone operational permits?
9 A. The fundamental purpose of each of the
10 operational permits is to prevent groundwater
11 contamination underneath and around the areas of the
12 mine that are permitted, and then to require abatement
13 of groundwater contamination that has occurred.
14 Q. Do each of the operational permits therefore
15 contain conditions to prevent groundwater contamination?
16 A. Yes, they do.
17 Q. What type of pollution prevention conditions
18 do the Tyrone operational permits contain?
19 A. There are numerous conditions in the various
20 discharge permits relating to pollution prevention and
21 abatement. In my written testimony on pages 7 through
22 10, I identify many of these, and I'm not going to go
23 through listing all of those now.
24 But one good example is that under the
25 operational permits Tyrone is required to line surface

1 impoundments to prevent seepage from the impoundments
2 into underlying groundwater. These include
3 synthetically lined ponds for collection of PLS, mine
4 process water and contaminated seepage water.
5 In some cases, the lined ponds have been
6 phased out and replaced with aboveground storage tanks
7 for PLS and raffinate collection, which ensures even
8 greater protection of groundwater quality.
9 Q. Do the Tyrone operational permits have
10 existing requirements for abating the groundwater
11 contamination within the areas covered under the
12 operational permits?
13 A. Yes, they do.
14 Q. Ms. Menetrey, you stated previously in your
15 testimony that there is groundwater contamination at the
16 Tyrone Mine site.
17 Has Tyrone begun abatement under the
18 operational permits?
19 A. Yes, it has.
20 Q. And what abatement activities has Tyrone
21 undertaken?
22 A. Tyrone is required to conform to most of the
23 abatement requirements of Subpart 4 of the regulations,
24 and, therefore, the goal of the abatement is to return
25 groundwater quality to standards beneath and around all

1 of the individually permitted facilities where
2 contamination has occurred and not just contain the
3 contamination.
4 Under Subpart 4, abatement of groundwater
5 contamination is conducted in two stages.
6 Stage 1 is the investigation to define the
7 extent and magnitude of contamination and obtain all the
8 relevant data to select an abatement remedy.
9 Stage 2 of the abatement plan involves
10 selection of an abatement option that will result in
11 attainment of groundwater standards.
12 Tyrone is still working on stage one of the
13 abatement plan, which has included investigation of both
14 groundwater in the vadose zone and has included drilling
15 of numerous additional monitoring wells across the site.
16 A final report on the Stage 1 investigation is
17 expected to be submitted to the Department in 2008.
18 Final remedies for cleaning up groundwater at the Tyrone
19 Mine have yet to be determined pending completion of the
20 Stage 2 abatement plan.
21 Tyrone additionally has numerous containment
22 strategies in place, such as seepage interceptor
23 systems, that were installed as part of corrective
24 action plans where permits fail to prevent groundwater
25 contamination.

1 Although these systems alone will not result
2 in abatement of all groundwater contamination at the
3 Tyrone Mine, it is likely that some of these systems
4 will be among the measures that will be incorporated
5 into the final abatement plan.
6 Q. Do you know if Tyrone has ever appealed any
7 pollution prevention or abatement conditions in its
8 operational permits?
9 A. To the best of my knowledge, no.
10 Q. Could you briefly describe the history of the
11 Department requiring closure plans or closure
12 requirements for the Tyrone Mine?
13 A. Yes. Excuse me. Closure plans or
14 requirements for closure plans were in place in the
15 Tyrone operational discharge permits as early as 1986.
16 As the potential long-term effects of the active
17 leaching process and acid rock drainage associated with
18 the tailings and stockpiles at the Tyrone Mine became
19 more evident, the Department began requiring that
20 closure plans be put in place for all of the operational
21 permits.
22 Due to the size and scale of these operations
23 and the increasing groundwater contamination that was
24 detected, the Department recognized that the closure
25 plans and associated source controls were key to

1 preventing future groundwater contamination beneath the
2 mine and surrounding area.
3 By 1989, permit requirements to prepare a
4 closure plan for the tailing impoundments were in place,
5 and from 1989 to the present, numerous closure studies
6 have been completed by Tyrone or were still ongoing that
7 were originally initiated under the operational permits.
8 The current requirements of DP-1341 are
9 therefore a continuation of permitting actions
10 previously conducted under each of the operational
11 permits for over a 20-year period.
12 Q. In your written testimony, you provide
13 examples that illustrate the Department's practice of
14 attempting to ensure that groundwater underneath the
15 Tyrone Mine site meets water quality standards.
16 Could you provide the Commission with a couple
17 of these examples?
18 A. Yes. And one example demonstrating the
19 Department's practice is DP-166, which, again, permits
20 the operations at the Number 2 Leach Stockpile as well
21 as the Main Pit and several other pits. And DP-166 was
22 the first discharge permit for a leach stockpile at the
23 Tyrone Mine, which was first approved on July 20th,
24 1981.
25 And again, I'll -- I'm going to change

1 exhibits.

2 Again, I'm -- this is NMED Exhibit 14, which

3 is a blow-up of the area of the main mine complex, and I

4 just wanted to point out the area of DP-166 again. It

5 encompasses the largest area of the main mine complex,

6 including the Main Pit and the Number 2 Leach Stockpile.

7 As part of permit issuance, the Department

8 required numerous groundwater monitoring wells be

9 installed inside the perimeter of the leach stockpile

10 area. These monitoring wells were installed to

11 establish preoperational groundwater quality beneath the

12 leaching operation and to monitor groundwater quality

13 following initiation of active leaching in order to

14 determine if the operation was causing any groundwater

15 contamination.

16 And pointing again to NMED Exhibit 14,

17 these -- many of these wells which were in the interior

18 of the leach stockpile area are shown as these black

19 dots on the map.

20 Even though most of these wells within the

21 perimeter of the stockpile were eventually mined out or

22 removed due to expansion of mine operations, the

23 requirement for installation of the wells shows that the

24 Department was concerned with the groundwater quality

25 inside the perimeter of the leach stockpile area.

1 Tyrone started active leaching of the Number 2
2 Stockpile in 1984. By mid 1985, significant groundwater
3 contamination was detected in some of the monitoring
4 wells located between the stockpile and the Main Pit.
5 Based on the monitoring well data, the
6 Department notified Tyrone that it needed to mitigate
7 this contamination beneath the mine area.
8 And I believe the wells that contamination was
9 detected in were 63, 64 and 65.
10 Given that DP-166 was also coming up for
11 renewal, the Department also notified Tyrone that in
12 order for the Department to renew this operating permit,
13 the renewal application would have to demonstrate this
14 contamination would be abated and that future
15 groundwater contamination would be prevented. And
16 again, this refers to groundwater contamination located
17 within and beneath active areas of the mine.
18 As part of the renewal of DP-166 in 1986,
19 Tyrone agreed to return the groundwater quality to
20 preoperational water quality "at the wells between the
21 Number 2 Leach Dump and the mine and at the wells within
22 the Number 2 Leach Dump." And that quote is from a
23 letter from Tyrone to the Department dated June 23rd,
24 1986.
25 Tyrone's consultants prepared an analysis of

1 how this contamination could be abated, which is now
2 understood to be faulty; however, the important point is
3 that the requirement to return groundwater to standards
4 beneath the stockpile area and the mine itself has been
5 a requirement of DP-166 and of all subsequent renewals
6 of DP-166.
7 This permit requirement demonstrates that with
8 issuance of the first discharge permit for a leach
9 stockpile in 1981 at the Tyrone Mine, the Department
10 required groundwater to meet water quality standards
11 beneath the permitted facilities, including the leach
12 stockpiles.
13 The other examples in my written testimony go
14 to the issue of why the Department was able to issue
15 permits for certain leach stockpiles in the past given
16 the extensive contamination that we see today. And this
17 was due, in fact, to Tyrone's representations that
18 groundwater would not become contaminated.
19 One of these examples is the Number 1A Leach
20 Stockpile.
21 And I'll point out again on NMED Exhibit 14
22 that the Number 1A Leach Stockpile is located at the --
23 on the eastern perimeter of the main mine complex.
24 In a July, 1983, letter, Tyrone notified the
25 Department that it intended to leach the area of the

1 Number 1A Leach Stockpile and that a discharge permit or
2 notification of intent to discharge was not necessary
3 because of the absence of groundwater in the area.
4 After formal notification to Tyrone from the
5 Department that a discharge plan would be required,
6 Tyrone continued to insist that a discharge plan was not
7 necessary due to the absence of groundwater, in letters
8 dated September 15th, 1983; October 21st, 1983;
9 March 19th, 1984; and June 25th, 1984.
10 Tyrone correspondence also indicated that
11 seepage rates from the dump would be low, that the life
12 of the leaching operation would be only five years, and
13 that since the stockpile would be located on Gila
14 Conglomerate materials, which were alkaline, that iron
15 salts would precipitate at the base of the stockpile and
16 act as a seal to prevent impacts to groundwater quality.
17 Despite these representations, the Department
18 approved a discharge plan for the Number 1A Stockpile in
19 February of 1985.
20 By 1996, a plume of contaminated groundwater
21 containing PLS was discovered to be moving from under
22 the Number 1A Leach Stockpile and from the Number 1C
23 Waste Rock Pile in the subsurface of Oak Grove Draw and
24 from under the Number 1 and Number 1B Leach Stockpiles
25 in the subsurface of Brick Kiln Gulch. The plumes

1 extended approximately 3.5 miles to the east of the
2 Tyrone Mine site.
3 Other permitted stockpiles have a similar
4 history to the 1A.
5 A key point here is that Tyrone has been able
6 to obtain discharge permits allowing operation and
7 significant expansion of the mine for almost a 30-year
8 period based, in part, on its representations that
9 groundwater beneath the mine site would not become
10 contaminated or that existing contamination would be
11 cleaned up.
12 The fact that the groundwater beneath the mine
13 site is now heavily contaminated and that implementing
14 source controls can be costly should not be reason as to
15 write off large areas of groundwater that were
16 previously considered protected as part of permit
17 issuance.
18 The regulations allow for Tyrone to petition
19 the Commission for alternative abatement standards in
20 the event that it is not technically or economically
21 feasible to abate to groundwater standards.
22 Q. Ms. Menetrey, what conclusions have you drawn
23 from your review of the Tyrone permit files and from
24 your experience permitting and overseeing the permitting
25 of the Tyrone Mine site?

1 A. For one, that the general course of conduct
2 for nearly 30 years shows that the Department considered
3 the groundwater underneath and around the entire Tyrone
4 Mine site as a place of withdrawal for present or
5 reasonably foreseeable future use under the Water
6 Quality Act and Commission Regulations.
7 And second, that the Department has required
8 all Tyrone operational discharge permits to include
9 pollution prevention measures and abatement requirements
10 to protect groundwater beneath and around the site and
11 to ensure that it met standards.
12 Third, the Department has required Tyrone to
13 clean up groundwater beneath the Tyrone Mine site to
14 groundwater quality standards.
15 Fourth, Tyrone represented repeatedly that its
16 discharges from the mine would have minimal impacts on
17 groundwater underneath the mine site.
18 And fifth, that Tyrone has put into place the
19 pollution prevention measures required by its discharge
20 permit.
21 Q. Ms. Menetrey, if the Commission were to decide
22 that portions of the area within the Tyrone Mine are not
23 a place of withdrawal of water for present or reasonably
24 foreseeable future use, what would be the ramifications
25 for the Tyrone operational permits?

1 A. There would be significant ramifications for
2 the operational permits already in place. Existing
3 pollution prevention measures could be deemed
4 unnecessary for some of the current discharges at the
5 Tyrone Mine, and the operational permits for those
6 discharges potentially could no longer be necessary, at
7 least in the current structure.
8 Even if the operational permits as they are
9 currently structured remained in place, many of the
10 conditions of the permits may no longer be enforceable.
11 And also, as I discussed previously, all of the
12 operational discharge permits presently require
13 abatement of contamination that has occurred beneath the
14 permitted facility.
15 The Department might not be able to enforce
16 these provisions if it were determined that the
17 groundwater were not protected. Without enforceable
18 pollution prevention and abatement conditions,
19 groundwater contamination at the mine could become
20 significantly worse. Containment strategies such as pit
21 dewatering and seepage interceptor systems if used alone
22 could become increasingly difficult to manage.
23 In summary, the existing regulatory practices
24 employed pursuant to the Water Quality Act at the Tyrone
25 Mine would be significantly disrupted. These existing

1 regulatory practices that protect groundwater throughout
2 the mine area have been in effect for almost 30 years
3 under the operational permits.
4 Q. And what would be the ramifications for the
5 closure permit?
6 A. The closure permit issued by the Department,
7 as I indicated before, is based on the premise that the
8 entire Tyrone Mine site is a place of withdrawal for
9 potential future use.
10 Therefore, many of the conditions and
11 requirements of the closure permit, such as the
12 requirement to treat contaminated groundwater, could go
13 away or change significantly in upcoming permit renewals
14 if it is determined that groundwater beneath portions of
15 the site do not have to meet groundwater quality
16 standards.
17 Q. What would be the effect on the Department's
18 ability to protect groundwaters throughout the state?
19 A. In my opinion, if groundwater beneath any
20 portion of the Tyrone Mine is determined not to be a
21 place of withdrawal, there will be numerous discharges
22 from mine sites and other facilities around the state
23 that will seek to extend the same analysis to their
24 facilities.
25 The Groundwater Quality Bureau currently

1 oversees over 900 discharge permits, including
2 approximately 50 discharge permits for mine sites.
3 Approved closure plans for these mine sites consistently
4 include implementation of source control measures to
5 protect groundwater beneath these sites, including
6 regrading and covering of stockpiles.
7 So any change in the Department's practices of
8 protecting groundwater at the Tyrone Mine has the
9 potential of destabilizing existing groundwater
10 protection activities currently in place throughout New
11 Mexico and could result in groundwater contamination in
12 the state that does not presently exist.
13 MS. FOX: That concludes Ms. Menetrey's direct
14 testimony, and the Department moves for admission of
15 NMED Exhibits 11, 12, 13 and 14.
16 MR. BUTZIER: No objection.
17 MS. PADILLA: No objection?
18 MR. FREDERICK: No objection.
19 MS. PADILLA: Okay. Accepted. Thank you.
20 (Exhibits NMED 11 through 14 were marked for
21 identification and admitted into evidence.)
22 MS. PADILLA: Okay. We can go to questions
23 from the Commission of Ms. Menetrey.
24
25

STATE OF NEW MEXICO

WATER QUALITY CONTROL COMMISSION

WQCC 03-12(A) and WQCC 03-13(A)

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Petitioner.

TRANSCRIPT OF PROCEEDINGS

BE IT REMEMBERED that on the 5th day of September, 2007, the above-entitled matter came before the New Mexico Water Quality Control Commission, taken at the New Mexico State Capitol Building, Room 309, 490 Old Santa Fe Trail, Santa Fe, New Mexico, at the hour of 8:36 a.m.

VOLUME 10

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1 I N D E X

2 PAGE

3 WITNESSES:

4 MARY ANN MENETREY

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1 realistic.

2 But in addition to that, the financial

3 assurance in place potentially would not be sufficient,

4 or wouldn't even be utilized in that fashion. I mean,

5 we're talking a very long time in the future.

6 Q. Would one reason that they might not be around

7 in the future be that they stop making a profit?

8 A. That's a potential possibility.

9 Q. Okay.

10 And I want -- another uncertainty about the

11 open pit capture zone is whether it is truly capturing

12 all the contamination that might otherwise appear to be

13 within that capture zone.

14 Is that -- are you concerned about that?

15 A. Yes. That is a concern.

16 Q. All right.

17 I have nothing further.

18 Thank you.

19 MS. PADILLA: Thank you, Mr. Frederick.

20 Mr. Butzier.

21 MR. BUTZIER: Thank you, Madam Chair.

22 CROSS EXAMINATION

23 BY MR. BUTZIER:

24 Q. Good morning, Ms. Menetrey.

25 A. Hello.

1 Q. I'd like to ask you to tell us, please, what
2 you reviewed before you provided your written testimony
3 in this case.
4 A. I reviewed many of the permit files for the
5 Tyrone Mine. I didn't review every document, but I
6 reviewed a substantial portion of the documents.
7 Q. And was that prior to supplying your written
8 testimony in this case?
9 A. Both prior and after.
10 Q. So you've also reviewed portions of the Tyrone
11 operational discharge plan files since providing your
12 written testimony?
13 A. Yes, I have.
14 Q. And did your review since providing your
15 written testimony cause you to change any of your
16 thinking about your testimony?
17 A. No.
18 Q. Was there anything else that you reviewed
19 prior to providing your written testimony in this case?
20 A. I -- let me think, because I'm always
21 reviewing a lot of things.
22 I reviewed some of the transcripts from
23 previous hearings and some of the, you know, exhibits
24 and -- associated with previous Tyrone hearings,
25 regarding the closure permit.

1 Q. Anything else?
2 A. I reviewed -- I did some review of other
3 permits that are not Tyrone operational permits.
4 Q. And which permits are those?
5 A. Primarily other Phelps Dodge permits such as
6 associated with the Chino Mine or the Continental Mine.
7 Q. Any others?
8 A. There were -- I don't remember specifically
9 any other permits I reviewed for the purpose of
10 preparing my written testimony. I often am looking at
11 other permit files associated with other activities, and
12 certainly whenever I look at any permit file, it reminds
13 me of other things that are going on at the time, but
14 not for the distinct purpose of preparing my written
15 testimony.
16 Q. Okay.
17 And when you say that you reviewed many of
18 the -- of the files relating to Tyrone's operational
19 discharge plan but perhaps not every document, can you
20 tell me specifically which of the -- of the nine
21 operational discharge plan files you reviewed for
22 purposes of preparing your written testimony?
23 A. I reviewed portions of all of the operational
24 permit files.
25 Q. And when you say portions, what portions did

1 you review?
2 A. Primarily the -- focused on the written
3 correspondence. I did not review every -- you know, all
4 the monitoring reports and that sort of information.
5 There -- there's tens of thousands of documents
6 involved, and I -- I certainly did not review all of
7 that.
8 Q. Did your review extend back prior to the time
9 that you came to the agency?
10 A. Yes.
11 Q. So did it go back to the -- to basically the
12 very beginning of discharging under the discharge plan
13 program for this site?
14 A. Yes, it did.
15 Q. And did you -- were there any -- were there
16 any discharge plans -- operational discharge plans for
17 the Tyrone site in which that was not the case? In
18 other words, in which you did not go back to the early
19 days of discharge permitting for those sites?
20 A. I believe for all of the operational permits,
21 I looked at the early correspondence.
22 Q. All right.
23 Now, you came to the Department in what year?
24 A. 1991.
25 Q. And what was the first position that you took

1 with the Department?
2 A. I believe it was a water resource
3 specialist --
4 Q. And --
5 A. -- in the Superfund Program, Groundwater
6 Quality Bureau.
7 Q. And that was part of the Groundwater Quality
8 Bureau, but as -- since you were dealing with the
9 Superfund Program, were you also dealing with the
10 discharge plans themselves?
11 A. Not with the specifics of permitting --
12 Q. Okay.
13 A. -- the discharge permits.
14 Q. But a Superfund site may overlap with an
15 existing discharge plan, correct?
16 A. There are cases where that has occurred, and
17 there was interaction with the permitting program.
18 Q. And then later did you -- did you actually get
19 to a position where you were responsible for reviewing
20 discharge plan applications within the Groundwater
21 Quality Bureau?
22 A. Yes.
23 Q. What year was that?
24 A. 1994.
25 Q. And what was your position at that time?

1 A. I'm going to look at my resume for a moment
2 and -- surface mining reclamation specialist.
3 Q. And 1994 was right around the time when
4 regulations were being adopted under the New Mexico
5 Mining Act; is that correct?
6 A. That's correct. It was 1993, I believe, that
7 the Mining Act regulations came into effect.
8 Q. The Mining Act was actually passed in 1993; is
9 that correct?
10 A. That may have been. I --
11 Q. So your experience in dealing with the
12 discharge plan program at NMED has been -- at least the
13 application review part of it has been since the Mining
14 Act and the closure requirements under the Mining Act
15 came into effect; is that correct?
16 A. Yes, that's correct.
17 Q. When you first came to the position in 1994 as
18 the surface mining specialist, or whatever you said your
19 title was, how did you -- well, who was the Groundwater
20 Quality Bureau Chief at that time?
21 A. Marcy Leavitt.
22 Q. And how did you train yourself or how were you
23 trained for your position beginning in 1994?
24 A. Well, at the time, I was super -- my
25 supervisor was the Program Manager of the Groundwater

1 Pollution Prevention Section. That was Dale Doremus.
2 And so she was primarily the one that trained me.
3 But certainly I -- we worked very much as a
4 team in the section and in the Bureau, and so I would
5 say my training went beyond that and to other discharge
6 permit reviewers, certainly, especially in the area of
7 mining and -- and also Marcy Leavitt, to a certain
8 degree.
9 Q. And I assume that you studied the actual
10 discharge plan regulations at that time, when you came
11 into that position; is that correct?
12 A. Yes.
13 Q. Okay. I'd like to -- you've indicated that
14 you're very familiar with the requirements of the Water
15 Quality Act and the Commission's Regulations, on the
16 first page of your written testimony; is that correct?
17 And I'm looking at the last sentence that
18 actually is a full sentence on page 1 of your testimony.
19 A. Yes. That's correct.
20 Q. This may be a little mundane, but I'd like to
21 just sort of go back to the -- the very elements of the
22 discharge plan program at NMED and try to understand
23 exactly what that program is all about, to the best of
24 your understanding.
25 Are you with me?

1 A. I think so.
2 Q. What is a discharge plan?
3 A. A discharge plan is a plan that is submitted
4 by an operator who wishes to discharge contaminants that
5 may move directly or indirectly into groundwater. It's
6 a plan submitted to the Department to prevent the -- to
7 prevent that contamination.
8 Q. Now, in --
9 A. It's a plan submitted for approval in order to
10 get approval to discharge those contaminants.
11 Q. Do you have your regulations in front of you?
12 A. Yes.
13 Q. I'd like to draw your attention to the
14 definitions part of the ground and surface water
15 protection regulations, and specifically to 20.6.2.7R,
16 which is the definition of discharge plan.
17 Do you see where I'm looking?
18 A. Yes, I do.
19 Q. And could you read that, please?
20 A. "'Discharge plan' means a description of any
21 operational, monitoring, contingency, and closure
22 requirements and conditions for any discharge of
23 effluent or leachate which may move directly or
24 indirectly into groundwater."
25 Q. Now, what is your understanding of what is

1 meant by discharge of effluent or leachate which may
2 move directly or indirectly into groundwater? What's
3 your understanding of that language?
4 A. In terms of what the discharge is?
5 Q. Well, is the -- is the discharge plan
6 something where somebody is telling the agency that
7 they're going to have a discharge and -- and there's a
8 pretty good chance that the discharged contaminants are
9 going to get into groundwater? Is that your
10 understanding?
11 A. I don't think it would necessarily be a pretty
12 good chance. I mean, it may --
13 Q. Okay.
14 A. -- is -- is the wording.
15 Q. Let's turn now to the 3104 regulation. And
16 when I say 3104, I'm leaving off the 20.6.2 part,
17 because I think everybody understands that we're in the
18 3100 series of the regulations.
19 Do you see where I'm looking?
20 A. Yes, I do.
21 Q. Is that the -- is the 3104 regulation the
22 regulation that defines when a discharge plan is
23 required?
24 A. Well, yes. I would say that it would -- if
25 there's going to be a discharge of effluent or leachate,

1 it must be conducted -- that would move directly or
2 indirectly into groundwater, it must be conducted
3 pursuant to a discharge permit, so --
4 Q. Okay.
5 Could you read the first sentence of that
6 provision, please?
7 A. "Unless otherwise provided by this Part, no
8 person shall cause or allow effluent or leachate to
9 discharge so that it may move directly or" -- looks like
10 there's a typo -- "indirectly into groundwater unless he
11 is discharging pursuant to a discharge permit issued by
12 the secretary."
13 Q. So if a -- if a person plans to discharge an
14 effluent or leachate, he can't -- he cannot do that --
15 that person cannot do that unless he obtains a permit
16 from the agency; is that correct?
17 A. That's correct.
18 Q. And is it your testimony that the purpose of
19 the dis -- of requiring a discharge plan of that type of
20 applicant is to prevent and not allow that contaminant
21 to reach groundwater?
22 A. Not necessarily. The regulations do allow
23 contamination up to the standards, so you can have a
24 discharge that enters groundwater. It just can't
25 exceed -- cause standards to be exceeded.

1 Q. And when you say cause standards to be
2 exceeded, you're talking about cause standards to be
3 exceeded at places of withdrawal of water for present or
4 reasonably foreseeable future use, correct?
5 A. That's correct.
6 Q. Okay.
7 Now, I'd like to turn back to the -- to the
8 definitions section, to the definition of discharge
9 site, which is subparagraph S of the regulation that I
10 referred to previously in definitions.
11 Do you see where I'm looking?
12 A. Yes.
13 Q. And could you read that, please?
14 A. "'Discharge site' means the entire site where
15 the discharge and associated activities will take
16 place."
17 Q. In your experience with the agency, do you
18 have -- and your review of the discharge plan
19 regulations, do you have an understanding of how that
20 term "discharge site" is used in these regulations?
21 A. Well, I have an understanding of how I believe
22 that's been applied in terms of what a discharge site
23 is.
24 Q. And what's your understanding?
25 A. It -- I mean, my understanding is what we're

1 permitting is the discharge, and so what the site is is,
2 of course, going to vary. It's not necessarily going to
3 mean the property, the entire property. It's going to
4 be where the discharge is occurring, and often there's
5 facilities associated with that discharge on a property
6 that might be included as part of the discharge.
7 It's going to be variable, but it really is
8 limited primarily to the discharge and things affecting
9 the discharge.
10 Q. Now, I noticed on your Exhibit 13 that where
11 you've identified certain areas for each of the nine
12 operational discharge permits you've essentially drawn a
13 line around -- around various facilities, all of which
14 are within the pink line, or the MMD permit boundary
15 line; is that correct?
16 A. Yes. There are -- there are lines on the map.
17 There are not -- these are not considered formal lines
18 in terms of like a permit boundary. They're primarily
19 for administrative reasons that generally describe the
20 area of the discharge.
21 Q. And it's just a -- essentially a matter of
22 convenience for the agency to think of the discharge
23 plan area as the area that you've drawn on this map?
24 A. Yes. Primarily yes, but I think it's also
25 convenience to the operator, especially in the case of

1 the main mine complex, because, obviously, you have
2 this -- this complex here, and there needs to be -- you
3 know, the operator needs to know if something happens
4 over here, I mean, which -- which permit do we send the
5 information in under. So that's --
6 Q. Okay.
7 And is it fair to say that the areas that
8 you've outlined for each of the individual discharge
9 plans -- that those are roughly the same thing as a
10 discharge site, as that term is used in these
11 regulations?
12 A. Roughly, but I wouldn't say the lines on here
13 accurately depict all the discharge sites at the Tyrone
14 Mine right now.
15 Q. Okay.
16 A. But in general, yes.
17 Q. And do you -- I guess I asked this, and I may
18 draw an objection, but do you know where else in the
19 regulations the term "discharge site" is used?
20 A. I don't. I don't recall.
21 Q. I'd like to have you turn back to the 3100
22 series to the 3106 regulation, which is entitled
23 Application for Discharge Permits and Renewals.
24 Do you see where I'm looking?
25 A. Yes.

1 Q. And in particular, let's look at 3106C.
2 Can you tell me what 3106C is requiring of a
3 discharge permit applicant?
4 A. Well, I could -- I could read it. I -- it
5 says it "shall set forth in detail the methods or
6 techniques the discharger proposes to use or processes
7 expected naturally to occur which will ensure compliance
8 with this Part."
9 And then there's a -- there's a list of
10 information.
11 Q. And would you read from that list, would you
12 read section -- subsection (2), please?
13 A. Yes. "Location of the discharge and of any
14 bodies of water, watercourses and groundwater discharge
15 sites within one mile of the outside perimeter of the
16 discharge site, and existing or proposed wells to be
17 used for monitoring."
18 Q. So this is -- this is at least one instance in
19 which the term "discharge site" is used; is that
20 correct?
21 A. That's correct.
22 Q. And again, discharge site, we're talking about
23 the place of the discharge and associated activities; is
24 that correct?
25 A. As they would -- associated activities as

1 related to the discharge.
2 Q. All right.
3 And do you have an understanding of why the
4 Water Quality Control Commission would have expected
5 applicants to provide the information in 3106C.(2)?
6 A. Well, I recall that I actually had a
7 conversation with Marcy Leavitt about this very
8 provision and -- because I thought it was somewhat
9 confusing in trying to understand why an operator would
10 be required to identify other groundwater discharge
11 sites.
12 And I certainly think that part of the reason
13 this is -- this is here is because, you know, as a
14 regulator in permitting a discharge, you're going to be
15 very interested in knowing if there are, you know,
16 sensitive areas that could be impacted from the
17 discharge.
18 With regard to the groundwater discharge site
19 issue, what generally applicants have provided have been
20 a showing of where wells are, mostly supply wells, that
21 are, you know, within the -- the one mile out -- you
22 know, outside the perimeter. That's because -- because
23 actually most people that apply for discharge permits
24 don't know, say, where other discharge sites are that
25 may be subject to permitting under the -- under the

1 regulations.
2 Q. Now, was part of your confusion that you
3 talked with Marcy Leavitt about the use of the term
4 "discharge" in 3106C.(2), location of the discharge?
5 A. No. It was regarding discharge site.
6 Q. Okay.
7 So you had a question about what the meaning
8 of the discharge site was, and so you talked to Marcy
9 Leavitt about that?
10 A. No, not about what the meaning of a discharge
11 site was, but in -- it had to do with what an operator
12 was required to submit to the Department and the issue
13 of, well, can you really expect an operator to know
14 where other discharge sites might be that have discharge
15 permits, and that -- you know, that was where the
16 confusion was.
17 It didn't -- I thought it was confusing, and
18 so I had gone to her to consult on this issue.
19 Q. Did you understand this to be requesting of
20 applicants information about other discharge sites? Is
21 that how you read this rule?
22 A. I didn't necessarily read it like that. I
23 think that there was a question because it appeared to
24 be somewhat confusing in the regulations exactly what
25 the operator was supposed to supply.

1 Q. And what did Marcy Leavitt tell you about her
2 understanding of what the operator was supposed to
3 supply for this 3106C.(2) requirement?
4 A. That as a practical matter, that operators
5 have been submitting the locations of wells in the area,
6 and part of the reason -- or the main reason for this is
7 so that -- especially before there's an operation where
8 you don't have, say, monitoring wells, that information
9 can be used to establish what is the TDS concentration,
10 say, water quality in the area before an operation is
11 permitted.
12 Q. Did you understand the meaning of discharge of
13 any bodies of water, watercourses and groundwater
14 discharge sites -- did you understand that to mean
15 essentially places outside the perimeter of the
16 discharge site for which the applicant was submitting a
17 permit, and where water was essentially being either
18 discharging from a spring or being withdrawn from a
19 well?
20 A. I don't know if I'm quite clear on your
21 question.
22 I guess I -- I see this as wanting to gather
23 as much information as possible on the groundwater and
24 surface water situation in proximity of a given proposed
25 discharge.

1 Q. And this -- is there anywhere in this list of
2 information that has to be set forth in a discharge plan
3 application -- is there anything in there that requires
4 an applicant to describe what wells are located inside
5 the perimeter of the discharge site?
6 A. Well, by a plain reading of number (2), the
7 requirement, even though it doesn't specifically say
8 wells, that -- by that plain reading of the first part
9 of that, that would be within one mile outside the
10 perimeter. Certainly, then, there's also requirement
11 for existing or proposed wells to be used for
12 monitoring, which those existing wells could be within
13 the inside perimeter.
14 And then if you move to (7), I mean, that may
15 be some information the Department would want in
16 evaluating a discharge permit.
17 Q. Okay.
18 Let me draw your attention back to the
19 prefatory language in 3106C, and in particular where
20 there's a mention of "processes expected to naturally
21 occur which will ensure compliance with this Part."
22 Do you see where I'm looking?
23 A. Yes, I do.
24 Q. What is your understanding of what the Water
25 Quality Control Commission's Regulations are asking of

1 an applicant in that language?
2 MS. FOX: I'm going to object as to outside
3 the scope. We've let this go on for a while now, and
4 I -- maybe Mr. Butzier can clarify how he's going to tie
5 this back to Ms. Menetrey's testimony.
6 MS. PADILLA: Mr. Butzier, could you --
7 MR. BUTZIER: Well, it's clearly within the
8 scope of this witness' understanding, and she's
9 testified that she understands these regulations.
10 I am going to tie it back to some of the
11 actual documents in the -- in the record in this case,
12 so I think this is helpful background to understand
13 essentially what -- what is being asked of an applicant
14 when the applicant applies for a discharge plan.
15 And I'll go through some of the application
16 materials here in a while.
17 MS. PADILLA: I'll allow the questions.
18 Thank you.
19 MR. BUTZIER: Was there a question pending?
20 Can we have the question read back?
21 MS. MENETREY: Line of questions.
22 MS. PADILLA: Line of questions.
23 Continue.
24 (Record read.)
25 Q. (BY MR. BUTZIER) And specifically I'm

1 referring to the language "processes expected to
2 naturally occur which will ensure compliance with this
3 Part."
4 A. Well, obviously, specific processes are not
5 outlined here, but the situation in general is going to
6 be that a discharge is going to -- a discharger is going
7 to have a discharge which exceeds the 3103 standards and
8 potentially could get into groundwater.
9 And so any number of -- of things or processes
10 are going to have to happen in order to ensure that
11 standards aren't exceeded. Some of them may be
12 processes that aren't natural, and others may be
13 natural, and so the Department is trying to determine
14 from the application if any of these natural processes
15 will prevent groundwater contamination in a natural
16 process.
17 I think that the regulations give a lot of
18 leeway to all kinds of processes. I mean, that could be
19 evaporation. That could be chemical reactions that
20 occur naturally in the soil. It could be any number of
21 things that -- that occur naturally without the operator
22 having to do something in addition, I guess is how I
23 would put it.
24 So I think it's -- it's rather endless what
25 those natural processes conceivably could be.

1 Q. And are some of those -- I'm sorry.
2 A. Go ahead.
3 Q. Were you finished?
4 A. Yes, I think so.
5 Q. And are some of those processes processes
6 which may occur once the contaminated discharge actually
7 reaches groundwater, in your understanding?
8 A. Potentially, they could. It's --
9 Q. Okay.
10 A. Again, contamination can happen up to the
11 standard, and there may be things that are naturally
12 happening in the aquifer that would be a natural process
13 that would prevent the standards from being exceeded.
14 Q. Now, in your testimony, as Mr. Frederick
15 pointed out, you talk a lot about places that are to be
16 protected, and you talk about a 30-year history of
17 permitting this Tyrone Mine site.
18 Do you recall that testimony?
19 A. Yes.
20 Q. And your actual firsthand experience began
21 sometime in the mid '90s, correct?
22 A. That's correct.
23 Q. And is the reason that you're able to discuss
24 the 30-year history of permitting the Tyrone Mine based
25 on the review that you described earlier of the

1 underlying operational discharge plan files?
2 A. Well, in part, but when I came to the
3 Department, I certainly had numerous discussions with
4 other staff and my supervisors and -- you know, who had
5 a longer history than I did with the Department and had
6 previously interpreted them and thinking about these
7 same documents and had reviewed the same documents.
8 Q. And other than the people you've already
9 mentioned, Marcy Leavitt and Dale Doremus, were there
10 others that you're talking about that helped you form an
11 understanding about a 30-year history?
12 A. I'm sure that there were.
13 Q. Let me ask you about -- about today.
14 Are you one of the people who has the longest
15 tenure in the Groundwater Quality Bureau at the New
16 Mexico Environment Department currently?
17 A. I would say that I am among those people in
18 the Groundwater Quality Bureau now. Yes.
19 Q. Are you the person with the longest history
20 who has dealt with mining facilities in the Groundwater
21 Bureau?
22 A. I don't believe -- I don't believe so, no.
23 Q. And who else has a longer history?
24 A. With mining -- I believe that -- I believe
25 that Clint Marshall was all -- he was already in the

1 permitting section working on mine facilities --
2 Q. Okay.
3 A. -- when I -- it was around the same time
4 frame, so I couldn't be absolutely sure of that, but
5 it's close.
6 Q. Okay. We'll come back to some of the specific
7 statements you make on page 3 about the 30-year history,
8 but before I get to that, I'd like to draw your
9 attention to page 4, under paragraph Roman numeral III,
10 about halfway down that section on the page, where you
11 refer to various pollution prevention measures during
12 operations.
13 Do you see where I'm looking?
14 A. Could you repeat --
15 Q. It's page 4 --
16 A. Okay.
17 Q. -- under Roman numeral III, A.
18 And this is a section talking about Tyrone
19 operational permits, primarily addressed to the
20 operational phase of facilities at the Tyrone Mine.
21 Do you see where I'm looking?
22 A. I -- let's see.
23 MS. FOX: What paragraph are you on?
24 MR. BUTZIER: Paragraph III.A on page 4.
25 MS. FOX: Right.

1 But what paragraph?
2 MS. MALAVE: That first paragraph.
3 MR. BUTZIER: It's in the first paragraph,
4 it's probably about the second to the last sentence,
5 beginning with "The Tyrone operational permits."
6 MS. FOX: Thank you.
7 Q. (BY MR. BUTZIER) Do you see where I'm
8 looking?
9 A. Yes.
10 I apologize. I was still thinking about the
11 other people I had worked with who had a longer history
12 than I did at the --
13 Q. Okay. If you think of others, just --
14 A. I did. I actually did.
15 MS. FOX: She's really being thoughtful about
16 your questions.
17 MS. MENETREY: I did.
18 Q. (BY MR. BUTZIER) Well, who else?
19 A. Well, Maxine Goad was my supervisor with
20 regard to all the work I did on the New Mexico Mining
21 Act, so --
22 Q. Okay.
23 A. -- we had -- and she certainly had a lot more
24 history than I did.
25 Q. And I was actually asking about people who are

still with the agency, but that's --

A. Right. I was even --

Q. -- helpful.

A. -- thinking back farther.

Q. Yeah.

A. I apologize.

Q. Well, let me draw your attention to the sentence we were just talking about on page 4 of your testimony. And why don't you go ahead and read that sentence.

A. This is the sentence "The Tyrone operational permits primarily"? Okay.

Q. That's right.

A. "The Tyrone operational permits primarily address the operational phase of individual facilities at the Tyrone Mine, and include requirements for pollution prevention measures during operations, groundwater monitoring, contingency plans, abatement of groundwater contamination, and corrective action in the event of unauthorized discharges."

Q. Now, I'd like to ask you about the various things you've listed in that sentence, and in particular starting with the groundwater monitoring.

What is your understanding of the purpose and use of groundwater monitoring under the NMED's discharge

1 plan program?
2 A. The purpose of groundwater monitoring is to
3 determine if groundwater is being -- how groundwater may
4 or may not be affected by the dis -- the permitted
5 discharge.
6 Q. And is it your -- I think you may have
7 indicated this previously. Is it your understanding
8 that groundwater monitoring is to determine if there are
9 exceedances of groundwater standards at the location
10 where there's monitoring?
11 A. Well, it's not just to determine -- certainly
12 groundwater monitoring is to determine exceedances, but
13 it's also to give you a picture of what's happening even
14 before exceedances may occur. It -- and you're
15 certainly measuring -- what you're measuring in that
16 monitoring well is a snapshot of -- at that time. So
17 you're measuring the groundwater right there at that
18 time.
19 Q. And is groundwater monitoring in any way
20 related to contingency plans, which is the next thing
21 you mention in this sentence?
22 A. Well, yes, it is related.
23 Q. What is a contingency plan, and how does it
24 relate to monitoring?
25 A. A contingency plan is the methods -- basically

1 a contingency plan is something that the operator
2 provides if there's a failure of the permit in some way,
3 what -- what's the operator going to do. It's a
4 description of what measures the operator will take
5 if -- if the permit fails.
6 Q. And when you use the term "failure" in that
7 context, you're not talking about a violation of the
8 water quality rules, you're talking about some kind of
9 exceedance -- some kind of contamination that -- that
10 occurs that maybe wasn't anticipated, and a contingency
11 plan is designed to address that; isn't that correct?
12 A. Could you repeat that? I'm sorry.
13 MR. BUTZIER: Could you read that back?
14 (Record read.)
15 MS. MENETREY: Well, I think it could be -- a
16 contingency plan wouldn't necessarily -- it could be
17 beyond, you know, unanticipated contamination of
18 groundwater. It could be other activities, as well, I
19 mean, besides that. I mean, for instance, you discover
20 that your -- your double-lined pond is, you know, ripped
21 or something.
22 I mean, there -- there's going to be
23 contingencies for all sorts of aspects of the discharge
24 besides -- but certainly if groundwater becomes
25 contaminated and it was not supposed to, then it would

1 be expected there to be a contingency for that.
2 Q. (BY MR. BUTZIER) What's the difference
3 between a contingency plan and a corrective action, in
4 the event of an unauthorized discharge?
5 A. Well, a contingency plan generally is in the
6 permit. It's an action that the operator is going to
7 take if something goes amiss. And there is going to be
8 potentially some overlap between these.
9 But a corrective action plan is where
10 something, you know, completely unanticipated happens,
11 and, you know, something needs to be done to address it
12 immediately. And I -- a lot of the idea behind a
13 corrective action plan really comes from 1203 of the
14 regulations, where you have an unauthorized discharge of
15 some sort.
16 And unauthorized would include -- say you have
17 an excursion of PLS that's going outside of the -- you
18 know, that's moving away from a leach stockpile.
19 Q. Okay.
20 A. That isn't something normally that an operator
21 would already have had a contingency plan for in their
22 permit. It's an unauthorized discharge, and the
23 regulations require that a corrective action plan be
24 implemented to address that.
25 Q. And in fact, corrective actions and

1 contingency plans are in two complete different sections
2 of the regulations and addressed by different sections
3 in the regulations; isn't that correct?
4 And in particular, I'll draw your attention to
5 regulation 1203A, which, I think, is the provision you
6 were just discussing about corrective actions when there
7 is an unauthorized discharge.
8 Do you see where I'm looking?
9 A. Yes.
10 Q. So that's -- am I correct that that's the
11 provision you were just referring to in connection with
12 corrective actions?
13 A. That's correct.
14 Q. And in Section 3107, back to the discharge
15 plan regulations, 3107A.(10) makes a specific reference
16 to a contingency plan.
17 Do you see where I'm looking?
18 A. Yes.
19 Q. And like you said, that is -- a contingency
20 plan is something that is anticipated and expected of an
21 applicant up front in the discharge plan permitting
22 process, correct?
23 A. Yes. Contingency plans are generally part of
24 a discharge permit.
25 Q. And in fact, 3107A starts, "Each discharge

1 plan shall provide for the following as the secretary
2 may require," and it lists a number of things, including
3 number (8), a system for monitoring, number (9),
4 procedures for detecting failure of the discharge
5 system, and number (10), contingency plans to cope with
6 failure of the discharge permit or system.
7 Do you see where I was just reading?
8 A. Yes.
9 Q. That's a whole -- contingency plans, in other
10 words, are a whole different concept under these
11 regulations than corrective action for an unauthorized
12 discharge under 1203A; isn't that correct?
13 A. They're different, but I think that they
14 are -- you know, can be connected given whatever the set
15 of circumstances are.
16 Q. Now, there has been some mention in this case,
17 both in Mr. Olson's testimony and in your testimony,
18 about failure of operational discharge plans at the
19 Tyrone site.
20 Do you recall that testimony?
21 A. Yes.
22 Q. Has the agency -- has the agency -- well, can
23 you give -- can you give me the instances in which the
24 agency has concluded that there were failures of the
25 permits and, therefore, contingency plans were triggered

1 under 3107A? Do you know those off the top of your
2 head?
3 A. Could you repeat the question? I'm sorry.
4 Q. Do you recall instances at the Tyrone Mine
5 site where there were failures of a discharge system
6 that resulted in triggering a contingency plan under
7 3107A.(10)?
8 MS. FOX: There's no triggering. Objection,
9 there's no -- misstates the regulation.
10 MR. BUTZIER: Okay. I'll withdraw that
11 question and ask it in a different way.
12 MS. FOX: Yeah.
13 Q. (BY MR. BUTZIER) Are you aware of instances
14 in which there have been failures of a discharge system
15 at the Tyrone Mine site and contingency plans were
16 implemented under 3107A.(10)?
17 A. There has been numerous times, innumerable
18 times, I could -- where contingency provisions have
19 been -- I mean, in recent past, almost every time that a
20 well shows an exceedance of standards, there is a -- you
21 know, a contingency provision is implemented, and it --
22 and in the permits now it's pretty specific. They've
23 gotten -- contingency provisions have gotten much more
24 specific over the years.
25 And now it requires, you know, resampling of

1 the well at X amount of time and -- there's a whole
2 procedure that has to be followed, and clearly that's
3 happened many times.
4 Q. And Tyrone, in each instance that you're
5 talking about, has, in fact, implemented a contingency
6 plan and has worked cooperatively with the agency to --
7 to deal with those contingencies.
8 A. Yes. The contingency plans early on were
9 pretty vague and -- early in the permitting history, and
10 many of those contingency plans were not implemented as
11 they were described. But certainly any time that there
12 has been contamination detected, some sort of measures
13 were conducted by Tyrone to address it, even if it was
14 not, in fact, a contingency as described in the permit.
15 Q. Okay. I'd like to turn back now to page 3 of
16 your written testimony.
17 And you indicate in the second sentence under
18 Roman numeral II that in your testimony you'll describe
19 the approximate -- approximately 30-year history of
20 permitting the Tyrone Mine under the Water Quality Act
21 and explain how that history shows that the Department
22 has treated the groundwater beneath the site as
23 protected under the WQA and Commission Regulations.
24 Do you see the sentence I just read?
25 A. Yes.

1 Q. And then there are three or four different
2 uses of the term "protected" in the rest of that
3 paragraph and another one in the next paragraph.
4 What do you mean when you use the term
5 "protected" in your written testimony?
6 A. What I mean is that the groundwater needs to
7 meet 3103 standards.
8 Q. And so when you say that the 30-year history
9 shows that groundwater beneath the site is to be
10 protected, your testimony is that there's a 30-year
11 history at the Tyrone Mine where -- where Tyrone was
12 expected to meet standards underneath all of its
13 facilities at the mine; is that correct? That's your
14 testimony?
15 A. Yes, that that was -- the expectation would be
16 that the water quality beneath those areas would be --
17 yeah, protected.
18 Q. Okay.
19 Now, Mr. Frederick asked you a question about
20 ways to prove that a place was not a place of
21 withdrawal, and in particular he asked you is one of
22 those ways of proving that a place is not a place of
23 withdrawal showing that total dissolved solids is
24 greater than 10,000 milligrams per liter.
25 Do you recall that question?

1 MS. PADILLA: Mr. Frederick.
2 MR. FREDERICK: Let me object to the question.
3 I don't think a cross on cross is allowed. If it is,
4 I'd like to be able to redirect on Mr. Butzier's
5 cross -- or recross on his cross of my cross.
6 MR. BUTZIER: We've already -- Madam Chair,
7 we've already established in this proceeding that the
8 attorneys are allowed to go into questioning that others
9 have gone into at the time those questions are asked.
10 MR. FREDERICK: That's actually when the
11 Commission asks questions, not when another attorney
12 asks questions. If it is, again, I would like an
13 opportunity to cross on information that comes out
14 during Mr. Butzier's cross-examination, which will, of
15 course, extend this proceeding infinitely.
16 MR. BUTZIER: Madam Chair, I think I -- I
17 think Mr. -- under the procedures we've established, I
18 think Mr. Frederick will get another opportunity.
19 MS. PADILLA: Yeah, on redirect.
20 I'll allow the --
21 MS. MALAVE: Well --
22 MR. SLOANE: Infinitely. He said infinitely.
23 MR. LEWIS: I heard that, too.
24 MR. SLOANE: That makes me cross.
25 (Discussion off the record.)

1 MS. PADILLA: Just for clarification on the
2 process that we've established, I think, throughout this
3 particular proceeding is that we've allowed a recross if
4 there is a redirect --
5 MR. FREDERICK: Correct.
6 MS. PADILLA: -- and we've gone through that.
7 But we have also allowed, I think, questions responding
8 to or from all the -- I think all parts of the testimony
9 and questions on that.
10 So I'll allow the question.
11 MR. BUTZIER: Okay.
12 Q. Do you recall Mr. Frederick asking you about
13 whether one way to prove that a place is not a place of
14 withdrawal of water for present or reasonably
15 foreseeable future use is by showing that the water
16 would be in excess of 10,000 parts per million?
17 A. Yes. I recall the question.
18 Q. And you testified that that is one way to show
19 that a place is not a place of withdrawal, correct?
20 A. I don't know if that was exactly what I said.
21 I -- I believe that I said that if it's greater than
22 10,000 TDS, water wasn't protected under the Water
23 Quality Act, and so it wouldn't really even be going to
24 that issue. But conceivably water could be withdrawn
25 for a purpose from there, but --

1 Q. And how --
2 A. I think that's more what I said.
3 Q. And how do you perceive the relationship
4 between the 10,000 milligram per liter threshold under
5 the -- under the water quality regulations and the place
6 of withdrawal issue? Are those two separate inquiries,
7 or are those part of the same question?
8 A. Well, if -- if you have greater than
9 10,000 milligrams per liter TDS, you wouldn't even need
10 to submit a -- a discharge permit application, unless,
11 for some reason, the -- there might be a circumstance
12 because you -- if that water was going to be through the
13 discharge moving into waters that was less than 10,000
14 milligrams per liter TDS.
15 So in a way, though, it's a -- to me, it's
16 a -- it's a separate issue --
17 Q. Okay.
18 A. -- than the issue of, okay, it's less than
19 10,000 milligrams per liter TDS, and so now we know
20 there needs to be a discharge permit, and so we need to
21 make sure that that discharge is protecting, you know,
22 any place of withdrawal, so --
23 Q. Okay. So taking the 10,000 milligrams per
24 liter threshold question out of my line of questioning
25 now, I'd like to just focus on the place of withdrawal

1 question.
2 You've testified that it's the discharger's
3 burden to show that a discharge plan will meet standards
4 at a place of withdrawal of water for present or
5 reasonably foreseeable future use, correct?
6 A. That's correct.
7 Q. And you've also testified that the Department
8 assumes that all groundwater is a place of withdrawal
9 unless the discharger proves otherwise, correct?
10 A. That's correct.
11 Q. Can you describe for me what the agency's
12 position is as to what kind of showing would be required
13 to demonstrate that a particular area is not a place of
14 withdrawal of water for present or reasonably
15 foreseeable future use?
16 A. I guess that I -- that I can. I mean, that's
17 why we're here, I believe, today, this -- because this
18 issue has never come up. It's -- that I know of. I
19 can't recall any such circumstance.
20 Q. And you don't recall it coming up in the
21 context of your review of Tyrone's operational discharge
22 plan files?
23 A. Of whether the Tyrone Mine was a place of
24 withdrawal?
25 Q. (Nods head.)

1 A. The -- the issue came up primarily from
2 Tyrone, I believe, in correspondence, but Tyrone never
3 appealed or, you know, went to this level of, you know,
4 deciding the issue, so -- so we've never had to -- you
5 know, the issue of what level of effort would be
6 required, it just -- it just hasn't come up.
7 Q. So are you -- are you saying that the decision
8 was made that the Tyrone Mine site is a place of
9 withdrawal and that that's reflected in the Tyrone
10 operational discharge plan files and Tyrone didn't
11 appeal that decision?
12 A. There was no formal written determination, if
13 you will, that was included in the file, that stated the
14 Tyrone Mine is a place of withdrawal. It's, again,
15 implied through the permitting actions.
16 Q. So I want to understand the logic of what
17 you've just said.
18 Is it your position that if Tyrone at any
19 point agreed to abate or address a situation at the
20 Tyrone Mine to standards, that that -- that is the same
21 thing as a decision by the agency that the Tyrone Mine
22 is a place of withdrawal of water for present or
23 reasonably foreseeable future use?
24 How do you get from there were certain
25 requirements to do things inside the MMD permit boundary

1 to clean up to standards -- from that to concluding that
2 the entire mine site is a place of withdrawal of water?
3 Is that reflected in the -- in the files?
4 A. It's my testimony that in looking at the
5 30-year body of documents and permitting the Tyrone
6 Mine, that that shows, you know, in general that the
7 Department treated the entire mine as protected. My
8 testimony is not that there was a declaration of some
9 sort in a document, but that that, in practice, is how
10 the Department has been regulating the facility.
11 Q. Well, isn't it the case that the Department
12 has also looked at property ownership and the ability of
13 property owners to control particular areas and that
14 that's been a pretty significant factor in concluding
15 whether a particular location is a place of withdrawal?
16 A. I don't recall the Department looking at
17 ownership as determining the place of withdrawal --
18 Q. And you don't --
19 A. -- in a facility.
20 Q. You don't recall the Department looking at the
21 ability to control access to a particular area as being
22 relevant at all to the -- to the inquiry of whether a
23 place may be a place of withdrawal of water for
24 reasonably foreseeable future use?
25 A. I don't recall that in my -- any of my

1 review --

2 Q. Okay.

3 A. -- or practice.

4 Q. And do you agree with Mr. Olson that property

5 ownership is basically irrelevant to the place of

6 withdrawal question?

7 A. Yes.

8 MR. BUTZIER: Madam Chair, this may be a good

9 time for a break, because I'm going to get some exhibits

10 out and pass them out.

11 MS. PADILLA: Thank you.

12 MR. BUTZIER: I don't know if you want to take

13 a break or if you want to plow ahead, but --

14 MS. PADILLA: No. I think it's a good time

15 for a break. Thank you. I didn't want to interrupt

16 you, and I was -- I appreciate you bringing that up.

17 MR. BUTZIER: Okay.

18 MS. PADILLA: I think we'll take about a

19 10-minute break.

20 (Proceedings in recess from 10:18 a.m. to

21 10:34 a.m.)

22 MS. PADILLA: Okay. I think we're all back

23 from a much needed break, so why don't we continue.

24 Mr. Butzier, if you'd like to continue.

25 MR. BUTZIER: Thank you, Madam Chair.

1 And I just wanted to make sure everybody got a
2 copy of both my bound exhibits that I'm going to be
3 addressing with this witness.
4 MS. PADILLA: I think everyone received a
5 copy.
6 Did everyone receive a copy of the exhibits
7 that were handed out?
8 Okay.
9 MR. BUTZIER: Thank you, Madam Chair.
10 MS. PADILLA: Thank you.
11 Q. (BY MR. BUTZIER) Ms. Menetrey, I've put in
12 front of you Tyrone/Remand Exhibit 920 (sic), which is a
13 paper that Commissioner Goad wrote back in 1982.
14 Do you have that in front of you?
15 A. Yes.
16 Q. And I'm not -- I want to assure Commissioner
17 Goad I'm not offering this to try to make Commissioner
18 Goad feel uncomfortable at all, I just wanted to address
19 some of the issues that have come up relating to your
20 testimony.
21 And in particular, I draw your attention to
22 12 -- page 12 of that exhibit.
23 Well, first of all, let me -- let me just turn
24 back to the cover page.
25 Does this appear to be a paper that was

1 prevented by -- presented by Ms. Goad to The Sixth
2 National Groundwater Quality Symposium in Atlanta,
3 Georgia, in 1982?
4 MS. FOX: Objection. I don't think this
5 witness can lay foundation for this paper unless she is
6 familiar with it.
7 MR. BUTZIER: I'm just asking if she -- if
8 this -- if that's what this appears to be.
9 MS. FOX: Well, it says what it says, but she
10 can't lay foundation for a paper --
11 MR. BUTZIER: Okay.
12 MS. FOX: -- she's not familiar with.
13 Q. (BY MR. BUTZIER) I'd like you to turn to page
14 12, and do you see the highlighting that I've provided
15 on page 12?
16 A. Yes.
17 Q. Could you go ahead and read the highlighted
18 portions on page 12 into the record, please?
19 A. "In order to be approved a discharge plan must
20 demonstrate either that the discharge will not affect
21 groundwater with a TDS of 10,000 milligrams per liter or
22 less; or that the discharge will not cause standards to
23 be violated or a toxic pollutant to be present at any
24 place of present or foreseeable future use of the
25 groundwater."

1 "Almost any location in the state is
2 considered a place of foreseeable future use unless the
3 discharger can demonstrate that he can control the
4 future well drilling in that location for as long as
5 contamination from his discharge may persist there.
6 Private wells as well as public water supplies are
7 included in present or foreseeable future use and are
8 protected."
9 Q. Now, in particular with respect to the second
10 highlighted portion that you just read and Ms. Goad's
11 mention of a discharger's demonstration that he can
12 control the future well drilling in that location for as
13 long as contamination from his discharge may persist
14 there, is that -- is that kind of showing consistent
15 with your understanding of the kind of showing that the
16 Department historically would accept in concluding that
17 a place is not a place of withdrawal of water for
18 present or reasonably foreseeable future use?
19 A. Well, I can't think of any circumstance where
20 this -- except for sitting here today at this hearing,
21 that this was offered up as a demonstration.
22 Q. Okay.
23 Have you had -- in your tenure with the
24 agency, with the Groundwater Quality Bureau, have you
25 had any discussions with Commissioner Goad or others

1 concerning the kind of showing that a discharger might
2 make relating to controlling the future well drilling of
3 particular locations?
4 A. I can't recall any -- I can't recall any such
5 discussions.
6 Q. And your testimony is that this -- this
7 subject just never came up?
8 A. If it came up, I am -- was not familiar with
9 the circumstances.
10 Q. And your testimony today is that somebody's
11 landownership and ability to control a particular site
12 is irrelevant to the place of withdrawal that this
13 Commission must undertake? Is that the agency's
14 position?
15 A. Yes.
16 Q. Referring now to the larger set of
17 documents -- and I don't think this will take long. It
18 looks more intimidating in size than it really is. This
19 is -- I'm referring to Tyrone/Remand Exhibit 921, and
20 I'd like you to turn -- it's tabbed 1 through 24 on the
21 side, and I'd like you to turn to tab 1, please.
22 Do you recognize this document?
23 A. Yes.
24 Q. Am I correct that this is basically day one of
25 Phelps Dodge Tyrone's submissions to the agency under

1 the discharge plan program that was adopted in the
2 regulations that became effective in 1977?
3 A. By day one, I'm not sure --
4 Q. Is this the very first letter in which Phelps
5 Dodge Tyrone submitted materials to the agency in 1978,
6 if you know?
7 A. There are other materials in the record that
8 are earlier, I think, in anticipation of the
9 regulations, but in terms of -- but this is definitely
10 one of the earliest documents.
11 Q. And this May 8th, 1978, document is identified
12 down in the right-hand corner as part of the
13 administrative record, document A-4, correct?
14 A. That's correct.
15 Q. And so this is a document that's in the -- in
16 the operational discharge plan files at the agency,
17 correct?
18 A. That's correct.
19 Q. Is this letter a letter that submits the
20 initial discharge plan, DP-27, for the Mangas Valley and
21 Pipeline Draw?
22 A. That's correct.
23 Q. And I'd like to draw your attention to the
24 highlighted portions, the third and fourth paragraphs.
25 Is my understanding correct that these

1 statements in the third and fourth paragraph themselves
2 don't actually refer to the Mangas Valley discharge plan
3 submission but relate to submissions from Tyrone?
4 Let me just -- let me do it another way.
5 Why don't you go ahead and read the third
6 paragraph into the record, please.
7 A. Excuse me. "Phelps Dodge intends, in the near
8 future, to drill a well in the southwest quarter of
9 Section 35, Township 19 South, Range 14 West. The water
10 pumped from this well will be used for industrial and
11 other purposes. This well will be located in the Oak
12 Grove drainage, downgradient from and approximately 4.5
13 miles from the leach area."
14 Q. Do you know what that -- what wells that's
15 referring to, that statement?
16 A. Which well --
17 Q. That paragraph?
18 A. Are you asking if I know the precise location
19 of that well?
20 Q. Are those -- is that well that's referred to
21 in that paragraph one of the wells that are -- that are
22 down the Oak Grove drainage some -- quite some distance
23 from the MMD permit boundary?
24 A. I don't recall exactly where this well is.
25 Q. Okay.

1 And could you read the next paragraph, please?
2 A. "Phelps Dodge proposes to monitor the quality
3 of the water from this well on a regular basis. In the
4 unlikely event that any seepage develops from the leach
5 area in the future, it will be detected at this well.
6 Pumping of this well will then intercept any flow
7 downstream in the Oak Grove drainage before it can reach
8 a subsequent user.
9 "Since Phelps Dodge owns all the land in the
10 Oak Grove drainage down to San Vicente Arroyo, the
11 nearest possible subsequent user would be a minimum of
12 five miles from the well or approximately ten miles from
13 the leach area."
14 Q. What is your understanding when this letter
15 refers to the nearest possible subsequent user? What is
16 your understanding of what that term might mean?
17 A. I -- I really don't exactly know what that
18 term means. I could --
19 Q. Okay.
20 A. -- speculate that -- but --
21 Q. Okay. Well --
22 A. It could mean any number of things.
23 Q. Am I correct that in the two paragraphs you
24 just read the reference to the Oak Grove drainage is a
25 reference to the southeastern direction of the mine

1 site?
2 A. Yes. That's -- that's correct.
3 Q. Looking at your Exhibit 13?
4 A. Yes.
5 Q. And am I also correct that what's actually
6 submitted with this letter is a discharge plan for -- at
7 least what it says in the first sentence is that a
8 discharge plan is being sent for the Mangas Valley and
9 Pipeline Draw, which is up to the northwest end of the
10 mine; is that correct?
11 A. That's correct.
12 Q. Okay.
13 I'd like to have you turn to -- to the second
14 document, please, tab 2.
15 Is this a 1978 submission by Tyrone of a
16 discharge plan for the tailings ponds, collection ponds
17 and oxidation ponds in the Mangas Valley?
18 A. Yes.
19 Q. And is this the original discharge plan, as
20 far as you understand, that was submitted by Tyrone
21 which ultimately resulted in Discharge Plan 27?
22 A. Yes, it is.
23 Q. And you indicated in your testimony yesterday
24 that you were, for a time at least, the discharge
25 lead -- or excuse me -- the permit lead at the agency

1 for Discharge Plan 27; is that correct?
2 A. Yes, that's correct.
3 Q. Is this a document that you reviewed at any
4 time during your time of serving as the discharge -- or
5 excuse me -- the permit lead at the agency? Is this
6 something that you reviewed when you were discharge --
7 excuse me -- permit lead at the agency?
8 A. Yes, I did.
9 Q. And did you also review this document before
10 providing your written testimony about the 30-year
11 Tyrone history in this case?
12 A. Yes, I did.
13 Q. All right.
14 I'd like to turn to the first highlighted
15 page, which is the page that has Introduction at the
16 top.
17 Do you see where I'm looking?
18 A. Yes, I do.
19 Q. And could you go ahead and read that first
20 highlighted paragraph into the record?
21 A. "This plan shows that groundwater at the point
22 of withdrawal for present or reasonably foreseeable
23 future use meets the conditions as set forth in Sections
24 3-103, 3103.A" -- excuse me, I forgot the "(first
25 paragraph)" after 3.103 -- "3103.A, 3-103.B and 3-103.C

1 of the New Mexico Groundwater Regulations. Therefore,
2 the plan should be approved because it meets the
3 conditions as set forth in Section 3-109.C.3 of the
4 Regulations."
5 Q. Okay.
6 And does the next paragraph go on to basically
7 provide Tyrone's summary that the discharge plan being
8 submitted will not result in either concentrations in
9 excess of the standards of Section 3-103 or the presence
10 of toxic pollutants at any place of withdrawal of water
11 for present or reasonably foreseeable future use?
12 A. Yes.
13 Q. Now, I'd like you to turn to -- and some
14 portions of the facilities being permitted at this time
15 in 1978 already were in existence on the ground; is that
16 correct?
17 A. That's correct.
18 Q. I'd like you to turn to the page that's
19 numbered 2, which is the very next page, the portions
20 I've highlighted where the discharge plan submitted by
21 Tyrone refers to seepage quantity.
22 Do you see where I'm looking?
23 A. Yes.
24 Q. And is that -- is that section of this
25 discharge plan submission a section which identifies

1 seepage of -- tailings pond seepage into groundwater
2 based on certain acre-feet?
3 A. It appears to. Yes.
4 Q. And isn't it correct that this document is
5 telling at the time the Environmental Improvement
6 Division that in years 1973, for example, 5,260
7 acre-feet of tailings pond seepage was going into
8 groundwater?
9 A. That's correct.
10 Q. And the same for the other years listed, that
11 in those other years, as much as, in one year, 1977,
12 6,118 acre-feet of tailings pond seepage was making its
13 way to groundwater at this site; is that correct?
14 A. Yes.
15 Q. And on page 3, the portion at the top, is that
16 indicating that the -- the potential contamination that
17 is being discharged is high in fluoride and occasionally
18 high in pH and molybdenum?
19 A. Yes. It indicates that those are the
20 parameters in the discharge that --
21 Q. So --
22 A. -- occasionally exceed --
23 Q. So would you agree with me --
24 MS. FOX: If she could answer.
25 MR. BUTZIER: I'm sorry.

1 Q. Were you finished?
2 A. Yes.
3 THE REPORTER: State it again.
4 MS. MENETREY: That these parameters were
5 those that occasionally exceeded standards in the
6 discharge.
7 Q. (BY MR. BUTZIER) Well, the ones that were
8 occasionally were the pH and the molybdenum, correct?
9 A. Yes.
10 Q. And it's indicating that -- that it will be
11 higher in fluoride and doesn't limit that to
12 occasionally, correct?
13 A. That's true.
14 Q. And in the next highlighted portion, does this
15 discharge plan, submitted in 1980 -- '78 by Tyrone,
16 indicate that the tailings ponds are located on natural
17 drainages to the Mangas Valley?
18 A. Yes, it does.
19 Q. And it goes ahead and repeats essentially in
20 text form the information provided in the table on page
21 2, namely the number of acre-feet of seepage quantity
22 per year; is that correct?
23 A. Yes.
24 Q. And then there's another portion that's
25 highlighted further down the page, page 3, that talks

1 about the decant return water sumps and the seepage rate
2 that is occurring from -- from that facility; is that
3 correct?
4 A. Yes.
5 Q. And if you turn to page 5, under the heading
6 Groundwater Discharge Sites, what is your
7 understanding -- go ahead and take a look at that and
8 then tell me what your understanding is of what Tyrone
9 was providing to the agency in 1978.
10 A. Just -- are you asking me to look at
11 continuing onto page 6?
12 Q. Correct.
13 A. Okay.
14 Q. And if you'd like to just read it, that's
15 fine, or if you'd like to look at it and then give me
16 your understanding of what information is being
17 presented to the agency, I'll take either approach.
18 A. I'll go ahead and read it -- I mean look at
19 it.
20 Q. Okay.
21 A. Well, it appears that Phelps Dodge is
22 providing the location of wells within one mile of the
23 outside perimeters of each of the tailing impoundments
24 or associated facilities to the tailing impoundments.
25 Q. And on page 3, the document actually refers to

1 the outside perimeter of discharge sites; isn't that
2 correct?
3 MS. FOX: Where is that?
4 MR. BUTZIER: On the bottom of page 5.
5 MS. FOX: Oh, I thought you said page 3.
6 MS. MENETREY: That's what I thought, too.
7 MR. BUTZIER: Oh, I may have. I apologize if
8 I did.
9 MS. MENETREY: I'm sorry. Could you repeat
10 the question?
11 Q. (BY MR. BUTZIER) Tyrone's discharge plan
12 document specifically refers on page 5, in the
13 highlighted portion, to the outside -- the wells --
14 wells within one mile of the outside perimeters of the
15 discharge site; isn't that correct?
16 A. Yes.
17 Q. And discharge site is the same term we
18 referred to earlier that is defined in the Water Quality
19 Control Commission's Regulations, correct?
20 A. That's correct.
21 Q. And the one mile information outside the
22 perimeter of the discharge site -- is it safe to
23 conclude -- or would you conclude that that is submitted
24 pursuant to regulation 3106C.(2) of the Water Quality
25 Control Commission's Regulations?

1 A. Well, it would appear that the -- that Tyrone
2 was attempting to satisfy that requirement.
3 Q. And the note on page 6 that is highlighted in
4 the discharge plan submission from Tyrone notes that
5 there are probably other wells in the private land north
6 of the Phelps Dodge property line within a one-mile
7 radius of decant return water ponds.
8 Do you see where I'm looking?
9 A. Yes.
10 Q. Okay.
11 And in the portion highlighted on the bottom
12 of page -- page 6, this talks about the groundwater most
13 likely to be affected by the discharges from the
14 tailings ponds.
15 Do you see that?
16 A. Yes.
17 Q. And do you see that it indicates that the
18 groundwater discharge site in this area or the wells
19 most likely to be affected by the discharge are wells
20 10, 11, 12, 13, 14 and 15? Do you see where I'm
21 looking?
22 A. Yes.
23 Q. I'd like you to turn to page 9 of this
24 document, which is a page that begins with the heading
25 Monitoring, and then there's some highlighted portion

about groundwater quality.

Do you see where I'm looking?

A. Yes.

Q. And can you read A under the heading Groundwater Quality?

A. "The monitoring of the quality of the groundwater will be conducted at wells Number 14 and 15."

Q. And do you know where wells 14 and 15 are located in relation to the Tyrone Mine site?

A. Approximately.

Q. And could you please identify that, if you can?

And I can either put up --

A. Well --

Q. -- Mr. Blandford's exhibit or you can do it on Exhibit 13 that you've already referred to, whichever you prefer.

A. If I'm correct, I believe those wells are located at -- near the intersection of the Wind Canyon drainage and Mangas Wash at the -- you know, near the base of the Number 3 Tailing Impoundment.

Q. And is it your understanding that wells -- monitoring wells 14 and 15 are actually outside of the currently delineated MMD permit boundary?

1 A. On this map, they are outside of the boundary.
2 Q. And by this map, you're referring to -- what
3 do we call this? Blandford-5?
4 Am I correct in pointing to wells 14 and 15
5 that were going to be used as monitoring wells for
6 Discharge Plan 27?
7 A. Yes.
8 Q. Okay.
9 A. I believe so.
10 Q. And I'd like to turn now to page 10, and look
11 at paragraph H that's highlighted.
12 Could you go ahead and read that, please, into
13 the record?
14 A. "Given the volume of seepage and the distance
15 to the monitor system, there is no reason to expect
16 contamination to show up after cessation of operations
17 when such contamination has not reached the monitor
18 system prior to cessation of the long-term operations."
19 Q. And does the rest of the highlighted portion
20 on page 11 refer to the contingency plan being offered
21 by Tyrone in 1978?
22 A. Yes.
23 Q. Okay.
24 And I'd like you to go ahead and read, if you
25 would, the first part of the text under Contingency

1 Plan.
2 A. "Subsequent water users will be protected in
3 the following manner:"
4 "Monitoring of wells Number 14 and 15 will be
5 conducted as described previously."
6 "An analysis will be made of the analytical
7 results of the monitoring to detect any increase in the
8 concentration of any of the constituents listed in Table
9 6."
10 "If an increase in the concentration of any of
11 the constituents listed in Table 6 is detected, a rate
12 of increase will be calculated to predict when the
13 concentration of any of the constituents will exceed the
14 standards in Section 3-103."
15 "Phelps Dodge will begin the following upon
16 chemical evidence indicating a consistent increase in
17 concentrations beyond that expected due to normal
18 analytical error and natural geochemical variation in
19 aquifer water quality:"
20 "A feasibility study will be made to determine
21 the method which will be used to prevent harm to
22 subsequent users."
23 Q. And what is -- Ms. Menetrey, what is your
24 understanding of what Phelps Dodge Tyrone was telling
25 the agency in the portion that you just read, which is

1 tab 2 to Tyrone Exhibit 921, page 11?
2 A. Well, what it says is that Phelps Dodge is
3 proposing to monitor wells number 14 and 15 and that
4 their contingency plan proposal is if -- if the
5 constituent concentrations begin to increase in those
6 wells and -- that they will conduct some sort of a study
7 to, you know, determine the fate of the contamination.
8 Q. And --
9 A. And the standards will be exceeded.
10 Q. And specifically to prevent harm to subsequent
11 users, correct?
12 A. That is stated in the contingency plan.
13 Q. So isn't this -- isn't this telling the agency
14 that with respect to the facilities that it's proposing
15 a discharge plan for in the Mangas -- Upper Mangas
16 Valley, that there will be monitoring conducted at this
17 location, at wells number 14 and 15, as depicted on
18 Blandford-5, and that if it looks like there is a change
19 in the trends, that then a study will be conducted to
20 figure out how to protect subsequent users farther on
21 down Mangas Valley?
22 Isn't that what this document is talking
23 about?
24 A. This document is Phelps Dodge's proposal. It
25 doesn't say that subsequent users would be farther down

1 Mangas Valley specifically, but -- but this was Phelps
2 Dodge's proposal at the time.
3 Q. Okay. I'd like you to turn to tab 3 in
4 Exhibit 921, please.
5 Can you identify that document for the record,
6 please?
7 A. This is the letter dated November 9th, 1978,
8 from EID -- let's see -- approving the discharge permit
9 for Mangas Valley.
10 Q. And does the highlighted portion of this
11 November 9, 1978, discharge plan approval letter -- does
12 that specifically refer to the discharge plan submission
13 of the agency -- or of Tyrone rather?
14 A. I believe it does. Let me check the date.
15 Well, there appears to be -- the date on the
16 application in tab number 2 appears to be different than
17 the date referred to in the letter, so --
18 Q. And tab 2 just refers to April, 1978 --
19 A. So I can't -- I can't be absolutely sure from
20 this letter that --
21 Q. Okay.
22 A. -- that is the same document.
23 Q. Well, I'll represent to you that that's my
24 understanding, and if the Department determines to the
25 contrary, I will stand corrected, but -- does this

1 letter also -- let me ask you just a process question.
2 In the early days of the discharge plan
3 program --
4 MS. FOX: Objection.
5 Q. (BY MR. BUTZIER) -- with the agency --
6 MS. FOX: I've got to object to his -- the
7 testimony that he just provided about what his
8 understanding is of this document.
9 MS. PADILLA: Sustained.
10 Q. (BY MR. BUTZIER) Ms. Menetrey, do you know of
11 any other discharge plan submitted by Tyrone that might
12 be referred to as having been received on May 10th,
13 1978, by the agency?
14 A. I can't recall. I don't remember one. I
15 can't recall if there was --
16 Q. Okay.
17 A. -- another submittal that might have referred
18 to.
19 Q. And back in the early days of the discharge
20 plan program, is it the case that typically the approval
21 of a discharge plan would simply come in the form of a
22 letter from the agency referring to various documents,
23 typically including the discharge plan and maybe further
24 clarifying letters? Is that correct?
25 A. That's true. And that didn't mean the

1 Department necessarily agreed with everything that was
2 in those -- those documents, but that is how plans were
3 approved in general under that format.
4 Q. And in particular, this one refers not only to
5 the discharge plan that Tyrone had submitted, but also a
6 couple of letters, correct? September 11 and
7 November 8th, 1978?
8 A. Yes.
9 Q. And the September 11 letter that's referred to
10 in the discharge approval letter at tab 3 appears as tab
11 4, and I'd ask you to turn to tab 4, please.
12 Is the first page of tab 4 a letter from a
13 Phelps Dodge Tyrone manager to the Program Manager of
14 the Water Pollution Control Section of the Environmental
15 Improvement Division?
16 A. Yes.
17 Q. And if you'd go back a couple pages to the
18 page numbered 2 at the top.
19 Again, I'm at tab 4 of Tyrone Exhibit 921, and
20 I'm referring to the page in tab 4 that's numbered
21 number 2.
22 Do you see where I'm looking?
23 A. Wait a minute. Back up.
24 MR. FESMIRE: The third page back numbered
25 number 2.

1 MR. BUTZIER: Thank you.
2 MS. MENETREY: Third page back. Okay.
3 MR. BUTZIER: Behind the letter to Maxine
4 Goad.
5 MS. MENETREY: Yes.
6 Q. (BY MR. BUTZIER) And could you read the
7 highlighted portion of paragraph 3b, please?
8 A. "Phelps Dodge maintains, as stated in the
9 proposed Discharge Plan, that monitoring wells 14 and 15
10 at the proposed frequency will adequately protect
11 subsequent users. Monitoring wells Number 10 through 13
12 at the same frequency is not necessary in this regard."
13 Q. Is it your understanding that this submission,
14 the September 11 submission from Tyrone, most likely
15 responds to a letter that Tyrone received from the
16 agency asking for follow-up information relating to the
17 discharge plan submission?
18 Does it appear to be responding to -- to a
19 letter from the agency?
20 A. Yes, it appears to be.
21 Q. And is this stating Tyrone's position that
22 monitoring wells -- monitoring at wells 14 and 15 as
23 previously proposed would be adequate to protect
24 subsequent users?
25 A. That's what it says in this letter.

1 Q. And is it your understanding that subsequent
2 users would be potential users of groundwater that would
3 be downgradient, in other words, farther up -- farther
4 down Mangas Valley from the locations of monitoring
5 wells 14 and 15?
6 A. Not necessarily. I don't believe there was
7 any -- ever any analysis of what the subsequent users --
8 where they would have been.
9 Q. Okay.
10 And the next highlighted portion on page 4,
11 would you read that, please?
12 A. "Phelps Dodge maintains that the Contingency
13 Plan does provide adequate protection for subsequent
14 users."
15 Q. So again, this is -- this is likely a response
16 to some questions that were raised by the agency,
17 correct?
18 A. Probably, yes.
19 Q. And if you'll turn to -- and the document at
20 tab 4, the September 11, 1978, document, that's one of
21 the two letters referred to in the discharge plan
22 approval letter dated November 9th that appears as -- at
23 tab 3 of this exhibit packet; is that correct?
24 A. Yes. It appears to be.
25 Q. And at tab 5, we have the other letter that's

1 referred to in the discharge plan approval letter, which
2 is the November 8th, 1978, letter, again from a manager
3 of Tyrone Mine to the program manager at the agency; is
4 that correct?
5 A. Yes.
6 Q. And if you'd like, you could take a minute to
7 look at that, but I don't think -- I didn't find it
8 particularly relevant or -- I didn't find it to change
9 anything about the prior submissions as to the
10 monitoring wells, the contingency plan or the protection
11 of subsequent users.
12 Do you see that? Would you agree with that?
13 A. Yes. It appears it has to do with water level
14 measurements.
15 Q. Okay.
16 So taking Exhibits -- Exhibits 2, which is the
17 discharge plan submission, 3, which is the discharge
18 plan approval, 4, which is the letter to Maxine Goad
19 responding to some questions from the agency, and 5,
20 which is the letter that you just referred to as
21 addressing water depth issues, let's talk about -- let's
22 talk about what was -- what was being approved in this
23 instance.
24 Am I correct that this approval of DP-27,
25 which was the very first -- well, I don't know if it was

1 the first approval, but it was the earliest discharge
2 plan submission.
3 Am I correct that this discharge plan approval
4 allows seepage to occur to groundwater beneath the
5 tailings disposal facility and the water decant facility
6 and that that's set forth in the plan and that's
7 understood by the agency and that's approved? Would you
8 agree with that?
9 A. Yes. Certainly there's many facilities,
10 especially unlined facilities, where seepage is part of
11 the discharge. It's -- it happens as a consequence.
12 Q. Okay.
13 And am I also correct in understanding from
14 this sequence of documents that Phelps Dodge Tyrone
15 satisfied the agency that the actual location of the
16 facilities were not locations where groundwater needed
17 to be protected, as you have used that term?
18 A. No. I don't agree that -- that that was the
19 measure of satisfying the agency. At the time that this
20 permit was approved, it's very important to note that
21 there were several wells in the valley, but none of them
22 showed any contamination above water quality standards,
23 regardless of all the seepage that had gone on for eight
24 years.
25 And so you really have to take yourself back

1 in time, not look at things as they are now, but how
2 they were then. There was no exceedances.
3 And again, not all the documents associated
4 with the discharge plan approval are in this packet, but
5 there were certainly many representations by Tyrone that
6 there was absolutely no expectations that groundwater
7 standards would be exceeded within the Mangas Valley
8 monitor wells.
9 Now, this is a very early discharge permit --
10 or discharge plan. The regulations were extremely
11 recent. And there's no question that the very early
12 permit applications -- or I guess discharge plans is
13 what I'll call them, because we have permits now -- were
14 definitely fairly weak in the monitoring and the
15 contingency aspects.
16 And that's an area that we've evolved
17 dramatically in -- I would say over the last 30 years.
18 But at that time, you know, looking at the permit, the
19 Department was satisfied that groundwater standards
20 would not be exceeded. And that's my --
21 Q. And is it your testimony --
22 MS. FOX: Let her finish.
23 MR. BUTZIER: I'm sorry.
24 Q. If I didn't let you finish, go ahead and
25 finish.

1 A. I think I'm done. I lost my train of thought
2 there.
3 Q. Sorry.
4 Would you -- Tannis, would you like us to see
5 where she was on the record and have her finish or --
6 MS. FOX: See if it -- yeah.
7 MR. BUTZIER: Okay.
8 MS. FOX: I mean, you did -- her voice trails
9 off, and then you cut her off, and you just need to be a
10 little careful of that, please.
11 MR. BUTZIER: Cheryl, could we go back in the
12 transcript and read her last answer, please?
13 (Record read.)
14 MS. MENETREY: Ah. I guess I did stop
15 midpoint there.
16 So I think that as a whole, that when the
17 Department was looking at this permit, they thought that
18 standards would be met, and it didn't relate to that
19 there were not places of withdrawal for wells closer to
20 impoundments than wells 14 and 15.
21 You know, certainly within a couple of years
22 on this particular permit, even though those wells 14
23 and 15 were the wells that were monitored, there were
24 several other wells in the valley which were also being
25 monitored by Phelps Dodge, and I think within a couple

1 of years of this permit approval, there were some
2 elevated concentrations of various contaminants.
3 And if you continue to look at the
4 correspondence, it's clear that the Department was very
5 concerned about the -- that this contingency plan
6 proposed in this discharge plan was inadequate and --
7 and you see a chain of events where it was tightened up
8 quite a bit.
9 Q. (BY MR. BUTZIER) So is it your testimony that
10 all of these references to protecting subsequent users
11 and submitting a plan that will meet standards at places
12 of withdrawal of water for present or reasonably
13 foreseeable future use -- that those were essentially
14 ignored by the agency and that the discharge plan was
15 approved with the agency understanding that beneath the
16 facilities where the seepages were going to occur were
17 places where standards had to be met? Is that your
18 testimony?
19 A. I wouldn't want to imply that the Department
20 simply ignored any of the -- those sorts of statements
21 in the discharge plan application.
22 It was very common in discharge plan
23 applications from Tyrone that there would be statements
24 regarding so-called subsequent users, but I don't
25 believe there's anything in the record where there was

1 discussion or confirmation or affirmation of where these
2 subsequent users would be, or any determination in that
3 regard.
4 I believe that the Department -- certainly
5 it's been my experience -- looks at a discharge plan
6 application and really is making sure that they
7 believe -- or that it believes that the requirements of
8 the regulations have been met by the plan. And that
9 does not mean that if the plan was approved, that there
10 was agreement with all of the statements that were made
11 by an applicant in the plan.
12 And so my -- you know, looking at the general
13 course of permitting on DP-27, yeah, I believe that the
14 Department expected for standards to be met within
15 Mangas Valley.
16 Q. Including immediately -- your testimony is
17 including immediately beneath the facility where the
18 seepage was to occur, correct?
19 A. The general course of conduct under -- over
20 permitting this facility required that standards be met
21 underneath the tailing impoundments.
22 Q. And are you referring to specific documents
23 that you recall seeing in the administrative record to
24 that effect?
25 A. Well, certainly the more recent correspondence

1 reflects that more, but without -- I mean, again,
2 there's so many documents that I don't have all the
3 documents memorized.
4 But I certainly refer -- or refer -- I recall
5 that -- in the late '80s, I recall a document where
6 there was a letter from the Department making it very
7 clear that if standards were exceeded at points below --
8 and when I say below, I'm saying, you know, upgradient
9 in the valley from wells 14 and 15 -- that if there were
10 exceedances, that those need to be returned to
11 groundwater standards.
12 Q. Okay.
13 A. So I think there's a lot of documents there --
14 Q. Give me the high sign.
15 A. -- that clarify -- that add -- I'm sorry,
16 what's going on -- that add clarification to that.
17 You know, I can't stress it enough. These
18 early documents were often very vague. And I
19 remember -- in fact, I think it was in 1983 -- that
20 whoever -- I think it was Albert Dye was reviewing this
21 and made comment that this was incredibly vague -- and I
22 don't want to say incredibly was a quote, but that it
23 was very vague, and that clearly, you know, the
24 Department couldn't even really tell what would happen
25 if standards were exceeded in the valley.

1 So I just wanted to make that comment.
2 Q. Okay.
3 And let's turn to the next document in the
4 packet, which is tab 6.
5 Is that a memorandum from Mr. Charles Nylander
6 to Ms. Maxine Goad, the Program Manager for Permits and
7 Regulations Unit?
8 A. Yes, it is.
9 Q. And could you read, please, the first
10 highlighted portion of the first paragraph in that
11 document?
12 A. "I have completed a technical review of the
13 above referenced discharge plan received May 10th, 1978,
14 and the additional information received from Phelps
15 Dodge Corporation and dated September 11th, 1978 and
16 November 8th, 1978. This plan adequately shows that
17 groundwater at the point or" -- I believe it's supposed
18 to say of -- "withdrawal for present or reasonably
19 foreseeable future use meets the condition set forth in
20 Section 3-103 (first paragraph), 3-103A., 3-103B. and
21 3-103C. of the New Mexico Water Quality Control
22 Commission regulations."
23 Q. And apart from what you've just discussed in
24 your answer previously about some -- some thought
25 processes that occurred in 1983, do you know what

1 Mr. Nylander was referring to when he said in the
2 portion you just read that the plan adequately shows the
3 groundwater at the point of -- or withdrawal for present
4 or reasonably foreseeable future use meets the
5 conditions set forth in the sections referenced?
6 Do you have an understanding of what -- what
7 he meant by that?
8 A. Well, it's not clear in this memorandum,
9 because at the time that this was written, there were no
10 groundwater exceedances in -- associated with the
11 tailing impoundments. And so this memorandum does not
12 define a particular point of withdrawal.
13 Q. And it's your --
14 A. So could it --
15 Q. Sorry.
16 A. I'm sorry.
17 I guess it could have been anywhere. It
18 doesn't -- it doesn't state in this memorandum.
19 Q. And it's your testimony that never in the
20 30-year history did the Department, in fact, define a
21 place of withdrawal for purposes of review and approval
22 of a discharge plan; is that correct?
23 A. I have -- do not recall that ever being
24 defined.
25 Q. Now, let's turn to tab 7 in Tyrone

1 Exhibit 921.

2 Is this a letter that also relates to

3 Discharge Plan 27?

4 A. Yes.

5 Q. And in the first paragraph -- this is a

6 June 8th, 1984, letter renewing DP-27; is that correct?

7 A. Yes.

8 Q. And am I correct that the first paragraph of

9 this letter again refers to the information and material

10 submitted as part of the original discharge plan

11 approved November 9th, 1978, which is a reference to the

12 letter at tab 3 of Tyrone 921?

13 A. Yes.

14 Q. And again, is that pretty much what the --

15 what the practice was in the mid 1980s, that as

16 discharge plans were renewed, there were references back

17 to the materials that were submitted by the proponent of

18 the discharge plan?

19 A. Yes. That's correct. That is the general

20 process.

21 Q. Okay.

22 Now, you talked about Mr. Albert Dye and

23 some -- some background, I think, related to 1983.

24 Let's turn to tab 8.

25 Is this a letter to the same Albert Dye that

1 you were referring to?
2 A. Yes.
3 Q. And in the first highlighted part of this,
4 does this appear to be a Tyrone letter responding to an
5 Albert Dye letter of August 5th, 1983, that relates to
6 the renewal we just looked at --
7 A. Yes.
8 Q. -- for Discharge Plan 27?
9 A. Yes.
10 Q. And in the highlighted part of the bottom of
11 that page, could you read that into the record, please?
12 A. "The quantity of seepage from the tailing
13 ponds is based upon an input-output analysis. The
14 formula used to calculate tailing pond seepage is
15 approved by the State Engineer and the results are sent
16 to his office on a monthly basis on the form that was
17 attached to the original Mangas Valley Discharge Plan
18 submittal."
19 Q. And on page 2 of the document at tab 8 of this
20 packet, could you read the highlighted portions at
21 paragraph 4?
22 A. "A map showing the property lines of Phelps
23 Dodge Corporation and its subsidiaries in the Mangas
24 Valley is enclosed with this letter. Other property
25 owners in this area are outlined in yellow on the map."

1 Q. Now, just as a side comment, this letter
2 provided a map of property lines of Phelps Dodge
3 Corporation and its subsidiaries in the Mangas Valley.
4 And I'm recalling Mr. Olson's testimony that
5 he was learning for the first time that Phelps Dodge
6 Corporation -- Phelps Dodge Tyrone didn't actually own
7 all the properties at this site.
8 Were you also hearing that for the first time
9 when that was discussed in Mr. Mohr's and Mr. Shelley's
10 testimony?
11 A. No. I knew that there were other subsidiaries
12 that had ownership out there, as well as the fact that
13 there's subsurface land or mineral rights that are also
14 owned in Mangas Valley by the State Land Office, so --
15 so I was aware that --
16 Q. And institutionally --
17 A. -- there was some other ownership.
18 Q. I'm sorry.
19 And institutionally the agency was aware since
20 at least September 6th, 1983, or approximately
21 September 6th, 1983, that Phelps Dodge and subsidiaries
22 owned -- Phelps Dodge Corporation, the parent, and
23 subsidiaries of the corporation owned property at this
24 site, correct?
25 A. Yes. I think this was a long time ago, and

1 the degree of recollection is -- you know, I certainly
2 was refreshed on this issue through this hearing.
3 Q. Now, let's look at page 3 of the September 6
4 letter to Mr. Dye, which is tab 8 of Tyrone Exhibit 921.
5 Could you read the highlighted portion on page
6 3, please?
7 A. "We believe that this monitoring system gives
8 good coverage of the Mangas Valley and should allow an
9 early warning of any groundwater quality problems from
10 any source."
11 Q. And the next paragraph?
12 A. "We believe that our contingency plan is still
13 an effective means to protect the groundwater in the
14 Mangas Valley. Although no one method is specified in
15 the plan to prevent harm to subsequent users, we have
16 always considered the interception of a seepage plume to
17 be technically feasible in the Mangas Valley.
18 "Mitigative actions in this area are not
19 likely to be needed because the natural chemical and
20 physical processes of sorption, dilution and dispersion
21 in combination with the quality of the effluent have
22 proven to be generally very effective in preventing
23 lasting effects on the Mangas Valley groundwater system
24 by the tailing ponds."
25 Q. So is it your understanding that Tyrone was

1 telling the agency that if a seepage plume develops and
2 is identified by the monitoring wells for this facility,
3 that it will be able to take mitigative actions, but
4 that probably they won't be needed because of natural
5 and chemical processes, including sorption, dilution and
6 dispersion? Is that your understanding of what the
7 agency was telling -- or the company was telling the
8 agency?
9 A. It appears the company was telling the agency
10 yes, that they could potentially install a seepage --
11 well, some sort of seepage interceptor system in the
12 future if it was necessary. But again, were reinforcing
13 there really aren't any problems right now.
14 Q. If you --
15 A. Or at that time. Excuse me.
16 Q. And if you'll turn to the enclosure with the
17 letter at tab 8. If you'd take a look at that for a
18 minute, and in particular the highlighted figures in
19 that table.
20 Am I correct in understanding that this
21 submission to the agency from Tyrone identifies
22 acre-feet of seepage from various facilities including
23 dam 1, dam 2, dam 3, dam 1X and dam 3X for the years
24 1978 to 1983?
25 A. It appears to. Yes.

1 Q. Okay.
2 And it -- and it's referring to seepage from
3 those facilities to groundwater; isn't that correct? If
4 you know.
5 A. I don't know if all of that seepage went to
6 groundwater, but certainly from the ponds.
7 Q. And a lot of the seepages identified on this
8 table occurred after the original approval of Discharge
9 Plan 27 approved on November 9th, 1978; isn't that
10 correct?
11 A. Yes.
12 Q. And notwithstanding this information, the
13 agency approved the renewal of discharge plan DP-27 on
14 June 8th, 1984, as reflected at tab 7; isn't that
15 correct?
16 A. That's correct.
17 Q. All right. Let's turn to tab 9 in Tyrone 921.
18 Can you identify that document, please?
19 A. It's a 19 -- a letter from EID dated
20 August 5th, 1983, to Richard E. Rhoades, the Manager of
21 Phelps Dodge Corporation, regarding the Mangas Valley
22 discharge plan.
23 Q. And does this letter appear to request certain
24 information from Tyrone in the context of the agency
25 considering whether to review DP-27 in the 1983 time

1 frame?

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

3 Q. Does this document appear to be a letter from

4 Mr. Albert Dye, dated August 5th, 1983, to Phelps Dodge

5 Tyrone requesting certain information in connection with

6 its review of Tyrone's renewal application resulting in

7 a renewal in the 1983 time frame?

8 A. Yes.

9 Q. Okay.

10 And in paragraph 2 of the August 5th, 1983,

11 letter, I've highlighted some text there, and could you

12 go ahead and read that into the record, please?

13 A. "In reviewing the chemical and water level

14 information that we have in our files, it is sometimes

15 difficult to understand the reasons for fluctuations in

16 groundwater quality and static water levels without

17 knowing which of the tailings dams were in operation at

18 the time the groundwater data was collected.

19 "Therefore, a schedule that shows dates of

20 operation of the various dams over the past five years,

21 the approximate amount of fluids disposed of and the

22 estimated amount of seepage from each dam is requested

23 to supplement the plan review."

24 Q. Is it your understanding that the information

25 provided by Tyrone in the table that appears as the last

1 page of tab 8, with the September 6th letter, is
2 responsive to this request from Albert Dye on August 5th
3 of 1983?
4 A. It appears to be.
5 Q. And does it -- is it also your
6 understanding -- well, let's refer to paragraph 4 at tab
7 9, again, the Albert Dye, August 5th, 1983, letter.
8 Could you read that into the record, please?
9 A. "Please submit a map that shows Phelps Dodge's
10 (and its subsidiaries) property boundaries in the Mangas
11 Valley drainage system."
12 Q. And is it your understanding that the map
13 referred to in the response letter to Mr. Dye, dated
14 September 6th, which appears at tab 8, paragraph 4,
15 refers to the map showing the property lines that we
16 talked about earlier -- is that responsive to Mr. Dye's
17 request for a map showing property boundaries in the
18 Mangas Valley drainage system?
19 A. It appears that it probably was.
20 Q. Okay.
21 And on the second page of the letter at tab 9,
22 it's a little difficult to read because the copying
23 isn't very good, but could you read the highlighted
24 portion of page 2 of Albert Dye's letter?
25 MS. FOX: Mr. Butzier, is it the copy that's

1 bad, or is it the original document's bad? Because if
2 it's just the copy, maybe you all could provide a more
3 legible copy later?
4 MR. FESMIRE: Thank goodness. I thought it
5 was a hangover.
6 MR. HUTCHINSON: It is.
7 MR. BUTZIER: A hangover or sheer boredom from
8 this line of questioning, I'm not sure which.
9 I don't know the answer to that. But if we
10 have a better copy, we'll provide it.
11 MS. FOX: Thanks.
12 MR. BUTZIER: I think it's -- I'm at least
13 able to read it, and, in fact, if you'd like, I could
14 take a shot at reading that into the record.
15 MS. FOX: Well, it's -- and it's the, you
16 know, rest of the letter, as well, that's not
17 highlighted that's difficult to read.
18 MR. BUTZIER: Well, I'll move on and not ask
19 you specifically about that right now.
20 One more document, and that would be a very
21 logical place to break for lunch, Madam Chair.
22 Is that acceptable?
23 MS. PADILLA: Logical place to break for lunch
24 because --
25 MR. BUTZIER: Because I'm moving from

1 Discharge Plan 27 to other materials.
2 MS. PADILLA: And it would take you -- I mean,
3 you anticipate --
4 MR. BUTZIER: Because I will have more to
5 cover with this witness. Yes.
6 MS. PADILLA: Okay.
7 Okay. Let's continue with this witness.
8 MR. BUTZIER: Okay.
9 Q. Let's turn to tab 10, please, in Tyrone's
10 packet of exhibits labeled Tyrone 921.
11 Do you see where I am?
12 A. Yes.
13 Q. Okay.
14 On page 2 of that letter, which is a letter
15 dated November 29th, 1983, to Albert Dye, the
16 highlighted part in paragraph 5 -- I think you referred
17 earlier in your testimony that over time a more
18 intensive monitoring network was employed in the Mangas
19 Valley.
20 Do you recall that?
21 A. Yes.
22 Q. And does this highlighted portion on page 2 of
23 the letter at tab 10 reflect that Tyrone shares the
24 agency's concern about the existing monitoring system
25 and the fact that it may not detect seepage plumes until

1 they have traveled a considerable distance?
2 A. Well, that's what this letter says. I
3 wouldn't want to say that that mimics the precise
4 concern in the Department, but that's what this letter
5 says.
6 Q. Okay.
7 And on page 3, does -- does the highlighted
8 portion on page 3 reflect that Tyrone is showing a
9 willingness to complete a study and that the time
10 required to complete that study should present no risk
11 to the quality of groundwater in the Mangas Valley
12 considering the results of the monitoring conducted up
13 to the present time and the quality of the effluent?
14 Do you see where I'm reading?
15 A. Yes.
16 Q. And is it your understanding that essentially
17 what the company is saying is that subsequent users on
18 down Mangas Valley should not -- there should be no risk
19 of harm to them while this study is conducted?
20 A. It -- the letter doesn't say anything about
21 harm to -- which I believe you said subsequent users.
22 It just refers to that the study should present no risk
23 to the quality of groundwater in the Mangas Valley.
24 Q. And are you -- are you aware of any documents
25 in the administrative record that are inconsistent with

1 my characterization of what's that -- what Tyrone's
2 telling the agency in that letter?
3 MS. FOX: Could you rephrase that?
4 MR. BUTZIER: Okay.
5 Q. Are you aware of any documents in the record
6 that reflect a different agency understanding than what
7 Tyrone was telling the agency in this letter at tab 10,
8 is that it would conduct a study and there would be no
9 risk to subsequent users on down the Mangas Valley while
10 that study is being conducted?
11 MS. FOX: Objection, misstates her
12 understanding of the letter. She already testified that
13 it doesn't refer to subsequent users.
14 MR. BUTZIER: Okay.
15 Q. But I'm now -- I'm now asking the question of
16 whether you have any documents -- you're aware of any
17 documents in the record that would disabuse me of my
18 understanding that we're talking about subsequent users
19 down the Mangas Valley in this document.
20 A. If -- I guess I'm still a little confused. As
21 I said, I -- I don't see that this letter is addressing
22 subsequent users, unless I missed something.
23 MR. BUTZIER: Madam Chair, I think this would
24 be a good time to break for lunch.
25 MS. PADILLA: Okay. I think it's -- that's

1 probably a good idea. It's about -- it's 12:45 (sic).
2 Why don't we come back at 1 o'clock.
3 MS. FOX: Are we done with this document,
4 then?
5 MR. BUTZIER: I'm finished with that document.
6 Yes.
7 MS. FOX: Thanks.
8 MS. PADILLA: This document.
9 Oh, I'm sorry. It's 11:45. I think we can
10 come back at 12 o'clock.
11 MR. BUTZIER: I'm sorry. I thought it was
12 12:45. I'm happy to continue if you -- if this is not
13 the right time to break. I was looking at the clock --
14 MS. PADILLA: How much longer do you
15 anticipate?
16 MR. BUTZIER: I would say at least -- at least
17 an hour.
18 MS. PADILLA: At least an hour.
19 What's the pleasure of the Commission? Would
20 you like to take a break for lunch?
21 Why don't we take a break for lunch, and we'll
22 come back at 1 o'clock.
23 MR. HUTCHINSON: Public comment?
24 MS. PADILLA: I'm sorry?
25 Oh, thank you.

1 And before we break -- I appreciate the
2 reminder -- is there anyone in the audience that would
3 like to provide any public testimony or public comment
4 at this time?
5 Seeing none, we'll recess until 1 o'clock.
6 Thank you.
7 (Proceedings in recess from 11:45 a.m. to
8 1:06 p.m.)
9 MS. PADILLA: Okay. I think we can reconvene.
10 I hope everyone had a nice lunch. And I think
11 we can pick up where we left off.
12 Mr. Butzier, I think you still had some
13 questions for Ms. Menetrey.
14 MR. BUTZIER: Thank you, Madam Chair.
15 Q. Good afternoon.
16 A. Good afternoon.
17 Q. Ms. Menetrey, I was in Tyrone/Remand
18 Exhibit 921, and I think I finished off with tab 10, and
19 now I'd like to move on to tab 11.
20 And just for the record, this starts to get
21 into documents that relate to Discharge Plan 166.
22 And am I correct, Ms. Menetrey, that you were
23 also the permit lead for a certain time period for
24 Discharge Plan 166?
25 A. Yes, I was.

1 Q. And you familiarized yourself with -- with the
2 operational discharge plan files for 166 before
3 providing your recent testimony in this case?
4 A. Yes, I did.
5 Q. And what was the period of time when you
6 served as the permit lead for Discharge Plan 166?
7 A. It would have been in the time frame between
8 1994 and 2000. I couldn't say that it was -- started
9 immediately. So I don't recall the exact dates. But it
10 would have been within that time period, several years
11 within that time period.
12 Q. And when you became the permit lead, did you
13 undertake to go back and look at the historical record
14 relating to DP-166?
15 A. Yes, I did.
16 Q. Now, would you please take a look at the
17 document at tab 11 of Exhibit 921, and would you please
18 identify that document for the record?
19 A. This is a letter from EID dated July 20th,
20 1981, from -- it's from the Director of the
21 Environmental Improvement Division, approving the
22 discharge plan for DP-166.
23 Q. And again, just so that we can orient
24 ourselves to the site, could you please identify the
25 area that 166 covers?

1 A. Yes.
2 Q. You're looking at Exhibit 13, NMED Exhibit 13.
3 A. Yes. DP-166 covers a large area, including
4 the Main Pit, in the center of the mine, the SX/EW plant
5 to northwest of that, several other open pits, including
6 San Salvador Hill Pit, the Copper Mountain Pit, and also
7 the Number 2 Leach Stockpile. And I believe there's
8 some waste rock piles in that area, as well.
9 Q. And is -- am I correct that this July 20,
10 1981, letter is the original approval of Discharge Plan
11 166?
12 A. Yes, I believe it is.
13 Q. And turning now to tab 12, there's a letter
14 and then an attached proposed discharge plan.
15 Do you see where I'm looking?
16 A. Yes.
17 Q. Is this the submission, to the best of your
18 knowledge, that is referred to in the July 20, 1981,
19 letter where it says "The approved discharge plan
20 consists of the plan received on March 24, 1981," et
21 cetera?
22 A. I -- I believe so.
23 Q. Now, in the document that it -- well, the
24 first document behind tab 12 is a March 23, 1981,
25 letter; is that correct?

1 A. Yes.
2 Q. And that letter describes generally what is
3 being proposed and what is being submitted to the
4 agency, correct?
5 A. That's correct. It's the proposed discharge
6 plan.
7 Q. And in the actual discharge plan that was
8 enclosed with that letter, I'd like you to refer, if you
9 would, to page 3 of the proposed plan.
10 Does the highlighted part of page 3 refer to
11 sites of potential discharge to groundwater?
12 A. Yes. That's what it says.
13 Q. And it's addressing sites that include the
14 Number 2 Leach Dump, the pregnant leach solution sump at
15 the plant site, the pregnant leach solution sump below
16 the dump, a section of the Niagara Tunnel serving as a
17 pregnant leach solution sump and the raffinate solution
18 pond at the plant site? That's what this plan covers,
19 correct? Or that's what -- that's what this plan says
20 are sites of potential discharge to groundwater,
21 correct?
22 A. That's what it says. Yes.
23 Q. And turning to page 4, page 4 indicates in the
24 first highlighted section that the infiltration rate
25 from the Number 2 Leach Dump, the very first item listed

1 on page 3, is estimated to range from approximately
2 1,200 to 1,300 gallons per minute; is that correct?
3 A. That's what it says. Yes.
4 Q. And for the pregnant leach solution pond at
5 the plant site, the highlighted portion says that the
6 seepage quantity at that site will be approximately
7 150,000 gallons per year?
8 A. That's correct. That's what it says.
9 Q. And for the pregnant leach solution pond below
10 the dump, the seepage quantity at this rate will be
11 approximately 1,200,000 gallons per year; is that
12 correct?
13 A. That's correct.
14 Q. Now, on page 5 of the same document, which is
15 tab 12 of Exhibit 921, is the highlighted part a
16 discussion of basically the flow characteristics of the
17 discharges discussed previously in the plan?
18 A. That's -- that's what it says. Yes.
19 Q. And in the very first part of the highlighted
20 paragraph starting with "Pregnant leach solution," could
21 you read that into the record, please?
22 A. "Pregnant leach solution will infiltrate to
23 the groundwater directly underlying the dump from the
24 bottom of the leach dump. Infiltration will occur
25 predominantly through faults and fractures in the rock

1 and, to a lesser extent, through interconnected
2 microfractures in the rock."
3 The next paragraph, as well?
4 Q. Yes, please.
5 A. "The existing groundwater gradient through the
6 leach dump area is to the north. In general,
7 groundwater flows parallel to its gradient. However,
8 over small areas (several hundreds of feet) in a
9 fractured medium, such as exists here, the direction of
10 flow may be dominated by the direction of the fractures.
11 Over large areas, where fractures and faults intersect,
12 the flow direction is dominated by the groundwater
13 gradient. Hence, the expected flow of any leachate
14 intersecting the groundwater is to the north."
15 Q. And then turning to page 7, the highlighted
16 portion at the top, does that refer to -- again to the
17 infiltration rates from the leach dumps?
18 A. Yes, it does.
19 Q. And again it refers to 1,200 to 1,300 gallons
20 per minute of infiltration?
21 A. Yes. That is what is referred to.
22 Q. Okay.
23 Now, the next section of this proposed
24 discharge plan refers to expected concentrations of
25 3-103 contaminants.

1 Do you see where I'm looking?
2 A. Yes, I do.
3 Q. And in that section, including onto the next
4 page, is that a discussion of what the expected
5 concentration of the contaminants being -- infiltrating
6 into groundwater will be?
7 A. I believe that this is a discussion of what
8 the concentration of contaminants would be in the
9 discharge.
10 Q. Okay.
11 A. Not necessarily -- I mean, that's what's
12 described here, not necessarily what would infiltrate
13 into groundwater.
14 Q. Okay.
15 Is there -- well, let's turn to the next --
16 the table on page 8. And I've highlighted three
17 different things, but I'd actually like to draw
18 attention to six things.
19 And the first line that I'd like to have you
20 look at is the copper line, Cu.
21 Do you see where I'm looking?
22 A. Yes.
23 Q. Does that indicate that the concentration of
24 copper in discharge related to the pregnant leach
25 solution, the middle column, is 1,000 parts per million,

1 or milligrams per liter?
2 A. That's what the table says. Yes.
3 Q. And do you know what the 3103 standard for
4 copper is?
5 A. I'm going to refer to the regulations just to
6 make sure that I --
7 Q. Thank you.
8 A. -- get that correct.
9 And the standard is 1 milligram per liter.
10 Q. So this document, then, is a document where
11 Tyrone is telling the agency that it's going -- its
12 pregnant leach solution which is going to discharge into
13 groundwater is 1,000 times above the groundwater
14 standard in 3103 for copper; isn't that correct?
15 A. That's what it says the discharge could
16 potentially contain. It certainly doesn't say that
17 that's necessarily what's going to enter the
18 groundwater.
19 Q. Okay.
20 The next item listed is Fe.
21 Is that iron?
22 A. That's correct.
23 Q. And does that indicate that 1,000 parts per
24 million of iron is in the pregnant leach solution?
25 A. Yes, it does.

1 Q. And do you know what the standard is for iron?
2 A. I'm looking at the regulations, and I see that
3 it is 1 milligram per liter.
4 Q. So again, this is -- this is telling the
5 agency that the pregnant leach solution which is being
6 discharged is 1,000 times above the then existing
7 standard for iron, correct?
8 A. That's correct.
9 Q. And let's talk about the next item on the
10 table.
11 What does that refer to, the Mn?
12 A. Manganese.
13 Q. And does that indicate that there's going to
14 be 1,500 parts per million, or milligrams per liter, in
15 the pregnant leach solution that's going to be
16 discharged from the Number 2 Leach Stockpile?
17 A. Yes, it does.
18 Q. What is the standard for manganese?
19 A. The standard is -- according to the 3103 is
20 .2 milligrams per liter.
21 Q. And has it always -- has the manganese
22 standard always been .2?
23 So point -- let me withdraw --
24 A. I don't recall.
25 Q. Let me withdraw that question.

1 .2 is obviously less than 1 part per million,
2 correct?
3 A. Yes.
4 Q. So this is several times -- what's listed on
5 the table on page 8 for manganese is several thousand
6 times higher than the existing standard, correct?
7 A. That's correct.
8 Q. And why don't you go on and read the parameter
9 and the parts per million for the three that I have
10 highlighted on this table.
11 A. The three that you've highlighted, the first
12 one is sulfate, the concentration predicted in the PLS
13 in the table is 25,000 parts per million, and the
14 raffinate is 27,000 parts per million.
15 The next parameter is total dissolved solids,
16 and the concentration predicted in the PLS is 37,000
17 ppm, and in the raffinate 37,000 ppm.
18 And for -- the next parameter is pH, and for
19 the pregnant leach solution is listed as 2.4, and 1.9
20 for the raffinate.
21 Q. And what -- do you know what the standard is
22 for sulfate?
23 A. It is 6 -- I believe -- I'm -- yes.
24 600 milligrams per liter.
25 Q. Do you know what the standard is for TDS?

1 A. It's 1,000 milligrams per liter.
2 Q. And do you know what the range -- acceptable
3 range for pH is?
4 A. 6 to 9.
5 Q. And you're referring in those -- in this
6 instance to the standards set forth in the 3103
7 standards of the -- of the Water Quality Control
8 Commission?
9 A. Yes. That's what I'm referring to.
10 Q. Okay. Let's look at page 9 in tab 12.
11 Is the highlighted portion there essentially
12 telling the agency that it's the pregnant leach solution
13 that can potentially enter the groundwater?
14 A. That's what -- that's what it says. Yes.
15 Q. And the pregnant leach solution, for example,
16 that's coming from the pregnant leach solution pond we
17 discussed is coming at the rate of approximately 1.2
18 million gallons per year, as reflected on page 4 of this
19 document; isn't that right?
20 A. And where are you looking? Did you say 1.4
21 million --
22 Q. 1.2 million. I'm looking under Pregnant Leach
23 Solution Pond Below the Dump, at the middle of page 4 in
24 the discharge plan, at tab 12 of Tyrone Exhibit 921.
25 A. Yes. That's correct.

1 Q. Now, is it your understanding that a discharge
2 plan in which these volumes of pregnant leach solution,
3 -- with these levels of constituents for copper, iron,
4 manganese, sulfate, TDS and pH, is something that the
5 agency could approve if it believed that the area
6 immediately under the facilities were places of
7 withdrawal of water for present or reasonably
8 foreseeable future use?
9 A. Yes. I -- I do think that the -- the
10 Department could approve a discharge permit for
11 discharges of that concentration if the groundwater
12 underneath is considered a place of withdrawal.
13 Q. And could you explain that, please?
14 A. Well, if -- it's going to be in part based on
15 the demonstrations by the applicant. I mean, clearly,
16 as I said before, when these discharges -- looking back
17 in history, I think the record shows pretty strongly
18 that the -- the contamination that resulted from this
19 discharge was far more than was ever anticipated.
20 You're in a fractured system. You really
21 don't -- you know, there really wasn't a good knowledge
22 about how this particular sort of discharge would impact
23 groundwater.
24 And getting back to your question, I mean,
25 clearly if -- today we know that if we have liners and

1 things like that below stockpiles, that that can, you
2 know, control this sort of source of contamination.
3 These are things that we didn't have as much knowledge
4 about in the past.
5 And certainly, as I said before, Phelps Dodge
6 requested this kind of a discharge for many of the leach
7 stockpiles, and not so much with this early permit
8 application, but with -- certainly with most of the
9 discharge permit applications, was very confident that
10 there would be minimal impacts to groundwater from this
11 very sort of discharge.
12 Q. Is it your testimony that when Discharge Plan
13 166 was approved on July 20th, 1981, that the agency at
14 that time considered the groundwater immediately beneath
15 the pregnant leach solution pond, where 1.2 million
16 gallons per year were being discharged -- that the
17 agency believed that the water beneath that facility was
18 a place of withdrawal of water for present or reasonably
19 foreseeable future use?
20 A. Yes.
21 Q. I'd like to turn a little farther into this
22 document, number 12, tab 12, to the next place where I
23 have highlighting, which is on page 19.
24 Do you see where I'm looking?
25 A. Yes.

1 Q. And could you please read the highlighted
2 portions on page 19 and 20, not including the conclusion
3 on page 20?
4 A. "Contingency Plan.
5 "Subsequent water users will be protected in
6 the following manner:
7 "Monitoring" -- did you say to just read the
8 highlighted --
9 Q. Well, I'm sorry. You can read that whole
10 section.
11 A. It's not all highlighted, that sentence.
12 Q. That's fine.
13 A. "Monitoring of wells 6-4, 6-5, 4-1, 4-2, 4-3,
14 4-4 and 4-5 will be conducted and described -- as
15 described previously."
16 Q. And then paragraph C.
17 A. "An analysis will be made of the analytical
18 results of the monitoring to detect any increase in the
19 concentration of any of the EID-required constituents."
20 Q. Okay. That was paragraph B.
21 Could you go ahead and read paragraph C, which
22 I've highlighted?
23 A. "Phelps Dodge will begin the following upon
24 chemical evidence indicating a consistent increase in
25 concentrations beyond that expected due to normal

1 analytical error and natural geochemical variation in
2 aquifer water quality."
3 Q. And then go ahead and read the four
4 paragraphs, please.
5 A. "A feasibility study will be made to determine
6 the method which will be used to prevent harm to
7 subsequent users."
8 2 -- was --
9 Q. If you'd like, I can go ahead and read it.
10 The second one is, "Based upon the method
11 selected, an engineering study will be conducted to
12 determine how the method will be implemented," correct?
13 A. Yes.
14 Q. The third paragraph -- numbered paragraph
15 says, "Upon completion of the engineering study, any
16 construction required to implement the method will be
17 done," correct?
18 A. Yes.
19 Q. And 4 says, "The scheduling of the above steps
20 1, 2, and 3 will be such that they will be completed,
21 and operation of the method will commence before any
22 subsequent user is harmed," correct?
23 A. Yes, that's correct.
24 Q. So again, is this -- is this document telling
25 the agency that essentially monitoring will be conducted

1 at various locations and that if there are certain
2 increases that various studies will be done to determine
3 how best to prevent harm to subsequent users?
4 A. Well, this is what this contingency plan is
5 proposing, but there were several changes to this --
6 this contingency plan was never actually implemented in
7 practice, and I believe there was other correspondence
8 regarding the contingency plan.
9 Q. Okay.
10 A. But yes, in answer to your question, this is
11 the proposal.
12 Q. And is there -- are you aware of other --
13 other documents in the administrative record that change
14 the basic concept of monitoring and then implementing a
15 contingency plan if certain things show up in the
16 monitoring wells?
17 A. I recall that there is other correspondence in
18 the file. I wouldn't be able to sit here and tell you
19 the dates of those communications.
20 Q. Okay.
21 Let's turn to tab 13, please.
22 Is this a letter from a Phelps Dodge Tyrone
23 manager to Albert Dye dated June 26, 1981?
24 A. Yes, it is.
25 Q. And in the first paragraph of this letter,

1 does it reflect that a meeting was held between Phelps
2 Dodge and agency representatives concerning the Number 2
3 Leach system discharge plan?
4 A. Yes.
5 Q. And go ahead and read the part of that
6 paragraph after the -- after the comma where it starts
7 "the question."
8 Do you see where I'm looking?
9 A. After the comma.
10 Q. "The question was raised by you on which
11 groundwater" --
12 A. Oh, okay.
13 Q. -- "geographically, the proposed plan intends
14 to protect."
15 Do you see where I'm reading?
16 A. Yes.
17 Q. Okay.
18 A. Well, wait a minute. Okay.
19 Q. First paragraph.
20 A. So starting with "In order." Okay. I thought
21 you meant there was a question somehow in there.
22 "In order to clarify this matter, we believe
23 that the discharge plan should protect the groundwater
24 of subsequent users, and that those users are our
25 neighbors using groundwater in the predicted path of

1 contaminant flow from the Number 2 leach system. Since
2 this path of contaminant flow is to the Mangas Valley
3 and since an existing discharge plan covers sources
4 presently discharging to the Mangas Valley flow system,
5 the subsequent users being protected by this plan will
6 also be protected from a discharge from the Number 2
7 leach system. The subsequent users, therefore, are our
8 neighbors to the north in the Mangas Valley.
9 "As the" --
10 Q. So -- if I could stop you there.
11 So looking at Exhibit 13, what's your
12 understanding of what Tyrone is telling the agency is
13 the -- are the subsequent users in the Mangas Valley and
14 the predicted flow of contaminants from the area of the
15 166 discharge site?
16 A. Well, the letter indicates that Phelps Dodge
17 considers subsequent users to be, I guess, users to the
18 north in the Mangas Valley, and at that time,
19 groundwater flow from DP-166 was to the north towards
20 the Mangas Valley.
21 Q. Okay.
22 And could you read the next paragraph of the
23 June 26 letter from the Tyrone manager to Mr. Dye?
24 A. "As the Tyrone Mine is deepened, we wouldn't
25 expect seepage from the leach system to reach the Mangas

1 flow system because of the effect that dewatering the
2 mine will have on intercepting seepage and changing the
3 groundwater gradient to achieve groundwater flow only
4 into the mine."
5 Q. Now, does that paragraph -- do you understand
6 that paragraph to be referring to the open pit capture
7 zone concept that -- essentially that seepage at a
8 certain point -- once the mine is deepened, seepage is
9 going to flow toward the mine rather than down the
10 Mangas Valley?
11 A. Well, certainly Tyrone expected that as they
12 deepened the Main Pit, that groundwater would be -- in
13 the area of the Number 2 Leach Stockpile would begin to
14 flow towards the Main Pit.
15 There was -- perhaps not all of the flow. I
16 mean, that would be a function really of how -- how deep
17 the pit was and -- but -- so I wouldn't say all of it,
18 but at the time it was expected that groundwater would
19 start moving towards the pit.
20 Q. And could you read the next paragraph, please?
21 A. "Our intent relative to the contingency and
22 monitoring sections in the proposed plan was that the
23 monitoring system would only trigger additional
24 monitoring at wells located in the flow system downgrade
25 from the mine. This monitoring will show how the mine

1 dewatering system is operating to prevent contaminant
2 flow past the mine.
3 "Action to protect subsequent users from harm
4 would be made on the same basis of the analyses of
5 samples obtained from wells 14 and 15 in the Mangas
6 Valley. These two wells also trigger the contingency
7 plan contained in the Mangas Valley Discharge Plan. As
8 stated in the plan, we intend to notify the EID of all
9 actions regarding the contingency plan."
10 And this is not a proposal that ended up in --
11 being approved.
12 Q. Is it your understanding, though, that the
13 agency agreed with the concept of a monitoring system
14 that triggers additional monitoring at other locations,
15 and that would also eventually trigger a contingency
16 plan?
17 A. The Department didn't agree with the proposal
18 in this letter, but in terms of does the Department
19 agree with monitoring that could trigger other
20 monitoring, I certainly think that monitoring and the
21 results of monitoring often triggers other monitoring.
22 Q. And often triggers contingency plan work,
23 correct?
24 A. Yes.
25 Q. Contingency plan work that is identified up

1 front in the discharge plan process, correct?
2 A. In -- in most cases, a contingency plan is
3 included in the discharge plan application.
4 Q. Okay.
5 And I'd like to turn to tab 15, and to the
6 second page -- well, is this a March 28th, 1986, letter
7 to Mr. Dye from Richard Rhoades, the manager at Tyrone?
8 A. Yes, it is.
9 Q. And on page 2, I've highlighted a couple of
10 sections.
11 Could you read the first one, please?
12 A. "We believe that elevated concentrations will
13 exist in the groundwater at the wells between the Number
14 2 leach dump and the Main pit for as long as there is
15 seepage from the dump."
16 Q. And so that's an indication by the -- by
17 Tyrone that there will, in fact, be elevated
18 concentrations in groundwater underneath portions of the
19 Tyrone Mine site, correct?
20 A. Well, this letter was written after -- after
21 groundwater contamination was detected in the monitoring
22 wells -- I discussed this in my written testimony -- in
23 the interior of the mine area, and is in response to
24 concerns by the Department -- well, the Department's
25 requirement to clean up that groundwater contamination,

1 so --

2 Q. And the second part that I've highlighted on

3 page 2, could you read that, please?

4 A. "Phelps Dodge intends to dewater the mine to

5 achieve the groundwater gradient necessary to intercept

6 seepage from the Number 2 leach dump for as long as

7 necessary to return the groundwater quality of the wells

8 between the Number 2 leach dump and the mine to

9 preleaching conditions."

10 Q. Now, is it -- is it your understanding that

11 that concept of dewatering the mine to achieve

12 groundwater gradient and intercept seepage and then

13 to -- and to do so for as long as necessary to return to

14 preleaching conditions -- is it your understanding that

15 that was Tyrone's suggestion originally or the agency's

16 suggestion?

17 The reason I ask is on page 14 of your

18 testimony, you refer to a July -- let's see -- a

19 July 13, 1986, letter. I'm on the third line of page 14

20 of your written testimony.

21 Go ahead and read that sentence, if you will.

22 A. "In a," is that where we are?

23 Q. "In a June 13."

24 A. "In a June 13, 1986 letter, the Department

25 informed Tyrone that it must commit to returning the

1 groundwater quality to preoperational water quality 'at
2 the wells between the Number 2'" -- well, quote, "'at
3 the wells between the Number 2 leach dump and the mine
4 and at the wells within the Number 2 leach dump.'"
5 Q. Now, I -- when I first read your testimony, I
6 had the impression that that was a requirement, but this
7 document that we're looking at here at tab 15 of Tyrone
8 921 indicates that that first was suggested and proposed
9 by Phelps Dodge; isn't that correct?
10 A. To -- I don't -- I may be misunderstanding,
11 but I do not believe that the idea to clean up
12 groundwater to standards by dewatering the mine was
13 first suggested by Phelps Dodge.
14 Q. Was that -- is that suggested first by the
15 agency in some document that I haven't seen?
16 A. The agency -- we may be getting confused here,
17 but the agency's requirement was to clean up
18 groundwater -- there's two issues you're talking about.
19 There's the dewatering of the mine, and then there's the
20 cleaning up of the contamination. The cleanup of the
21 contamination was, I believe, the Department's idea
22 first.
23 Q. And was that -- was that because that's what
24 it says in the June 13, 1986, letter, referred to on
25 page 14 of your testimony?

1 A. Without -- I couldn't say that that's the
2 first document that might have asked for that. It may
3 have been, but I can't recall if it was or if it wasn't.
4 Q. Well, in any event, the document at tab 15
5 predates the June 13 letter, does it not? It's a
6 March 28 letter as opposed to a June 13 letter?
7 A. Yes. So there was likely previous
8 correspondence, but not discussed here.
9 Q. Now, is it -- is it your position that --
10 using this as an example, that just because Tyrone in
11 this March 28, 1986, letter indicated that it intend --
12 intended to dewater the mine as long as necessary to
13 return water to preleaching conditions -- is it the
14 agency's position that that's tantamount to conceding
15 that the entire mine site is a place of withdrawal of
16 water for present or reasonably foreseeable future use?
17 A. What I'm trying to demonstrate in my testimony
18 is the general practice of the Department in terms of
19 how the mine was regulated with regard to whether the
20 mine was a place of withdrawal. And by requiring -- the
21 Department would not have required cleanup of the water
22 beneath the Number 2 Leach Stockpile if it was not
23 considered a place of withdrawal.
24 And Phelps Dodge agreed to this requirement.
25 How in Phelps Dodge's -- so, you know -- and they did

1 not appeal the requirement. They agreed to it. So
2 whether or not that would be conceding -- or Phelps
3 Dodge felt that it conceded, I don't -- I don't know.
4 I'm only looking at the record and what did, in fact,
5 happen at the site.
6 Q. In your review of the record, did you find any
7 document in connection with any operational discharge
8 plan that stated the Department's position that water
9 immediately between -- or in -- excuse me -- beneath a
10 portion of the Tyrone Mine facility was water at a place
11 of withdrawal of water for present or reasonably
12 foreseeable future use?
13 That was not very artfully asked, but -- let
14 me try again.
15 Did you find any document where the agency in
16 writing took the position that the mine site itself was
17 a place of withdrawal of water for present or reasonably
18 foreseeable future use?
19 A. In those words in one document, discussing the
20 entire mine site, no. I believe that the -- the record
21 as a whole -- you know, the body of the record as a
22 whole in general is indicative of that the Tyrone Mine
23 was considered a place of withdrawal.
24 Q. Did you, in your review of the Tyrone
25 operational discharge plan files at any time, see a

1 document that took issue with statements -- the multiple
2 statements we've seen in these documents about
3 subsequent users and the fact that the subsequent users
4 were neighbors to the north, down the Mangas Valley?
5 A. I don't recall any documents arguing about the
6 term "subsequent users," but the record -- in almost
7 every permit that I can recall, certainly the majority,
8 Phelps Dodge's initial -- the monitoring plan that would
9 first, you know, be put forth and contingency efforts
10 that would be a result if there was contamination
11 were -- were much farther away from the sources of
12 contamination than what the Department believed was
13 appropriate.
14 And so there was a lot of correspondence and
15 back and forth, and which for some permits, I mean,
16 months or years of discussing wanting monitoring to be
17 brought closer to the source of potential contamination.
18 So that's not arguing necessarily about the
19 term "subsequent user," but it certainly shows that the
20 Department was very concerned with groundwater, you
21 know, at the source and immediately adjacent to the
22 source of contamination.
23 Q. Fair enough.
24 And these documents also reflect that Phelps
25 Dodge was very concerned about water at the source;

1 isn't that correct?
2 A. Which -- which documents?
3 Q. Well, for example, the documents at tab 15,
4 where it indicates that Tyrone intends to dewater the
5 mine and intercept seepage for as long as necessary to
6 return the quality at the wells between the Number 2
7 Leach Dump and the mine to preleaching conditions.
8 That reflects the company shared the concern
9 of the agency about contamination at the site, does it
10 not?
11 A. Well, this letter was written in response to
12 the Department requiring Phelps Dodge to abate the
13 groundwater contamination and come up with a plan for
14 abating the contamination at the leach stockpile.
15 Q. And it's your --
16 A. I --
17 MS. FOX: Hey --
18 Q. (BY MR. BUTZIER) Were you finished?
19 A. I certainly wouldn't want to say that Phelps
20 Dodge wasn't concerned. I'm just saying that this
21 letter is in response to the Department requiring that
22 they clean up the contamination.
23 Q. And the reason the Department was requiring
24 the cleanup of contamination, in your opinion, is
25 because the Department viewed all groundwater at the

1 site was a place of withdrawal of water for present or
2 reasonably foreseeable future use?
3 A. Yes.
4 Q. Okay.
5 Did you, in your review before preparing your
6 testimony in this case -- did you review the discharge
7 plan file for Discharge Plan 286?
8 A. Yes. I didn't -- I reviewed the majority of
9 the file, most of the file.
10 Q. And could you identify on NMED Exhibit 13 the
11 area covered by 286?
12 A. Again, that's the Number 3 Leach Stockpile
13 system, located at the northern portion of the main mine
14 complex.
15 Q. And actually, your Exhibit 13 identifies that
16 as the 3A system, correct?
17 A. That's correct.
18 Q. Could you explain why you're now referring to
19 that as the Number 3 system?
20 A. It -- that leach stockpile used to be referred
21 to as the Number 3 Leach system, and over time, at
22 several of these leach stockpiles or waste rock piles,
23 Tyrone has changed, you know, the terminology here and
24 there. And so that's -- but the discharge permit, I
25 believe, still refers to it as the Number 3 Leach

1 system, even though the mine may refer to the piles a
2 little bit differently.
3 Q. And I'd like you to turn to tab 16, please.
4 Is the first page of that tab 16 in Tyrone 921
5 a May 25, 1983, letter from the Manager of Tyrone to the
6 Director of the Environmental Improvement Division?
7 A. Yes, it is.
8 Q. And does it indicate that it is enclosing a
9 discharge plan for the Number 3 Leach system?
10 A. Yes, it does.
11 Q. Now, I've included in Exhibit 16 portions --
12 in particular the table of contents and executive
13 summary from the Woodward-Clyde document that is the
14 discharge plan for the Number 3 Leach system; is that
15 correct?
16 A. That's correct.
17 Q. And that -- have you looked at the
18 Woodward-Clyde document that these are excerpts from?
19 A. Yes, I have.
20 Q. And it's a fairly extensive document, correct?
21 A. I recall that it -- that it was fairly
22 extensive.
23 Q. And on small Roman numeral iv, the last page
24 of the document at Exhibit 16 -- or excuse me -- tab 16,
25 could you read the highlighted portion from the

1 Executive Summary of the Woodward-Clyde report?
2 A. "If groundwater contamination is detected by a
3 triggering well downgradient in the Gila Conglomerate
4 aquifer system in the Mangas Valley, a contingency plan
5 outlining the procedures for assessment and containment
6 of detected contaminants would be implemented."
7 And -- but I do recall that this document was
8 mostly discussing the unlikelihood of any such event
9 occurring.
10 Q. And in fact, there was -- there was
11 considerable discussion about the Woodward-Clyde report
12 in the correspondence, correct, in which the agency
13 questioned the information provided and asked for lots
14 of additional information? Do you recall that?
15 A. Yes. There was quite a time period of -- I
16 believe probably a year-and-a-half or so of
17 correspondence between the Department -- and when I say
18 the Department, I mean the EID -- and Phelps Dodge
19 regarding this discharge plan, proposed discharge plan.
20 Q. And is that -- is this one of those instances
21 in which you've previously testified there sometimes was
22 an extended period of back and forth between the
23 discharge plan proponent, Tyrone, and the agency on a
24 number of issues?
25 A. Yes. I --

1 Q. And do you recall if that issue -- one of
2 those issues included the discussion of place of
3 withdrawal issue, from your review of the file?
4 A. I don't -- the place of withdrawal in terms of
5 if you mean -- I don't recall that there was any
6 discussion as to where the -- or certainly a
7 determination as to the place of withdrawal beneath the
8 mine. I recall that there was -- you know, there
9 certainly was documentation that this was an issue
10 between the Department and Phelps Dodge where they
11 didn't come to agreement.
12 Q. Could we look at tab 17, please? And could
13 you identify for the record what that document is?
14 Again, we're in Tyrone/Remand Exhibit 921.
15 A. This is a letter from EID, specifically
16 from -- it's from Karl Souder to Phelps Dodge, the
17 Manager of Phelps Dodge, dated July 26, 1983.
18 Q. And is -- does this letter appear to be
19 requesting more information after the agency received
20 the Woodward-Clyde discharge plan for the Number 3
21 Stockpile?
22 A. Yes.
23 Q. And could you please read the highlighted part
24 of the first paragraph?
25 A. "More information will be necessary in order

1 to evaluate this discharge plan. It was not clear from
2 Woodward-Clyde report what impact seepage from the
3 projected Number 3 Leach System would have on the Mangas
4 Creek alluvial aquifer. This effect needs to be
5 quantified, and if a contaminant plume is expected to
6 develop in this alluvial aquifer, then its flow
7 downgradient needs to be modeled to determine whether
8 such a plume would, in time, move to a place of present
9 or foreseeable future use.
10 "More detail is also needed on contingency
11 plans. A contingency plan must outline, in some detail,
12 a technically feasible method of preventing
13 contamination from moving unacceptably in the event that
14 this become imminent. Monitoring wells which would
15 trigger implementation of a contingency plan will need
16 to be located fairly close to the leach dump in order to
17 identify contamination at an early enough time that
18 corrective action is feasible."
19 Q. Now, there's a lot in that paragraph, and I'd
20 like to just break it down a little bit.
21 Does it appear to you that the agency -- this
22 is an agency document, correct?
23 A. Yes, it is.
24 Q. And does it appear to you that Mr. Souder in
25 this document is -- is requesting more information so

1 that it can -- well, is it saying that if a contaminant
2 plume is expected to develop in the alluvial aquifer,
3 that modeling needs to be done to determine whether a
4 plume would move to a place of withdrawal of water for
5 present or reasonably foreseeable future use?
6 A. Well, I think -- and I am familiar with this
7 letter, and it's -- you know, there's going -- if you
8 start picking -- there's going to be some early
9 documentation that's fairly ambiguous with regard to the
10 issue of contingency plans and monitoring. There's no
11 question about that.
12 And I certainly think that this is one of
13 those letters, because I've read this letter before, and
14 I think it's relatively unclear what was being requested
15 at the time.
16 I think that -- well, I know what was
17 happening from the correspondence on this -- on this
18 discharge permit application was that, again, there was
19 a year-and-a-half of correspondence, and Phelps Dodge
20 asserted repeatedly that there would be no impacts to
21 groundwater and that there would -- you know, that there
22 wouldn't be contamination from the facility.
23 And the permit reviewer, who was Karl Souder
24 at this point, was extremely speculative -- or he was
25 very concerned that this might, you know, not be the

1 case. And so there was a tremendous amount of back and
2 forth on this.
3 So I guess -- now I need you to repeat the
4 question.
5 Q. Well, I'm happy to move on to my next question
6 if --
7 A. Okay.
8 Q. -- that's acceptable for you.
9 My next question is, apart from what maybe was
10 said about what would happen, am I missing something, or
11 doesn't this letter reflect an understanding by the
12 agency that the place of present or reasonably
13 foreseeable future use was somewhere other than the
14 Number 3 Leach Stockpile or directly underneath the
15 Number 3 Leach Stockpile or system?
16 A. I don't -- I don't think that it says that at
17 all. I don't think that it implies that the Number 3
18 system is not a place of withdrawal. I think that
19 there's certainly a concern here about what's going to
20 happen if a -- if some -- if contaminants move away.
21 And again, in a lot of these contingency plans
22 that we're talking about, including the last one for the
23 Number 2 Leach Stockpile, the contingency plans that
24 were proposed by Phelps Dodge often contemplated that
25 there would be some sort of elevated contaminant level

1 in the monitoring wells, and then there would be some
2 modeling conducted, and that then it could be determined
3 if over some year period standards would be exceeded,
4 and then something would be done.
5 But indeed, these contingency plans -- I think
6 that what this shows in part relates back to your
7 question about didn't we think that these discharges are
8 fairly onerous, and wasn't that bound to cause
9 groundwater to become contaminated.
10 Well, certainly by the very presence of
11 contingency plans that seemed to think that there would
12 just be minor elevations in constituents and that
13 somehow we could model that over a period of time shows
14 that we weren't really expecting the degree of
15 contamination that we saw at the mine site.
16 So no. I do not agree that -- that this
17 paragraph is showing that the Number 3 was not a place
18 of present or reasonably foreseeable future use.
19 And in fact, when -- after they started
20 leaching the Number 3 Pile in 1990, and groundwater
21 contamination was almost immediately detected, or within
22 six months or so, the action by the Department was
23 requiring that to be cleaned up.
24 And so in practice, that's what the Department
25 has required. In fact, that's what the Department has

1 required every time that there has been contamination --
2 groundwater contamination detected at the entire mine
3 site.
4 Q. Does this letter from Mr. Souder dated
5 July 26, 1983, reflect his understanding that monitoring
6 wells relating to the Number 3 Leach system would be
7 used as trigger wells, and would trigger the
8 implementation of a contingency plan?
9 MR. FREDERICK: Let me object that we don't
10 know what Karl Souder's understanding was other than
11 what he says in this letter, and that's pure
12 speculation. So I'm objecting that that's just -- he's
13 asking the witness to speculate on what Karl Souder
14 understood.
15 It says what it says.
16 MR. GLASS: Would you like to rephrase the
17 question, Mr. Butzier?
18 MR. BUTZIER: May I respond to counsel's
19 argument?
20 MR. GLASS: Please respond.
21 MR. BUTZIER: This is a witness that's been
22 offered to testify about the 30 years of history of
23 permitting at the Tyrone facility, and she's testified
24 that in preparation for delivering her opinions she has
25 reviewed documents in the record which presumably would

1 include this document.

2 And I am -- and she's expressed opinions

3 about -- in her testimony about monitoring wells being

4 places where water had to meet groundwater standards,

5 and she's refused to acknowledge that monitoring wells

6 are for the purpose of triggering contingency plans.

7 And I'm simply asking her about her

8 understanding of this document as it relates to the

9 underpinning of her opinions in this case.

10 MS. FOX: Well, I'm going to object because

11 there hasn't been testimony that she has refused to

12 state that monitoring wells trigger contingency plans.

13 I think that's a misrepresentation of the testimony.

14 Maybe -- Mr. Butzier asked a compound

15 question, whether this indicates that Mr. Souder thinks

16 that there were trigger wells, a term that has not been

17 defined, and whether the monitoring wells would trigger

18 implementation of a contingency plan, two sort of

19 different ideas.

20 Maybe Mr. Butzier could not ask a compound

21 question and the witness can answer the question, if

22 she -- if she knows the answer. She may or may not have

23 an understanding, based on her understanding of the

24 file, what was in Mr. Souder's mind.

25 (Discussion off the record.)

1 MR. GLASS: All right. We'll allow the
2 objection to stand and ask Mr. Butzier to refrain from
3 questions asking Ms. Menetrey to read Mr. Souder's mind
4 some 20, 30 years ago and maybe stick to the plain
5 meaning -- the plain meaning of the language and her
6 interpretation therein.
7 MR. BUTZIER: Okay. Thank you.
8 Q. Does this letter of July 26, 1983, state that
9 monitoring wells which would trigger implementation of a
10 contingency plan will need to be located fairly close to
11 the leach dump in order to identify contamination at an
12 early enough time that corrective action is feasible?
13 A. Yes, it does state that.
14 Q. And that's a letter from the agency in 1983,
15 correct?
16 A. That's correct.
17 Q. I'd like you to turn to tab 18, please.
18 Is this an October 3, 1983, letter from Karl
19 Souder and Albert Dye to Richard Rhoades at Tyrone?
20 A. Yes, it is.
21 Q. And is this part of the back and forth that
22 you talked about lasting for over a year in relation to
23 the discharge plan for the Number 3 Stockpile?
24 A. Yes, it appears to be.
25 Q. And could you read the highlighted parts of

1 this letter, please?
2 A. "If a demonstration is to be made that this
3 discharge plan is approvable, three considerations are
4 of foremost importance:
5 "1. What will be the rate of seepage from the
6 leach dump?
7 "2. How much attenuation will occur due to
8 dilution by groundwater flow beneath the leach dump and
9 sorptive processes?
10 "3. In the event that seepage is detected in
11 the Number 3 Leach System monitoring well what action is
12 to be taken?"
13 Q. Now, does this October 3, 1983, letter from
14 the agency reflect that the agency felt it was important
15 to know how much attenuation would occur due to dilution
16 by groundwater flow beneath the leach dump and sorptive
17 processes?
18 A. I wouldn't say that this letter reflects the
19 Department's position with regard to the issue of
20 dilution. In reviewing really literally thousands of
21 documents, this is the only time that I recall ever
22 seeing any reference whatsoever to dilution in the
23 files.
24 And so I -- I think that you certainly are --
25 in the record you're going to find some letters from

1 technical staff which are going to be, you know, a
2 little bit ambiguous and somewhat different than how the
3 Department analyzed these issues for most of the other
4 discharges -- or for all of the other discharges.
5 So I would say that this represents something
6 that Karl Souder was interested in but doesn't
7 necessarily reflect how the agency was analyzing these
8 permit applications as a whole at the time.
9 Q. Now, Karl Souder was a highly regarded
10 groundwater hydrologist; isn't that correct?
11 A. I --
12 MR. FREDERICK: Objection.
13 MS. MENETREY: I couldn't say how --
14 MR. FREDERICK: It's an ambiguous question.
15 Regarded by whom? What circles?
16 Q. (BY MR. BUTZIER) Do you know enough to know
17 whether Karl Souder, before he tragically died in a
18 car-train collision, was well regarded as a hydrologist?
19 A. I am familiar with the name. I don't have a
20 lot of personal experience with exactly how well
21 regarded he was.
22 Q. And is he related to the Souder Miller
23 consulting firm that's got offices in Albuquerque and
24 Las Cruces?
25 A. I believe so. From looking through the files,

1 I don't think that he was working on a lot of the mine
2 applications.
3 Q. And this is also signed by Albert Dye,
4 correct?
5 And I'm referring to tab 18 of Exhibit 921.
6 A. That's correct.
7 Q. And Mr. Dye was a well regarded employee of
8 the agency in the mid '80s, correct?
9 A. Yes.
10 Q. And it was copied to Mr. Ray Krehoff, correct?
11 A. Yes.
12 Q. I'd like you to turn to Exhibit 19, if you
13 would.
14 And can you identify that document please?
15 A. Yes. This is a memorandum of a -- looks like
16 a meeting between Karl Souder of EID and Mike Koranda
17 and Tom -- looks like Tysseling --
18 Q. Tysseling.
19 A. Tysseling?
20 Q. Um-hum.
21 A. -- of Phelps Dodge.
22 Q. And so these are Karl Souder's notes relating
23 to a meeting regarding the Number 3 Leach Dump, correct?
24 A. That's correct.
25 Q. Relating to Discharge Plan 286?

1 A. Yes.
2 Q. And this also is part of the back and forth
3 between Tyrone and the agency on a number of issues,
4 including the question of where groundwater standards
5 were to be measured; is that correct?
6 A. Yes. This is the memo that I was referring to
7 where it was clear that there was disagreement between
8 Phelps Dodge and EID with regard to where standards had
9 to be met.
10 Q. And is it your position that -- well, why
11 don't you read the highlighted part of this into the
12 record.
13 A. "Contamination detected in the monitoring
14 wells would trigger a response which included
15 delineating the extent and severity of the plume.
16 Remedial action and the point at which groundwater is to
17 meet WQCC standards is not yet resolved."
18 Q. So this is a document in which Mr. Souder is
19 indicating that there still is disagreement about the
20 place or the point at which groundwater is to meet WQCC
21 standards, correct?
22 A. Yes. And it wouldn't surprise me that this
23 would be in a memo, because this has been, you know, an
24 issue many times over the years in meetings with Phelps
25 Dodge.

1 Q. And is it your understanding from your review
2 of the files relating to DP-286 that this issue was
3 never resolved, the issue of where water quality
4 standards would be measured?
5 A. Well, I -- I think that the Department didn't
6 necessarily look at this as an issue that needed to be
7 resolved. I mean, it was -- but resolved to Phelps
8 Dodge's satisfaction, I -- I don't know. The issue has
9 come up several times over the years. Certainly we're
10 talking about it here.
11 So, you know, I can't -- I can't say what
12 meetings, phone calls or other correspondence that's not
13 in the record -- there may have been some resolution for
14 this particular permit. But clearly this memo indicates
15 at this point in time it was an issue and it wasn't
16 resolved.
17 Q. And could we turn to Exhibit 20, please?
18 A. Exhibit 20.
19 Q. Would you identify that document?
20 A. You mean tab -- tab 20?
21 Q. I'm sorry. Tab 20 in Exhibit 921. Thank you.
22 A. This is a July 20th, 1984, letter from
23 Woodward-Clyde Consultants to the Environmental
24 Improvement Division, from James Obermeyer.
25 Q. And James Obermeyer was a Woodward-Clyde

1 project manager, correct?
2 A. That's what it says here in the letter.
3 Q. And on page 2 of his enclosed Monitoring and
4 Contingency Plan Proposal for the Number 3 Leach system,
5 he outlines certain points regarding a contingency plan.
6 Do you see where I'm looking on page 2?
7 A. Yes.
8 Q. Could you read the highlighted parts, please?
9 A. "If analyses from the above-listed perimeter
10 wells indicate a consistent increase in concentration
11 beyond that expected due to normal sampling, measurement
12 and analytical error or natural geochemical variations
13 in the aquifer's water quality."
14 And I'm not clear if I'm to read the
15 highlighted portion --
16 Q. Let's skip to number (2), please.
17 A. "We will develop a groundwater solute
18 transport model of the aquifer system affected by leach
19 dump seepage and determine the fate of the plume."
20 Q. Now, is it your understanding that what
21 Woodward-Clyde is proposing in part is that a fate and
22 transport model would be conducted as part of its
23 contingency plan?
24 A. That's what they're proposing, but --
25 Q. And what's your -- I'm sorry.

1 A. But such a -- that was -- has never been
2 implemented in a contingency plan for this discharge
3 permit.
4 Q. That contingency plan?
5 A. Correct.
6 Q. Okay.
7 And could you turn to the next page, please,
8 page 3?
9 And read the highlighted part.
10 A. "If necessary, actions will be taken to
11 prevent concentrations of constituents in the
12 groundwater from exceeding the standards at approximate
13 location 18.15.19.324 in the Mangas Valley."
14 Q. And is your understanding -- is it your
15 understanding that Woodward-Clyde's program manager is
16 referring to a specific place on the ground, namely
17 Township 18, Range 15, Section 19, et cetera?
18 A. That's correct. But again, this contingency
19 provision was never implemented when contamination was
20 detected at the -- at the site.
21 Q. Do you know whatever came of the proposal to
22 use this particular location in the Mangas Valley as the
23 place where actions would be taken to prevent
24 concentrations of constituents? Do you know if the
25 agency ever agreed with that location?

1 A. This was a situation, again, for the Number 3
2 Stockpile where there was a lot of correspondence back
3 and forth with regard to monitoring, what to do if there
4 was a failure of the system, which is, you know, the
5 contingency plan, and where there was a lot of back and
6 forth negotiations.
7 And again, at this particular time, when this
8 was approved -- and it was approved as part of the
9 contingency plan for what would happen if there was a
10 failure of the system, that is if -- if the plan failed
11 to protect groundwater. But indeed what happened was
12 that when groundwater contamination did occur, this
13 contingency plan was not implemented.
14 Again, these contingency plans were based on
15 these ideas that there would be some elevated
16 concentrations of contaminants in wells and then we'd
17 have time to model them and observe what happened to,
18 you know, the elevated concentrations and how fast they
19 were moving.
20 But what really happened on the ground was
21 that the contamination at the Number 3 Pile in
22 particular was -- was pretty fast and furious, and so
23 this contingency plan, along with several that are --
24 that are similar to this in other permits, you know,
25 kind of went out the window, in a way, because what

1 happened was certainly not what was expected or
2 anticipated.
3 So in answer to your question, at that time,
4 the permit reviewer had sufficient comfort in this
5 contingency plan to okay it in the permit, given -- if
6 you look at the reasons that Karl Souder gave for
7 approving the discharge plan, it was because Phelps
8 Dodge had put clay plating, you know, so-called liners
9 beneath the dump.
10 And the main reason being that there was
11 extensive monitoring around the dump, so that if there
12 was a problem, it could be detected quickly.
13 So yes, this was agreed to, but it certainly
14 didn't take the importance of -- these others were
15 considered more important, so --
16 Q. So my original question was relating to
17 specifically the choice of Township 18, 15 -- Range 15,
18 Section 19.
19 Did the agency agree that that would be the
20 location?
21 A. The location --
22 Q. Isn't that, in effect, a location that
23 Woodward-Clyde is identifying as a place to measure
24 compliance with groundwater standards?
25 A. I think by the exact reading that that would

1 be the place by which -- if there was a problem in the
2 perimeter monitoring wells, that modeling would be
3 initiated, and then there would be an attempt to predict
4 if standards would be exceeded and how long they would
5 take to be exceeded, say, at this point.
6 Q. Okay. Let's turn to tab 21, please, in Tyrone
7 921.
8 Can you identify that document, please?
9 A. This is a letter from the Environmental
10 Improvement Division, specifically from Karl Souder, to
11 Mike Koranda with Phelps Dodge Corporation, dated
12 September 13th, 1984.
13 Q. And does it appear to you that this document
14 reflects certain agreements and suggested language and
15 is a document coming from the Environment Department to
16 Tyrone?
17 A. Yes. It appears to be a document reflecting a
18 telephone conversation where he's listing some items of
19 agreement.
20 Q. Now, let's turn to the top of page 2, and item
21 number 3, which is highlighted.
22 Could you read that, please?
23 A. "After the two year calibration period, if the
24 model predicted an exceedance of standards at
25 approximately 18.15.19.324 in the Mangas Valley, then

1 the contingency plan would be invoked."
2 Q. Does not that reflect an agreement that the
3 place of withdrawal of water for present or reasonably
4 foreseeable future use where compliance would be
5 measured is at this particular location?
6 A. I don't think that this -- I -- as I read this
7 letter, it does not appear to be consistent with what
8 was actually agreed upon in the -- in the discharge
9 permit.
10 I -- I do know that there was an agreement
11 that this location would be -- I think the confusion in
12 this -- in this particular sentence has to do -- has to
13 do with the word "would" be invoked. It's not clear in
14 this letter and -- what that means. And so I guess I
15 wouldn't be able to agree with your question, because --
16 Q. Well, let me venture a suggestion as to what
17 it might mean --
18 MS. FOX: Were you done?
19 Q. (BY MR. BUTZIER) -- and you can agree or
20 disagree with it.
21 Okay?
22 A. Yes.
23 Q. Fair enough?
24 Doesn't this reflect that the agency agrees
25 with the concept that if monitoring shows that there may

1 be exceedances at a certain point, that a model would be
2 prepared to predict whether groundwater standards would
3 be exceeded at a particular point? Isn't that what this
4 is reflecting?
5 A. No. I think that the way this played out,
6 actually, and the way that all the other contingency
7 plans, when we were still talking about having these
8 models, had to do with exceedance -- not exceedances of
9 standards at monitoring wells, but increases in
10 contaminant concentrations, which would then trigger
11 modeling.
12 I think -- I believe what you said was that
13 the modeling would be triggered by an exceedance, and
14 that's not my understanding. I can't think of any other
15 contingency plans.
16 And again, we never -- these plans pretty much
17 went out the window once contamination started
18 occurring. And I think that, again, you have to
19 remember that at the time that this correspondence was
20 going back and forth there was no contamination, that I
21 can recall, detected at the mine site.
22 And so there was a -- the discharge permit
23 reviewers had a lot more comfort in some of these
24 contingency plans that appear very weak compared to the
25 plans that we have today.

1 So, you know, once contamination was
2 discovered at this particular site, this contingency
3 plan was never mentioned again. In fact, the
4 reviewers -- the current reviewers of this plan were
5 sort of surprised that it ever exists -- existed, but --
6 Q. Okay. Well, if I did say exceedances at the
7 monitoring point, I apologize. I misspoke.
8 Doesn't this show that the concept here was
9 that there would be a model exercise undertaken to
10 predict whether there would be an exceedance of
11 standards after the contamination moved from the source
12 to a particular point, and doesn't this reflect that
13 that particular point is at Township 18, Range 15,
14 Section 19?
15 A. Yes, it does. It does reflect that the
16 modeling would be done to see what would happen at that
17 point. Again, we have to remember we're looking at a
18 contingency plan here, meaning that there already would
19 have been a failure of the predicted system, and what
20 the comfort level of that permit reviewer would have
21 been in terms of what to do if something like that
22 happened.
23 Q. Now, would it surprise you to learn that the
24 actual point upon which there was agreement that
25 standards would need to be met is at a location --

1 MS. FOX: Objection, misstates evidence, the
2 evidence in the record.
3 MR. GLASS: Response?
4 MR. BUTZIER: I wasn't finished with my
5 question.
6 MS. MALAVE: Yeah.
7 MS. FOX: I apologize.
8 MR. BUTZIER: And typically counsel waits
9 until the question is finished.
10 MS. MALAVE: Yeah.
11 Q. (BY MR. BUTZIER) My question is -- I guess
12 I'll need to reask it now. And it may not come out
13 exactly the same, but --
14 MS. FOX: Good.
15 Q. (BY MR. BUTZIER) Do you know where that point
16 that's reflected in paragraph 3 on page 2 of this -- of
17 the agency's September 13, 1984, letter is located on
18 the ground?
19 A. I don't know precisely where that location is.
20 Q. And would it -- would it surprise you to know
21 that that's in the Mangas Valley, outside of the current
22 MMD permit boundary?
23 A. Outside -- I -- I guess that -- I don't recall
24 that that's where it was. I don't remember precisely
25 where it was, but I don't recall that it was outside of

1 there.

2 Q. And could you read the highlighted part of

3 paragraph 4 in that letter?

4 A. "The contingency plan would commit Phelps

5 Dodge to maintain the groundwater standards at this

6 point by either" -- or -- did you instruct me to read

7 the whole --

8 Q. Well, really just the highlighted part is

9 fine.

10 A. Okay.

11 Q. The point being that this letter reflected

12 that Phelps Dodge would have to meet groundwater

13 standards at the point that was originally proposed by

14 Woodward-Clyde in the document appearing at tab 20, and

15 it's agreed to by the agency in tab -- at tab 21; isn't

16 that correct?

17 A. Well, I guess I still look at this as being a

18 contingency plan, and, again, a plan that was not ever

19 implemented, which has to do with the failure of the

20 system and what Phelps Dodge would do to keep the

21 contamination from migrating any further. That's how I

22 would look at it.

23 Q. Now --

24 A. And certainly as we see here in the letter,

25 one of the options presented by Karl Souder was to

1 discontinue leaching of the dump altogether, and so
2 clearly there was an interest in eliminating the source
3 of the contamination, not just maintaining standards
4 exclusively at some point.
5 Q. And can you explain how what the agency agreed
6 to in this September 13 letter was designed to protect
7 groundwater beneath the Number 3 Leach Stockpile?
8 A. Could you repeat that question?
9 MR. BUTZIER: Could you read it back?
10 (Record read.)
11 Q. (BY MR. BUTZIER) I think my question was can
12 you explain how the agreement set forth in this letter
13 reflects the agency's intent to protect all groundwater
14 at the site including groundwater underneath the Number
15 3 Leach Stockpile.
16 A. Well, to me, this letter is talking about just
17 some specific provisions of the -- of a discharge plan
18 application that's -- it's discussing the need for
19 having another monitoring well constructed, it's talking
20 about wanting to get baseline groundwater quality at
21 each of the monitoring wells, it's talking about trying
22 to have an improvement in the contingency plan, and
23 again the -- which the contingency plan which was
24 previously proposed by Phelps Dodge had even further
25 monitoring points away from the dump.

1 And so it's really just trying -- to me, this
2 letter is not addressing the big picture of -- it's just
3 addressing limited issues that were remaining
4 unresolved.
5 Q. Okay.
6 So you would -- you would disagree with me if
7 when I looked at these documents I concluded that this
8 was an example that Commissioner Glass has on a number
9 of occasions been looking for from various witnesses
10 where the parties actually agreed to a place where
11 measurement was to occur as a place of withdrawal of
12 water for present or reasonably foreseeable future use
13 in terms of measuring compliance with the discharge
14 plan?
15 A. I don't think that this letter defines a place
16 of reasonable or foreseeable future use away from the
17 area of the dump. I think it's a contingency plan
18 provision, but I -- I certainly do think that you're
19 going to find limited correspondence in the files which
20 is ambiguous and may indicate that there were other
21 thoughts in certain reviewers' minds at the time.
22 There's no question about that in this early -- in this
23 early permitting history.
24 But I think that you have to pay close
25 attention to a number of things that were going on at

1 the time. For instance, there was no groundwater
2 contamination at the time.
3 We have really evolved our understanding of
4 the discharges over the years and what might happen, and
5 certainly that is definitely the case with the Number 3
6 system here. And so over the years, we have -- you
7 don't see this sort of discrepancy, if you would call it
8 that, in the later discharge permit correspondence.
9 So that would be my answer to that.
10 Q. Okay.
11 We've reviewed a number of documents today
12 where Phelps Dodge Tyrone referred to subsequent users
13 and where it's clear that Phelps Dodge was conceiving of
14 the subsequent users as people who have wells to the
15 northwest of the site down Mangas Valley, correct?
16 A. There was that one correspondence where Phelps
17 Dodge indicated that was their definition of subsequent
18 users.
19 Q. And we've also reviewed documents today where
20 in the context of DP-27 for the Mangas Valley tailings
21 facilities, that monitoring was to occur at the farthest
22 northwest corner outside the MMD boundary at wells
23 number 14 and 15, correct?
24 A. Those wells 14 and 15 were monitor -- the
25 monitoring wells for DP-27, among them.

1 Q. And we've seen documents today that reflect
2 that there was agreement that a place where, granted,
3 compliance under the context -- in the context of the
4 contingency plan was to occur, an agreement as to a
5 point where groundwater quality standards would need to
6 be met, where discharges were emanating from the Number
7 3 Stockpile, correct?
8 A. Could you repeat what you just said?
9 Q. We've seen agreement as to where compliance
10 needed to be achieved after fate and transport modeling
11 as part of the contingency plan for DP-286 relating to
12 the Number 3 Stockpile, right in the middle of the mine
13 site, correct?
14 A. I don't know if I would say that is precisely
15 correct, but we -- what -- we did agree on a location
16 for contingency plan provision in that area. But again,
17 I'd want to say that's a very, very unusual
18 circumstance, or I can't think of anywhere else on the
19 mine where that sort of provision for contingency plan
20 was part of the -- part of the record.
21 Q. And you wouldn't disagree with me -- or at
22 least you don't have information to disagree with me
23 that the place where compliance would be measured with
24 respect to the Number 3 Stockpile was somewhere outside
25 the MMD boundary in the Mangas Wash; is that correct?

1 A. I -- I don't agree with that.
2 Q. You don't agree, or you just don't know where
3 that Township 18 point that was agreed to --
4 A. I don't know the precise location of that, but
5 I also don't agree that compliance with the standards
6 was outside of the MMD permit boundary. I mean, clearly
7 under the discharge plan we've required abatement and --
8 of groundwater contamination right there at the Number 3
9 Leach Stockpile.
10 Q. And my question doesn't relate to what maybe
11 has agreed -- has been agreed to since that time. I'm
12 simply talking about the context of the 1983 documents
13 we've looked at.
14 A. Well, I don't know --
15 MS. FOX: Which --
16 MS. MENETREY: -- the location of this well
17 that you're talking about, so --
18 MR. BUTZIER: Okay.
19 MS. MENETREY: -- I don't know --
20 Q. (BY MR. BUTZIER) Did you take those
21 documents -- and I'm referring to tab 20 and 21. Did
22 you take those documents into account when you testified
23 that there's a 30-year history of permitting that shows
24 the Department has treated the groundwater beneath the
25 site as protected under the Water Quality Control Act

1 and Commission Regulations?

2 A. Yes. I certainly do, and I believe that my

3 testimony refers to the general course of conduct by the

4 Department over a 30-year history.

5 And again, there's no -- there certainly are

6 going to be some limited documents in the record which

7 may appear to have a discrepancy in that, but --

8 generally from individual permit reviewers, but I still

9 hold by my testimony that the general course of conduct

10 has been that the entire mine site has been protected as

11 a place of withdrawal.

12 MR. BUTZIER: Chairman Glass, this may be a

13 good time to take a break, if others are agreeable.

14 MS. FOX: Are you finished with your cross?

15 MR. BUTZIER: No. I intend to ask some more

16 questions of this witness.

17 MS. FOX: How much more time do you have?

18 MR. BUTZIER: Probably 30 minutes, under an

19 hour.

20 MR. SLOANE: You said you only had an hour

21 last time.

22 MS. FOX: I'd like to get it over with.

23 MR. GLASS: Do we continue with his

24 cross-examination or take a 10-minute break?

25 My personal preference would be to continue

1 with the cross-examination.

2 MR. BUTZIER: Okay. That's fine.

3 MR. HUTCHINSON: Mr. Chairman, we're coming up

4 on two hours for the reporter, too, so --

5 MR. GLASS: Okay.

6 Cheryl, how are you doing? Do you need a

7 break?

8 MR. SLOANE: Yes.

9 THE REPORTER: Yes, please.

10 MR. GLASS: Okay. Break.

11 THE REPORTER: Thank you.

12 MR. GLASS: Thank you.

13 Let's be back at five until 3:00.

14 (Proceedings in recess from 2:42 p.m. to

15 2:58 p.m.)

16 MR. GLASS: All right. Mr. Butzier, continue

17 with your cross-examination, please.

18 MR. BUTZIER: Thank you, Commissioner Glass.

19 Q. Ms. Menetrey, just to bring closure to our

20 review of the documents in 921, I'd like you to refer to

21 Exhibit 20 -- excuse me -- 22.

22 MR. HUTCHINSON: Tab 22?

23 MS. MENETREY: Tab 22?

24 MR. BUTZIER: I'm sorry. Tab 22 in

25 Exhibit 921.

1 Thank you.
2 Q. Can you identify that, please?
3 A. This is a letter from Denise Fort, Director of
4 the Environmental Improvement Division, to Richard
5 Rhoades, Manager of Tyrone, dated January 24th, 1985,
6 regarding DP-286.
7 Q. And does that refer specifically to the
8 Woodward-Clyde letter of July 20 that appears at tab 20
9 and indicate that it's part of what is being approved?
10 A. It refers to the July 20 -- 20th, 1984,
11 Woodward-Clyde submittal.
12 Q. Which appears at tab 20, correct?
13 A. Yes.
14 Q. So that's a further indication of agreement
15 with the particular location identified on page 3 of the
16 Woodward-Clyde letter in the Mangas Valley, correct?
17 A. It's agreement to at least whatever provisions
18 in this Woodward-Clyde document that the Department felt
19 met an approvable plan. You know, it doesn't
20 necessarily mean that the Department agreed with every
21 provision in it, so -- I couldn't say.
22 Q. Okay.
23 Now, your testimony talks about a 30-year
24 history of protecting groundwater underneath the entire
25 Tyrone Mine site, does it not?

1 A. Yes, it does.
2 Q. And are you aware -- can you identify for us
3 today specific documents that you've reviewed or that
4 you can think of today which address or refute Tyrone's
5 submissions that the subsequent users to be protected
6 are users down Mangas Valley, neighbors to the north
7 down Mangas Valley?
8 A. Well, I think that there is numerous --
9 there's a multitude of documents that indicate that the
10 entire Tyrone Mine is a place of withdrawal for
11 reasonably foreseeable future use.
12 You know, again, the requirements as early as
13 1985 to actually return groundwater beneath the mine and
14 the leach dump area to standards is clearly indicative
15 that the Department felt that the water needed to be
16 protected for future use and that indeed there could be
17 subsequent users of that groundwater.
18 There's -- you know, all of the discharge
19 permits at this time require abatement of groundwater
20 within the area of the mine, and the Department cannot
21 require that abatement unless it's been determined that
22 there is a foreseeable future use of that water.
23 So I certainly couldn't name every document,
24 but there are, I think, lots of documents in the record.
25 Q. Well, I wasn't -- I wasn't really asking about

1 your general impression based on what may exist today in
2 various documents.
3 I was asking if you can name -- let's start
4 with can you name one document that specifically
5 attempts to disabuse Phelps Dodge Tyrone of the notion
6 that subsequent users down Mangas Valley are the users
7 of groundwater to be protected by this program?
8 MR. FREDERICK: I'm going to object because
9 the question is ambiguous.
10 Does he mean disabuse Phelps Dodge of its own
11 idea, its own definition of what subsequent users are,
12 or -- or some other definition of subsequent users, and
13 how -- how does subsequent users relate to the standard
14 we're actually concerned about here, and that is place
15 of withdrawal of water for present or reasonably
16 foreseeable future use.
17 MR. GLASS: Response?
18 MR. BUTZIER: Commissioner Glass, I'll save
19 you the ruling and ask the question a different way.
20 MR. GLASS: Thank you.
21 MR. FESMIRE: Save or delay the ruling.
22 MR. GLASS: Yeah.
23 Q. (BY MR. BUTZIER) Can you identify -- excuse
24 me. My voice is giving out on me here.
25 Can you identify a single document that

1 addresses the issue of subsequent users down Mangas
2 Valley from the agency?
3 A. That addresses -- a document that addresses
4 the issue of subsequent users in Mangas Valley. I guess
5 I can't identify a document that is exactly specific on
6 that topic of definition of subsequent users in Mangas
7 Valley.
8 Q. Can you identify a single document -- and I'm
9 not talking here about what abatement may have been
10 required under certain plans.
11 Can you identify a single document, based on
12 your review of the record, that tells Tyrone that the
13 place of withdrawal of water for present or reasonably
14 foreseeable future use is somewhere inside the MMD
15 permit boundary?
16 A. I recall --
17 MR. FREDERICK: I -- go ahead. Too late.
18 MS. MENETREY: I do seeing documentation to
19 that effect in the record for DP-1341, but I do not
20 recall the dates of those letters or documents. I know
21 I have seen correspondence where this issue came up, but
22 no, I cannot recall the -- the date of that
23 correspondence.
24 Q. (BY MR. BUTZIER) And by DP-1341, you're
25 referring to NMED Exhibit 3, correct?

1 A. Correct. There's a large volume in the record
2 just for DP-1341, and although I'm familiar with that
3 record, I did not review it in detail for this
4 proceeding. And so -- I recall there's some documents,
5 but I don't remember the dates.
6 Q. And I think you previously testified to this,
7 but just to be sure, I'll ask.
8 It's your understanding that there has been no
9 agreement as to the place of withdrawal issue in the
10 context of the discussions relating to DP-1341, correct?
11 No agreement between --
12 A. Well --
13 Q. -- the agency and Tyrone?
14 A. I guess we wouldn't be here if there had been
15 agreement, so -- but again, the -- Phelps Dodge has
16 agreed with the permit provisions with regard to
17 protecting and cleaning up groundwater under the site.
18 Q. Ms. Menetrey, can you identify a single
19 document in the first 10 years of the discharge plan
20 program, before you arrived at the agency, which
21 indicates the agency's belief that the place of
22 withdrawal of water for present or reasonably
23 foreseeable future use was somewhere inside what's
24 currently delineated as the MMD permit boundary?
25 MS. FOX: Objection, asked and answered.

1 MR. FREDERICK: I'll object.
2 MS. FOX: She said many, many times throughout
3 her testimony that the course of conduct of the
4 Department has led her to believe that the Department
5 treated the entire mine site as a place of withdrawal,
6 and she's given many, many examples of the permits and
7 the pollution prevention provisions in the permits, the
8 abatement provisions in the permits, the actual
9 abatement and corrective action that has occurred.
10 I think we've gone over this territory.
11 MR. GLASS: Mr. Butzier.
12 MR. FREDERICK: I'd like to just say also
13 she's testified that you begin with the initial
14 assumption that all groundwater is protected under the
15 Water Quality Act, that all groundwater is a place of
16 withdrawal. She's already testified to that. There
17 doesn't have to be one document identifying every single
18 place of withdrawal in a mine site or anywhere else.
19 There has to be a -- evidence in the record showing that
20 a location is not a place of withdrawal.
21 MR. GLASS: Mr. Butzier, care to respond?
22 MR. BUTZIER: Commissioner Glass, I have not
23 asked this question before. I am asking about the first
24 10 years of the discharge plan program, before this
25 witness came to the agency, and -- or at least to the

1 groundwater discharge plan program, and it's a simple
2 question.
3 I'm asking if there's a single document she's
4 reviewed -- she's testified as to a 30-year history.
5 She's only been at the agency for something considerably
6 less than that 30 years, and yet she's offering opinions
7 here about a 30-year history. And my question is
8 directed to the part of that history in which she must
9 have formed her opinion based on review of documents
10 since she wasn't there.
11 MR. GLASS: Hmm. Well, given the fact that I
12 think we're observing an evolution of perception over a
13 period of some time in the Department, I'm going to
14 overrule the objection and ask you to answer the
15 question.
16 MS. MENETREY: Could you repeat the question,
17 please?
18 MR. BUTZIER: Could you read it back?
19 Sorry.
20 (Record read.)
21 MS. MENETREY: Well, again, I think -- I mean,
22 I believe that there's a lot of documents that indicate
23 that the place of withdrawal is inside -- and again, in
24 the first 10 years of permitting history, there was no
25 MMD permit boundary, and so it's -- there wouldn't have

1 been any correspondence relating to that.

2 But again, clearly the requirement under

3 DP-166 to clean up and abate groundwater within and, you

4 know, beneath the mine and within the area of the leach

5 dump is, to me, a clear document and indication that

6 that area was considered a place of withdrawal. There

7 is other correspondence, as well.

8 And again, the situation at the Tyrone Mine

9 was that in those early years there wasn't very much

10 groundwater contamination at the site. The brunt of --

11 I mean, after the number -- DP-166 contamination

12 occurred -- and again, that was in -- around 1985, but

13 after that -- and our action was to require that

14 groundwater get cleaned up.

15 But really there wasn't any other groundwater

16 contamination detected until you get into the '90s, the

17 early '90s, when groundwater contamination was detected

18 at the tailing impoundments. And so, you know -- and

19 then the mid '90s was when we started detecting the

20 contamination over on the east side of the mine, which

21 was very extensive -- or actually it would have been the

22 early '90s also for the Number 3 Stockpile.

23 So, you know, when you start talking about the

24 first 10 years of the record, there wasn't a lot of

25 activity with regard to contamination in the record, but

1 certainly when it did occur, the Department's actions
2 were to require that that contamination be cleaned up.
3 And I know that there is also some
4 correspondence in some of the back and forth, especially
5 with regard to monitoring. I recall a 1985 letter
6 regarding the Number 2A Leach Stockpile, where -- I
7 believe it was Ron Conrad, who was very specific --
8 there was a plan proposed by Tyrone to have monitoring,
9 you know, well away from the dump area, and in that
10 letter it was very specific that standards had to be
11 met.
12 If there's monitoring wells adjacent to the
13 dump and they could contaminate, you have to meet
14 standards here.
15 So I think that there's quite a bit of
16 documentation. It didn't apply to the MMD permit
17 boundary, but -- that's my answer.
18 Q. (BY MR. BUTZIER) And it also didn't apply to
19 the specific issue of place of withdrawal of water for
20 present or reasonably foreseeable future use, did it?
21 You've identified one -- one document in your
22 answer with any kind of specificity, and that document
23 does not specifically address the issue of place of
24 withdrawal of water for present or reasonably
25 foreseeable future use, does it?

1 A. Well, I think that all of the documents I've
2 referred to do address that issue, because the
3 Department cannot require that groundwater be cleaned up
4 to standards unless that groundwater is located at a
5 place of withdrawal for reasonable or foreseeable future
6 use. So I think it does address that.
7 Q. So I guess your answer is that it implicitly
8 addresses it; is that correct?
9 A. Well, I guess that would be one way to look at
10 it.
11 Q. Despite dozens of documents that I've gone
12 over with you today that specifically talk about
13 subsequent users downgradient of the Mangas Valley.
14 MS. FOX: Objection. There's not dozens of
15 documents, and argumentative.
16 MR. FREDERICK: And ambiguous.
17 MR. BUTZIER: I'll withdraw the question.
18 No further questions.
19 MR. GLASS: No further questions.
20 Would you like to move for introduction of
21 your exhibits, or have you --
22 MR. BUTZIER: Yeah. I would like to move for
23 the introduction of Tyrone Exhibits 920 and 921.
24 MS. FOX: I object to -- NMED objects to 920.
25 There's no foundation for 920.

1 MR. GLASS: 920 would be the report prepared
2 by one Maxine S. Goad?
3 MS. FOX: Correct.
4 There's absolutely no foundation for that.
5 And then with respect to 921, I guess I would
6 only object to that one document that's not legible
7 until we get a legible copy.
8 And then we did not --
9 MR. GLASS: Sorry. Could you identify that
10 more specifically?
11 MS. FOX: I don't -- which document was that?
12 MR. BUTZIER: Tab 9?
13 And by the way, during the lunch break, we did
14 confirm that at least what we've scanned in is blurred
15 on page 2, so I don't -- I don't have a specific
16 document I can go back to to give you a better copy on
17 that.
18 MS. FOX: If -- I mean, if the original from
19 the file can be submitted that's legible, I don't have
20 an objection, but if it's illegible, I would continue my
21 objection. If we can't do that, I would continue my
22 objection.
23 And then we did not -- I mean, this is kind of
24 theoretical, because these are in the administrative
25 record, but -- so technically in evidence, but we did

1 not go over -- Mr. Butzier did not go over documents 23
2 and 24. So I would object to those.
3 MR. BUTZIER: And counsel is correct that I
4 didn't specifically refer to those today, but she's also
5 correct that those are already part of the
6 administrative record.
7 And so that we don't have to tear apart this
8 binder, I would just request the stipulation that these
9 are documents that are already in the record and can be
10 admitted as part of 921.
11 On Exhibit 920, I would also request
12 stipulation so that I don't have to call Commissioner
13 Goad to authenticate her paper delivered to the
14 conference in Atlanta.
15 MS. FOX: You can't call her. You can't
16 subpoena her.
17 I just -- I don't -- you know, objection,
18 relevance, too. There's no foundation, and it's not
19 relevant. So I continue my objection.
20 And he can't -- he can't subpoena Commissioner
21 Goad in any event.
22 MR. GLASS: No, he can't do that.
23 Mr. Butzier, would you like to address further
24 the --
25 MR. BUTZIER: I would --

1 MR. GLASS: -- objection to 920?
2 MR. BUTZIER: I would just -- I guess I would
3 ask that the Commission either take judicial notice of
4 it or admit it as an exhibit, and short of that, I'll go
5 ahead and deal with that in rebuttal.
6 So I would just request some ruling from the
7 Commission as to which direction you'd like me to go.
8 MR. GLASS: Mr. Frederick, do you have a
9 comment, objections to any of these?
10 MR. FREDERICK: I will just join in the
11 Department's objection.
12 MS. FOX: Maybe we could put off the ruling
13 until counsel has returned.
14 MR. GLASS: We can do that.
15 We can take notice of the request for
16 admission at least for this one, for the -- for 920, and
17 then we -- I think we can go ahead and address 921.
18 And as I understand it, the Department and
19 GRIP object to tab 9 and tabs 23 and 24, or was the tab
20 9 issue resolved?
21 MS. FOX: It's kind of theoretical because it
22 is in the -- these documents are in the administrative
23 record. So I will withdraw my objection.
24 MR. GLASS: Okay.
25 MR. FREDERICK: I will also withdraw to the

1 extent they're in the administrative record already.
2 MR. GLASS: All right. We will admit
3 Exhibit 921 into the record and reserve judgment on
4 Exhibit 920 until we can consult with counsel.
5 MR. BUTZIER: Thank you.
6 (Exhibit Tyrone 921 was marked for
7 identification and admitted into evidence.)
8 MR. SLOANE: I have a question, Mr. Chairman.
9 MR. GLASS: Commissioner Sloane.
10 MR. SLOANE: Does that mean we can't ask
11 questions relative to this document now, or --
12 MR. GLASS: Well, it does mean that on
13 redirect the Department can't address this document at
14 all, if they object --
15 MR. FREDERICK: I would say in -- that you can
16 ask -- I would just say you can ask questions regarding
17 the document. Whether it's admitted into the evidence
18 or not is another question.
19 Until -- there is a movement to admit this
20 document on -- a motion to get it admitted that seems to
21 be delayed. I'm certainly going to want to ask
22 questions about the document until I know for sure it's
23 not going to be admitted.
24 MR. GLASS: Okay. That's a good point.
25 That's well taken.

1 So I guess in answer to your question,
2 Mr. Sloane, we can certainly pursue questions regarding
3 this document --
4 MR. SLOANE: Then that's tantamount to being
5 admitted.
6 MR. FREDERICK: And to tell you the truth, I
7 will withdraw my objection to this document.
8 MR. GLASS: Okay. So GRIP withdraws their
9 objection to 920.
10 And I'm assuming the Department maintains
11 their objection to 920 based on relevance and lack of
12 foundation.
13 MS. FOX: (Nods head.)
14 MR. GLASS: Okay.
15 MS. FOX: Correct.
16 MR. GLASS: Commissioner Hutchinson.
17 MR. HUTCHINSON: I think we can hold the
18 witness over for any further questions if -- you know,
19 we would just not release her until this is resolved,
20 and if there are questions on this, then -- and it has
21 been admitted, then we can bring her back up and ask her
22 questions, so --
23 MS. FOX: Well, I'm not objecting to you
24 asking her questions right now on the document. I think
25 Mr. Frederick is correct, that you can ask -- that

1 admission of the document and asking questions of the
2 document are two different things.
3 MR. HUTCHINSON: Okay.
4 MR. FESMIRE: The only way the document can be
5 kept out is if PD objected to it, and since PD addressed
6 it and has sought to introduce it, they've essentially
7 waived their objection. So you can ask questions on it,
8 but you can't -- you just -- we haven't decided whether
9 it's admissible yet.
10 MR. GLASS: All right.
11 Given that discussion, I guess we can move to
12 redirect.
13 Is that correct?
14 All right.
15 Is there any further discussion on these two
16 documents?
17 MR. LEWIS: What about Mr. Nylander?
18 MR. GLASS: Ah, very good point. Thank you.
19 I neglected to point out that Mr. Nylander,
20 who would actually do his cross-examination at this
21 point, is not available. He did notify the Hearing
22 Officer earlier that he could not be here today but has
23 no cross-examination for Ms. Menetrey and will return
24 tomorrow.
25 So thank you for that reminder.

1 And now on to the Department's redirect.
2 MS. FOX: And, Mr. Hearing Officer, if I could
3 ask for a 10- to 15-minute break just to get my redirect
4 ready, please.
5 MR. GLASS: All right, then.
6 Is that like a timeout?
7 MS. FOX: It's like there's a lot of documents
8 and I need just a few minutes.
9 MR. GLASS: Okay. Ten minutes.
10 MS. FOX: Which will hopefully shorten my
11 redirect.
12 MR. GLASS: Let's be sure we're back by 3:35.
13 MS. FOX: Thank you very much.
14 (Proceedings in recess from 3:22 p.m. to
15 3:41 p.m.)
16 MS. PADILLA: Thank you, all. I hope you all
17 had a nice break.
18 I understand we're at redirect with -- from
19 the Environment Department to Ms. Mary Ann Menetrey.
20 I want to thank Commissioner Glass for filling
21 in for me while I was away at a meeting. So I am back
22 and ready to listen to redirect, so -- Ms. Fox.
23 MS. FOX: Thank you, Madam Hearing Officer.
24 And thank you for the break, Commissioner
25 Glass. It did help shorten the redirect.

1 REDIRECT EXAMINATION

2 BY MS. FOX:

3 Q. Ms. Menetrey, if you would look at Tyrone
4 Exhibit 921, tab 1, which is a letter from Phelps Dodge
5 Corporation dated May 8th, 1978, to EID. That was a
6 letter that was discussed, I believe, in the context of
7 DP-27, which is the tailing impoundments.
8 And would you -- do you have anything to help
9 clarify the meaning of that letter, and specifically the
10 portions that are highlighted, for the Commission?
11 A. Yes. This was a letter in response to a
12 letter from EID to Phelps Dodge in 1978 requesting that
13 they submit discharge plans for the Mangas Valley
14 tailing impoundments and for the Number 1 Leach
15 Stockpile, which were the only active operations at the
16 time in 1978.
17 The Number 1 Leach Stockpile being this leach
18 stockpile to the east of the main mine complex.
19 And this was a letter that was submitted from
20 Phelps Dodge in response to the request from the
21 Department for those discharge plans.
22 And what it does is it transmits -- in part,
23 it transmits the discharge plan -- proposed discharge
24 plan for the Mangas Valley tailings, and then it also
25 informs the Department that Phelps Dodge does not intend

1 to provide a discharge plan for the Number 1 Leach
2 Stockpile for the reasons that are stated in this
3 letter, that basically it's -- it says it's a closed
4 circuit for economic and environmental considerations.
5 In other words, that there would be no discharges that
6 could -- that could impact underlying groundwater.
7 And so what I had read in this letter was
8 that -- the last two paragraphs which discuss Phelps
9 Dodge's intention to drill a well approximately 4.5
10 miles from the -- the leach stockpile and that they
11 would be looking at -- or monitoring that water quality.
12 And I just wanted to clarify that this was not
13 a proposal that was ever submitted as part of a
14 discharge plan or approved by the Department.
15 Q. And then those two paragraphs refer to
16 drilling a well for the tailing impoundments or for the
17 Number 1 Leach Pile?
18 A. For -- this would relate to the Number 1
19 Leach -- Leach Pile. I believe the letter says at the
20 end of the third paragraph approximately 4.5 miles from
21 the leach area.
22 Q. And when was the -- when was the discharge
23 permit for the Number 1 Leach Pile issued?
24 A. That permit was issued in, I believe, May
25 of 2007.

1 Q. And this proposal from Phelps Dodge in 1978
2 about where they would drill a well for monitoring
3 purposes was not, then, the monitoring plan that was
4 eventually approved by the Department in 2002, for the
5 Number 1?
6 A. In 2007, no, it was not.
7 Q. Oh.
8 That's all I have.
9 MS. PADILLA: Thank you.
10 Any recross from the Commission?
11 RECROSS EXAMINATION
12 BY THE COMMISSION:
13 MS. PADILLA: Commissioner Hutchinson.
14 MR. HUTCHINSON: Ms. Menetrey, whenever you
15 were being questioned in regards to Tyrone
16 Exhibit 921 -- and this is -- this came up when there
17 was a discussion about tab 19, on the -- and the
18 statement in here that's highlighted on that -- on that
19 tab 19.
20 We've heard previous testimony through -- from
21 Mr. Olson and also from yourself that there was an
22 understanding within the Department about, you know,
23 what was a place of withdrawal and that the idea in the
24 Department was that the entire mine site was a place of
25 withdrawal.