NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

December 22, 1998

Mark Ashley
Hearing Examiner
New Mexico Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

RE: Case No. 12033--Application of PNM for review of the cleanup actions required by OCD letter dated March 13, 1998

Dear Mr. Ashley:

Enclosed is a draft order in the above-referenced case pursuant to your request and your postponement of its due date to today.

If you desire any other information or have any questions, please feel free to call me at 827-8156.

Sincerely,

Rand Carroll
Division Attorney

c w/enc: Richard L. Alvidrez, Esq.
Kelleher & McLeod, P.A.
P.O. Drawer AA
Albuquerque, NM 87103

William F. Carr, Esq.
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STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

APPLICATION OF PUBLIC SERVICE COMPANY OF NEW MEXICO FOR REVIEW OF OIL CONSERVATION DIVISION DIRECTIVE DATED MARCH 13, 1998, DIRECTING APPLICANT TO PERFORM ADDITIONAL REMEDIATION FOR HYDROCARBON CONTAMINATION, SAN JUAN COUNTY, NEW MEXICO

CASE NO. 12033
ORDER NO. R-

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on November 20, 1998, at Santa Fe, New Mexico, before Examiner Mark Ashley.

NOW, on this _____ day of December, 1998, the Division Director, having considered the record and the recommendations of the Examiner,

FINDS THAT:

(1) Due public notice has been given and the Division has jurisdiction of this case and its subject matter.

(2) Public Service Company of New Mexico ("PNM") owned and operated dehydration equipment and an unlined dehydrator pit located down gradient from a well site (the "Hampton 4M") operated by Burlington Resources Company located at Unit Letter N, Section 13, Township 30 North, Range 11 West, San Juan County, New Mexico, near Aztec, New Mexico.

(3) Evidence presented by PNM, Burlington and the Division show that hydrocarbons were disposed of in PNM's unlined dehydrator pit and migrated downward to the groundwater underneath the dehydrator pit. Evidence presented by Burlington and the Division show that such hydrocarbons contaminated the ground water beneath the dehydrator pit and then migrated down gradient from the dehydrator pit.

(4) Evidence presented by PNM, Burlington and the Division also show that another

source of hydrocarbon contamination of the ground water was from Burlington's production operations up gradient of the dehydrator pit and that such contamination contributed to the groundwater contamination and added to contamination down gradient of PNM's dehydrator pit.

(5) The evidence does not support a finding that either the PNM or Burlington source of hydrocarbon contamination was the primary source of the groundwater contamination under the dehydrator pit or of the contamination down gradient of the PNM pit.

(6) Burlington is a responsible person for soil and ground water contamination up gradient of the unlined PNM dehydrator pit.

(7) PNM is a responsible person for the contamination from the unlined dehydrator pit down to the groundwater.

(8) PNM and Burlington are both responsible persons for groundwater contamination beneath, and down gradient of, the unlined dehydrator pit.

IT IS THEREFORE ORDERED THAT:

(1) PNM is a responsible person for the hydrocarbon contamination located under the unlined dehydrator pit down to the ground water, the groundwater hydrocarbon contamination located under the dehydrator pit and for hydrocarbon contamination found down gradient of the dehydrator pit.

(2) Burlington is a responsible person for the contamination up gradient of the unlined dehydrator pit, the groundwater contamination under the dehydrator pit and for hydrocarbon contamination found down gradient of the dehydrator pit.

(3) PNM and Burlington, as responsible persons, are required to comply with Division directives regarding remediation of hydrocarbon contamination.

(4) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

LORI WROTENBERY
Director

SEAL

THE LAW FIRM OF
KELEHER
&McLEOD
A PROFESSIONAL ASSOCIATION

OIL CONSERVATION DIV.

98 DEC 22 PM 3:39

Richard L. Alvidrez
Attorney at Law
Direct Dial: 505-346-9150
E-mail: rla@keleher-law.com

December 22, 1998

Hand-Delivered

Honorable Mark Ashley
Hearing Examiner
NM Oil Conservation Division
2040 S. Pacheco Street
Santa Fe, NM 87505-5472

Re: PNM Appeal of the OCD Directive Dated March 13, 1998; Oil Conservation Case No. 12,033

Dear Mr. Ashley:

Enclosed is an original and two copies of a proposed Recommendation and Final Order submitted on behalf of Public Service Company of New Mexico ("PNM") in the above appeal before the New Mexico Oil Conservation Division ("OCD"). Pursuant to your instructions, we have also included a copy on floppy disk in Microsoft Word format.

Hard copies of the Recommendation and Order were mailed to counsel for Burlington Resources and the OCD this date..

Very truly yours,

KELEHER & McLEOD, P.A.

By: Richard L. Alvidrez

cc William Carr, Esq.
Rand Carroll, Esq.
Joyce Trew, Esq.-Williams

W. A. Keleher *(1886-1972)*
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STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

IN THE MATTER OF HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

APPLICATION OF PUBLIC SERVICE COMPANY OF NEW MEXICO FOR REVIEW OF OIL CONSERVATION DIVISION DECISION DATED MARCH 13, 1998, DIRECTING APPLICANT TO PERFORM ADDITIONAL REMEDIATION FOR HYDROCARBON CONTAMINATION, SAN JUAN COUNTY, NEW MEXICO

Case No. 12033

PNM'S PROPOSED RECOMMENDATION AND ORDER FOR DISPOSITION

THIS MATTER came before the New Mexico Oil Conservation Division ("OCD" or "Division") upon the Application filed April 13, 1998 by Public Service Company of New Mexico ("PNM") for Review of Final Determination of the Oil Conservation Division Relating to the Hampton 4M Well Site. The Division Director appointed the Honorable Mark Ashley as hearing examiner. Appearing as counsel at the hearing on behalf of PNM was Richard L. Alvidrez of the law firm of Keleher & McLeod, P.A. Witnesses providing testimony on behalf of PNM were Toni K. Ristau, Rodney T. Heath, Maureen Gannon, Mark J. Sikelianos and Valda I. Terauds. Appearing as counsel on behalf of Burlington Resources ("Burlington") were William F. Carr and Paul R. Owen of the law firm of Campbell, Carr, Berge and Sheridan, P.A. Testimony was provided on behalf of Burlington by Paul Rosasco. Appearing as counsel on

behalf of the OCD was Rand L. Carroll, Legal Counsel to the Division. Testimony was provided by William C. Olson on behalf of the OCD.

The Hearing Examiner, having reviewed the Application, pleadings and evidence on the record[1], and being otherwise duly informed, issues this recommended decision and order.

STATEMENT OF THE CASE

This is an appeal by PNM from an OCD directive dated March 13, 1998 requiring PNM to "take additional remedial actions within 30 days to remove the remaining source areas with free phase hydrocarbons in the vicinity of and immediately downgradient of the Dehy Pit" at the Hampton 4M well site near Aztec, New Mexico. (PNM Exhibit 39) The matter at issue is whether PNM is responsible for massive amounts of free product underlying the Hampton 4M well site. The bases for PNM's appeal are that: 1) PNM's former unlined pit is not the source for any free phase product in the groundwater under the site; 2) the data show that the free phase product underlying the Hampton 4M well pad originated at a release point or points upgradient of PNM's former dehydration pit; 3) PNM is not the owner of any free product under the site; 4) to the extent that free product may have been discharged into PNM's former unlined pit it was the result of operational or mechanical failure of Burlington's upgradient equipment and operations; and 5) PNM has already recovered more free product from the ground water than could have possibly been discharged into its former unlined pit under any reasonable scenario.

PNM seeks a determination from the Division that it has completed all remediation activities relating to any discharges from PNM's former unlined pit and has no further

[1] Reference to the record in this Recommendation and Order are to page and line numbers of the transcript abbreviated in the following manner: e.g. (Tr. 14; 10) refers to page 14, line 10 of the written transcript.

responsibility or liability for clean-up of free product and the associated dissolved phase hydrocarbons at and in the vicinity of the Hampton 4M well site.

FACTUAL BACKGROUND

Burlington is the current owner and operator of the Hampton 4M well site. (PNM Exhibit 39) PNM has purchased natural gas from the Hampton 4M well since 1985 following its purchase of certain gas assets from Southern Union Company. (Tr. 49; 9 - 50; 20) PNM, and its affiliate, Sunterra Gas Gathering and Processing, sold their gas gathering and processing assets, including the surface equipment at the Hampton 4M well site, to Williams Energy ("Williams") effective June 30, 1995. (Tr. 51; 23 - 52; 14) As part of the contractual arrangement with Williams for the sale of the gathering assets, PNM agreed to retain responsibility for remediation for contamination that occurred before June 30, 1995 and resulting from PNM's unlined dehydrator pits. (Tr. 52; 15 - 53; 4) However, under the terms of the Agreement, PNM agreed only to be responsible for contamination problems that were actually caused by PNM through its prior operations. (Tr. 53; 17-23) PNM has no agreement to remediate contamination caused by others. (Id.)

Prior to the sale of gas assets to Williams, PNM owned two dehydrators at the Hampton 4M site. Two dehydrators were installed at the site because the well was a dual completion well. (Tr. 57; 8-14) The well was subsequently commingled within the last year and now there is only one dehydrator remaining at the site, which is operated by Williams. (Tr. 57; 14-16) PNM's former unlined pit into which the dehydrators discharged was located on the northern portion of the Hampton 4M well pad. (Tr. 59; 15 - 60; 25; PNM Exhibit 5).

Burlington and its predecessors installed, maintained and continue to operate an extensive amount of well equipment located in the southernmost portion of the site, including two combination unit separators which also discharged into an unlined earthen pit at the site. (PNM Exhibit 5) In addition, Burlington maintained two large volume product tanks on the site. (Id.) Historical records show at least two unlined pits at the site. (PNM Exhibit 54) There is evidence of surface releases from Burlington's equipment at the site. (Tr. 252;25 - 255; 14) All of Burlington's equipment is located upgradient from PNM's former unlined pit. (PNM Exhibits 4, 6, 7 and 8)

Under the terms of the gas purchase agreement which was in effect between PNM and Burlington, Burlington was required to utilize mechanical combination unit separators to remove liquid hydrocarbons, which are commonly referred to as "free product," from the natural gas purchased by PNM. (PNM Exhibit 1). PNM purchases natural gas free of deleterious liquids and is not in the business of purchasing free product. (Tr. 50; 21-25 to 51; 1-5). Title to the natural gas passes to PNM at the meter orifice, which is located downstream of the dehydrators and upstream of the gathering system. (Tr. 51; 6-10). Burlington, as the producer, retains ownership of any free product hydrocarbons which are produced in conjunction with the natural gas. (Tr. 51; 11-22).

The combination unit separators owned and operated by Burlington perform a variety of functions associated with the Hampton 4M well. These functions include providing heat for operating and turning on the well, controlling overpressure, and the separation of free product from natural gas. (Tr. 129; 20 - 130; 9 and PNM Exhibit 10)

The dehydration units owned and operated by PNM at the Hampton 4M site are and were intended to remove water vapor from the natural gas stream. (Tr. 131; 16 - 132; 6) Water vapor and other liquids in the gas pipelines will cause operational problems, including freezing and shut ins of wells. (Tr. 124; 25 - 125; 25) The combination unit separators owned and operated by Burlington are necessary for proper well operation in order to prevent free product from entering the dehydration unit and causing malfunctions and loss of glycol from the dehydration equipment. (Tr. 124;11-19) PNM as a public utility has an absolute obligation to serve its customers. (Tr. 79; 4-8). Therefore, PNM installs dehydrators to remove moisture from its gas lines to help ensure operational integrity and to ensure that it can meet its obligations to serve its customers. (Tr. 79; 4-10).

Pursuant to PNM's OCD-approved pit closure plan, PNM undertook a site assessment of the Hampton 4M well site on April 23, 1996. (Tr. 156; 9-13 and PNM Exhibit 26). The site assessment included a visual observation of the site, including the equipment at the site. Cessation of discharge at the site was achieved by shutting off the dehydrator. (Tr. 165; 4-21). After remediation of PNM's former pit on April 24, 1996, a metal tank was placed at the site for discharges from the dehydrator to ensure that no further discharges were made to the ground. (Tr. 166; 3-16). Once cessation of discharge is achieved at a site, the dehydrator can no longer be a source for contamination. (Tr. 165;10-13)

PNM conducted vertical extent soil and groundwater sampling in the area of the former unlined pit in January of 1997 when monitoring well MW-2 was installed. (Tr. 167;3-11) Per provision of PNM's approved Groundwater Management Plan, written notification of groundwater contamination was given to the OCD by letter dated January 13, 1997, with a copy

to Burlington. (Tr. 166; 17 - 167; 2 and PNM Exhibit 27). That same month, PNM installed two other monitoring wells MW-3 and MW-4. (Tr. 168; 16-19). Monitoring well MW-4 had 800 ppb of benzene in a dissolved phase. (Tr. 168; 20-25). MW3 was "non-detect" e.g. no contamination was detected using the particular analytical methods specified by the Groundwater Management Plan and OCD guidelines. (Tr. 169; 1-2). Based upon the installation of these additional wells, PNM determined that groundwater flow was in a northwesterly direction on the well-pad. (Tr. 169; 3-8 and PNM Exhibit 5). The results found in MW-4 showed the existence of contamination upgradient from PNM's former unlined pit. PNM immediately notified Burlington of these findings. (169;17-23).

PNM met with Burlington and the OCD on-site in February of 1997 to discuss possible remediation options. (Tr. 170; 14-21 and PNM Exhibit 2). A subsequent on-site meeting was held between PNM and Burlington on April 9, 1997 to discuss options relating to the installation of monitoring wells and additional excavations at the site. (Tr. 171; 20-172; 5 and PNM Exhibit 2). On April 14, 1997, Burlington discovered a surface seep of hydrocarbons on the northwest portion of the well pad. (Tr. 172; 6-11 and PNM Exhibit 2).

A meeting was held on April 16, 1997 at the site between the OCD, PNM and Burlington to discuss the hydrocarbon seep. (PNM Exhibit 2) The OCD requested that action be taken to contain the seep. (Id.) It was agreed that a collection trench should be installed to slow or stop the migration of hydrocarbons from the seep. (Tr. 173; 3-12 and PNM Exhibit 2). Burlington constructed a collection trench to contain the hydrocarbon seep on April 17, 1997. (Tr. 173; 11-12 and PNM Exhibit 2).

On April 30, 1997, Burlington commenced excavation in the area where its 300 barrel and 210 barrel fluids tanks existed. (PNM Exhibit 2). Burlington was unsuccessful in penetrating a sandstone layer in this area. (Tr. 173; 21-25 to 174; 8 and PNM Exhibit 2). On June 4, 1997, another meeting among the OCD, PNM and Burlington was held at the site to discuss further investigation. It was agreed that Burlington would continue to try to perform soil borings, but with the use of a drilling rig to try to penetrate the existing sandstone layer. (Tr. 174; 9-15 and PNM Exhibit 2). Burlington performed additional soil borings and installation of temporary monitor wells on June 5 and 6, 1997. The results of the ground water samples taken from the temporary wells indicated that: there was dissolved phase hydrocarbons in TPW-1; measurable product in TPW-2; TPW-3 was a dry hole; and TPW-5, TPW-6 and TPW-7 had high concentrations of BTEX and benzene. (Tr. 175; 5-12 and PNM Exhibit 2).

In August 1997, the OCD drew "a line in the sand" on the Hampton 4M well pad between the location of PNM's former dehydration pit on the north end of the site and Burlington's equipment on the south end of the site. (Tr. 425; 25 - 426; 12) PNM was designated responsibility for all contamination north of the OCD line and Burlington was designated responsibility for contamination on the south end of the well pad. (Tr. 448; 7-13) The basis for the OCD's line of demarcation was the belief that that there were two sources of contamination at the site. (Tr. 426; 13-20) One source was thought to be PNM's former pit and the other was some unknown source located to the south of the pit and upgradient on the Burlington portion of the well pad. (Id.)

On August 25, 1997, PNM conducted sampling at a private landowner's well located downgradient from the Hampton 4M well site. The sample results for the private well were non-detect for hydrocarbon contamination. (Tr. 176; 16 to 177; 1 and PNM Exhibit 2).

PNM conducted additional drilling and monitor well installation on October 29 and 30, 1997. An upgradient monitor well, MW-1, was installed south of the site just above the well pad. (Tr. 177; 10-25 and PNM Exhibit 2). Monitoring well MW-1 had no contamination which indicates that there was no contaminant source upgradient from Burlington's equipment. (Tr. 178; 1-5). Monitoring well MW-5 was also installed at this time and showed 6,000 ppb of benzene. (Tr. 178; 6-9). In addition, monitoring well MW-6 was installed as a free product recovery well. (Tr. 179; 14-18)

PNM also conducted quarterly ground water monitoring at the site. Measurements taken at MW-6 in November 1997 showed free product 4.8 feet thick on the top of groundwater. (Tr. 179; 22-24) The purpose for MW-6 was to allow PNM to commence recovery of free product on the water table as directed by the OCD. (Tr. 180; 12-20) TPW-1 was also installed by PNM in the area in the wash near Williams pipeline and showed that contamination had traveled at least as far as the pipeline (PNM Exhibit 2) As a follow-up, in December 1997, PNM installed MW-7 near the area of TPW-1 which is located approximately 900 feet downgradient from the Hampton 4M well pad. (Tr. 180; 21- 181; 10) PNM also installed MW-8 which showed a hydrocarbon sheen as well has high dissolved phase contamination. (Tr. 181; 19-20) Monitoring well MW-8 revealed free product within a short time of its installation. (PNM Exhibit 49)

In January 1998, PNM began recovery of free product through MW-6. (Tr. 182; 3-7) PNM also commenced its second round of quarterly monitoring at the same time. (PNM Exhibit

2). On March 13, 1998, the OCD issued its letter directive to PNM to commence recovery of free product in the groundwater at the Hampton 4M well site. (PNM Exhibit 39) No similar written directive was issued to Burlington. (Tr. 449; 17-22)

During the pendancy of this appeal, PNM continued recovery of free product until early November of 1998 when MW-6 was removed from the site by Burlington, effectively rendering any additional free product by PNM an impossibility. (Tr. 182; 8-11) Over the months of operation, PNM recovered approximately 1,100 gallons of free product from the groundwater. (Tr. 182; 12-15) PNM also continued to conduct additional sampling from the monitoring wells at and around the site. (PNM Exhibit 2) The continued monitoring showed the presence of free product in wells far upgradient from PNM's former unlined pit in the location of Burlington's operations. (PNM Exhibits 49 and 5)

During the week immediately prior to the hearing in this matter, Burlington undertook remediation in the area of PNM's former unlined pit. (Tr. 263; 16-25) Burlington is using a bulldozer to excavate in the area of the former pit down to groundwater contamination. (Tr. 264; 1-7 and 267; 17-268; 21) Burlington's use of the bulldozers resulted in the removal and destruction of PNM's monitoring and recovery wells in this area. (Tr. 263; 12-265; 14 and PNM Exhibit 2) At the time of the hearing, Burlington had not completed its remediation activities at the site. (379; 10-25)

DISCUSSION

The basic factual details outlined above are not in dispute. The disputed issue is whether PNM contributed to the presence of free product in the ground water. The following will briefly summarize the evidence presented by the parties.

PNM's Evidence.

PNM has maintained since early on that the free product at the Hampton 4M site originated upgradient from PNM's former unlined pit. PNM indicates that the presence of free product in the ground water at a site with a former unlined pit is a relatively rare occurrence. PNM has remediated approximately 1,000 former pits. (Tr. 45; 1- 46; 6) Of those sites, only about 30, or three tenths of one percent, have involved ground water. (Tr. 46; 6-8) Of those sites, only the Hampton 4M well has involved the magnitude of free product at issue in this appeal. (Tr. 46; 9-10)

A substantial amount of data have been developed at this site as a result of the sampling of monitoring wells installed by PNM, and to some extent by Burlington. (PNM Exhibit 2) Much of the data presented has been developed since PNM originally filed the present appeal on April 13, 1998. (Id.) Significantly, free product has been confirmed in MW-4, MW-8 and MW-10. (PNM Exhibit 49). With the exception of MW-1, all of these monitoring wells are located upgradient from PNM's former unlined pit and downgradient of Burlington's operations. (PNM Exhibit 49)

It is undisputed that the predominant ground water flow underlying the well pad is to the northwest. (Tr. 297; 8-23 and PNM Exhibit 6) The gradient on the well pad is 0.1, as confirmed

by surveyed locations, which is indicative of a fairly active gradient. (Tr. 299; 7-16 and Tr. 301; 20-24 and PNM Exhibit 8) Thus, the data show that groundwater flows from the area of Burlington's operations to the area underlying PNM's former dehydration pit. (PNM Exhibit 8) In addition, there is a sand lens underlying the well pad which progressively thickens under the former location of PNM's dehydration pit. (Tr. 302; 4 - 303; 9) Sand is one of the coarser elements at the site and both ground water and hydrocarbons will tend to follow the easiest path, which is the sand layer. (Id.) The thickest accumulation of sand directly underlies PNM's former pit location. (Id.) This results in the formation of a free product reservoir underlying PNM's former pit. (Id.)

There is a significant amount of free product far upgradient from PNM's former pit. (Tr. 303; 10 - 13) If PNM's pit was the source of the free product underneath its pit, there would not be any significant accumulation of product at significant distances upgradient. (Tr. 303; 14 - 17) The migration of contamination from PNM's former pit to the area of Burlington's equipment can be ruled out based on reasonable scientific probability. (Tr. 312; 8-16)

In addition to the foregoing, a considerable amount of data have been developed with regard to the soils column beneath PNM's former unlined pit. (PNM Exhibit 52) The drill log for monitoring well MW-2, which was drilled directly in the bottom of PNM's former pit, shows silty sands with hydrocarbon odor and some staining down to 16 feet below grade. (Tr. 313; 7-14) However, it was only when the drilling approached the groundwater table at about 20 to 22 feet below grade that possible hydrocarbon-saturated soils were detected. (Tr. 313; 15-19) The log shows that there was no free product in the soil column all the way down from the surface to the water table. (Tr. 313; 25-314; 2) There is a free product layer in and around the water table,

but not in the soil column directly above the water table, indicating that the source of the free product cannot be the former PNM pit. (Tr. 314; 2-4)

The foregoing findings indicate that PNM's former pit was not the source for the free product in the ground water. (Tr. 314; 5-7) Additional borings in the area of PNM's former pit also confirm the absence of saturated soils from the area of the bottom of PNM's former pit to the water table. (Tr. 314; 8-316; 14) Moreover, a videotape of Burlington's excavation activities in the area of PNM's former pit confirms the absence of saturated soils from the bottom of PNM's pit to the water table. (Tr. 316; 18-318; 12) These finding rule out PNM's pit as a source for the contamination to a reasonable degree of scientific probability (Tr. 318; 13-15)

The data developed for the Hampton 4M well site also show that a very large and laterally extensive amount of free product underlies the site. (PNM Exhibit 7) PNM had been recovering free product from the ground water for several months. (PNM Exhibit 9) The amount of free product recovered by PNM during the course of remediation was in excess of 1,050 gallons. (Tr. 322; 5-8) Despite continued recovery, the free product thickness remained relatively constant at about 2 feet after an initial drop from 4.6 feet of thickness. (Id.) This suggests either a continuing source, or a significant pool of free product under the site. (Tr. 321; 13-25) The presence of free product in wells far upgradient from PNM's former pit, suggests an areally extensive free product plume. (Tr. 321; 11-15)

Based upon the data concerning the area and thickness of the free product plume, PNM has been able to calculate an estimated volume of free product under the site. (PNM Exhibit 50) A conservative estimate of the volume of free product under the site is between 7,700 and 13,000 gallons. (Tr. 326; 21-327; 328; 1) PNM also noted an apparent anomaly in production rates of

hydrocarbon product from the Hampton 4M well. (PNM Exhibits 13, 14, 15) The production records showing the oil and gas ratios for the well indicate that there was no recovery of any oil or liquid hydrocarbons from the Mesa Verde formation for a period of at least two years, though gas production from the formation continued during that period. (Tr. 143; 17-24) This loss of production is unexplained. (Tr. 144; 20-145; 146; 21) The product unaccounted for by Burlington for the year 1995 alone represents 100 to 125 percent of the volume of free product currently estimated to underlie the site. (Tr. 328; 12-13)

Using data concerning hydrocarbon production from the Hampton 4M well, together with information concerning the relative efficiencies of the separators and volatilization of the free product, PNM was also able to calculate the maximum amount of free product which could have been discharged to its former pit. (Tr. 322; 2-324; 21 and PNM Exhibit 50) These calculations show that a maximum of 523 gallons of free product would have been discharged into PNM's pit during the entire existence of the unlined pit. (Tr. 324; 12-325; 2 and PNM Exhibit 50) This figure represents the maximum amount of product that could have possibly entered the pit as contrasted with the maximum possible amount that could have entered the ground water. (Tr. 325; 7-10) The amount that could have entered the ground water would be significantly less than this amount because soils in and underlying the pit would have absorbed the free product before it could reach the ground water. (Tr. 325; 13-326; 1) All of this data suggest that free product could not have come through PNM's pit, migrated through the soil column and ended up as more than four feet of free product in the ground water. (Tr. 325; 8-18) PNM did not handle sufficient volume of product through its dehydration pit to result in such contamination. (Tr. 325; 17-18)

PNM maintains that even if it were determined that PNM somehow contributed to the presence of free product at the Hampton 4M site, it has already recovered well in excess of any amounts that it could have possibly introduced to the ground water. (Tr. 328; 18-24) As noted above, the maximum amount of free product which could have been discharged by PNM is approximately 500 gallons. (Tr. 324; 12-325; 2 and PNM Exhibit 50) PNM has recovered in excess of 1,000 gallons of free product from the site. (Tr. 328; 18-24)

PNM also presented evidence concerning operational aspects of the surface equipment at the site. The combination unit separators owned and operated by Burlington have at least a 99 percent efficiency rate. (Tr. 130; 10-18) This means that the separators remove over 99 percent of any free product from the natural gas piped to PNM's dehydration equipment. (Tr. 130; 19-23) Under these circumstances, very little free product would ever reach PNM's dehydrators. (Tr. 131; 12-15) In addition, because of the design of the dehydrator, if large amounts of free product were released from the separators to the dehydrators, very little free product would be released from the dehydrators. (Tr. 136; 5-13) Indeed, the operational history gathered concerning PNM's dehydrators suggests that they were working well with no excessive glycol loss. (Tr. 139; 6-16) If significant amounts of free product had been released to the dehydrators, significant loss of glycol would have resulted. (Tr. 139; 17-140; 19) Because there was no significant loss of glycol, it is reasonable to conclude that the dehydrators were working properly and that little free product was discharged to the pit through the dehydrator. (Tr. 140; 20-141; 7)

In addition to the foregoing, there is a clear line of demarcation of ownership and operational responsibility for surface equipment at gas well sites. The producer, which is Burlington in this case, has absolute control over the recovery of hydrocarbons through its

separators. (Tr. 141; 8-19) The dehydrators owned and operated by PNM were intended to address moisture in the gas as opposed to free product. (Tr. 131; 24-132; 6) PNM has no control over free product which is released through Burlington's separators and into PNM's dehydrators. (Tr. 141; 16-19)

Finally, PNM presented evidence concerning the ownership of the free product underlying the site. Under the terms of the gas purchase agreement which was in effect between PNM and Burlington, PNM purchased natural gas free of deleterious liquids and did not purchase any free product. (Tr. 50; 21-25 to 51; 1-5 and PNM Exhibit 1). Title to the natural gas passes to PNM at the meter orifice, which is located downstream of the dehydrator and upstream of the gathering system. (Tr. 51; 6-10). Burlington, as the producer, retains ownership of any free product hydrocarbons which are produced in conjunction with the natural gas. (Tr. 51; 11-22). Indeed, the free product removed from the ground water by PNM and placed in the above ground tank at the site was recovered and later sold by Burlington. (Tr. 183; 23- 184; 4)

Burlington's Evidence.

Burlington presented the testimony of a single witness on the issue of whether PNM's former pit was a source for free product contamination at the Hampton 4M site. The Burlington witness testified that PNM's pit was a contributing source for the free product underlying the site. (Tr. 380; 5-11) This opinion was based upon the drilling and excavation logs for the soils underlying PNM's former pit as well as field observations during Burlington's excavations. (Tr. 384; 19-385; 22) Burlington's witness disputes that the high levels of hydrocarbon vapor in the soils beneath the former pit originated from the water table. (Tr. 386; 6-19) In addition, Burlington relied upon the finding that the thickest part of free product contamination was

located under the area of the former pit as evidence that the free product originated from the pit. (Tr. 386; 20-387; 10)

Despite Burlington's assertions relating to PNM as the source for the free product contamination, its own witness confirmed that Burlington's operations in the southern part of the site are the source for free product at the site. (Tr. 387; 15-13) Burlington's witness also established that Burlington is a responsible party for this contamination. (Id.)

Most of the remaining testimony presented by Burlington dealt with Burlington's remediation efforts at the site. Burlington's remediation efforts were concentrated in the area of PNM's former pit. (Tr. 388; 14-389; 4) The stated objective of this activity was to remove all remaining source material, free product and soils with residual product. (Tr. 389; 11-23) Burlington acknowledges that its remediation approach is to focus on remediation rather than source characterization, and that source identification may never be achieved through its approach. (Tr. 391; 10-21) In addition, Burlington's activities and removal of PNM's recovery well made it impossible for PNM to continue to its remediation activities at the site. (Tr. 263; 12-265; 14)

Burlington's remedial approach involves the use of a bulldozer to rip through the soils and sandstone layers underlying the site. (Tr. 392; 3-12) Burlington is excavating to ground water and then pumping off the ground water and free product from the site. (Tr. 396; 11-19) Burlington is attempting to dewater the entire site, but has encountered a large volume of ground water at the site. (Tr. 396; 20-397; 8)

As further grounds for its position that PNM is a responsible party, Burlington elicited testimony from PNM's witnesses that PNM chose to discharge its dehydrators into an unlined pit.

(Tr. 78; 4-16) Burlington also elicited testimony that PNM could have installed a tank to receive the discharge from the dehydrators, but that PNM, in common with Burlington and other operators in the San Juan Basis, did not install a tank until the OCD's cease discharge directive went into effect. (Tr. 78; 21-79; 3)

OCD's Evidence.

The OCD also presented the testimony of only a single witness in support of its position. The OCD witness testified that PNM was the only entity initially designated as a responsible party at this site. (Tr. 425; 5-9) In August of 1997, the OCD also designated Burlington as a responsible party and drew a literal "line in the sand" at the well pad as means of allocating responsibility for clean-up. (Tr. 425; 25-426; 7) The basis for OCD's the line of demarcation was the OCD's belief that there were two sources of free product contamination at this site. (Tr. 426; 13-20) One suspected source was PNM's former pit. (Id.) The second was some unknown source located upgradient of PNM's former pit on Burlington's portion of the well pad. (Id.) The OCD witness is still of the opinion that there are two sources of free product contamination at the site. (Tr. 427; 7-13)

The OCD also presented evidence of six former dehydrator sites in the San Juan Basin with free product contamination. (Tr. 427; 14-23) The product thickness at these sites ranges from about one-tenth of a foot to up to three feet. (Tr. 427; 24-428: 2) The OCD witness also related that he had seen some other dehydrator pits with free product in them. (Tr. 428; 25-429-16)

Analysis.

PNM presented substantial credible evidence that the free product contamination underlying its former dehydrator pit originated upgradient in the vicinity of Burlington's operations. Significantly, both Burlington and the OCD agree that the Burlington operations constitute a source for the free product at the site and that Burlington is a responsible party. (Tr. 387; 15-13 and 425; 25-426; 7)

The threshold question to be resolved is whether PNM's former pit is a source for any of the free product underlying the site. As noted above, there is conflicting testimony on this issue. PNM relies upon the relative rarity of sites with free product. Although the OCD asserts that free product is more common than indicated by PNM, the OCD still acknowledges that the occurrence of free product contamination at sites rarely occurs at sites where there is just a dehydrator and no potential upstream or upgradient source. (437; 20-438; 4)

PNM also asserts that the soil boring sample results from soils in the vicinity of its former pit demonstrate that the free product contamination could not have migrated from its pit to the ground water. Burlington uses the same sampling results to support its contention that some free product did indeed originate from PNM's former pit. Under the circumstances, the evidence and credibility of the witnesses must be assessed.

The undisputed facts show that free product contamination is a relatively rare occurrence as a result of dehydrator operations. (Id.) Moreover, the demonstrated amounts of free product which might have potentially passed through the dehydrators were relatively small -- no more than approximately 500 gallons. While Burlington indicates that the levels of benzene in the soil beneath PNM's pit were too high to suggest upward migration of contamination, it acknowledges

that this site would have been acceptable for closure based upon total BTEX concentrations of 36 ppm benzene detected in the soil sample taken by Burlington at 15 to 16 feet below PNM's pit. (Tr. 407; 10-21) These facts militate against a finding that PNM's pit is a source of free product contamination.

Consideration must also be given to the relative credibility of the evidence presented in this case. PNM has indicated from the outset that there was an upgradient source for the free product. Both Burlington and the OCD disputed this. Burlington has long asserted that it was not responsible for the free product at the site and relied upon supposedly decreasing levels of BTEX in MW-4 as evidence that it was not the source. However, the recent developments at the site have proven PNM right with respect to the source of the free product contamination under the site. Even Burlington must now acknowledge that it is a source of this free product. Under the circumstances, it is reasonable to resolve the factual dispute concerning PNM's pit as a potential source for free product in favor of PNM.

Burlington and the OCD also rely upon the relative thickness of the free product under PNM's former pit as evidence that the pit is a contributing source. Again, PNM has presented ample evidence to refute this explanation. PNM's depiction of the ground water flow at the well pad and its cross section demonstrating the migration of free product from upgradient is unchallenged. (PNM Exhibit 8) The geology of the site explains how the pooling of free product has occurred under PNM's former pit. The estimated losses of free product in Burlington's production stream more than account for the amount of free product estimated to underlie the site. And again, the amounts of free product underlying the site far exceed any amounts reasonably probable from PNM's dehydrators. Significantly, neither Burlington nor the OCD have any

estimate of the amounts of free product that may have been released by PNM. (Tr. 402; 13-17 and 434; 10-19) The fact that the thickest portion of the free product plume underlies the former PNM pit is easily explained and is not determinative on the issue of PNM's pit as the source of the free product contamination.

The OCD and Burlington also assert that PNM should be held responsible for recovery of free product because PNM chose to discharge liquids from its dehydrators to an unlined pit. This assertion begs the question. PNM, like Burlington and other operators in the San Juan Basin, was allowed by then existing rules and regulations to discharge in this manner. Even if there were discharges of wastewater to the pit by PNM, this does not establish that the discharged liquids contained free product, or more significantly, that the free product reached the ground water. To the contrary, the weight of the data show that free product did not reach the ground water from PNM's former pit.

Moreover, these arguments ignore several other facts. First, it is undisputed that the free product is owned by Burlington. PNM has no legal interest in the product. Second, PNM's dehydrators are intended only to remove moisture from natural gas. They are not intended to handle free product from Burlington's equipment. Free product can only reach PNM's dehydrator if Burlington fails to remove the free product from its natural gas as required under its agreement with PNM. PNM has no control over Burlington's upstream equipment or operations. Ownership and responsibility for the free product must remain with Burlington.

PNM has also presented substantial evidence that it has already recovered more free product than it could have possibly released to the ground water. The OCD asserts that it is not charged with apportioning responsibility for combined releases. However, the OCD concedes

that by drawing its "line in the sand" at this site and assigning liability, it has made a *de facto* apportionment of responsibility as between PNM and Burlington. (Tr. 446; 25-447; 3) The OCD further acknowledges that PNM should only be responsible for activities that PNM has conducted and that PNM is not responsible for activities that it did not conduct. (Tr. 455; 4-13)

Based on the OCD's prior allocation of responsibility at this site, and its acknowledgment that parties are only responsible for contamination caused by their own activities, it is not beyond the scope of the OCD's authority to apportion liability for contamination clean-up. The evidence shows that even if it is assumed that PNM's activities at the site contributed to the presence of free product, PNM's maximum contribution could only have been about 500 gallons of product. PNM has presented a sound and reasonable methodology for apportioning liability at this site. Even if it is assumed that free product did emanate from PNM's former pit, it is undisputed that PNM has already recovered free product far in excess of any amount it could have reasonably released to ground water. Therefore, apportionment of the relative amounts of contamination that could possibly have been contributed by each party results in PNM having already addressed its potential share of free product contamination.

FINDINGS AND CONCLUSIONS

Based upon the evidence presented at the hearing in this appeal, the Hearing Examiner makes the following findings of fact and conclusions of law:

Findings of Fact.

1. The OCD has jurisdiction over the subject matter and the parties to this appeal.

2. The OCD has issued a final appealable determination in the form of its letter of March 13, 1998 directing PNM to undertake additional remedial measures with respect to free product underlying the Hampton 4M well site.

3. PNM has timely and properly perfected an appeal of this directive to the Division.

4. Burlington is the owner of free product underlying the Hampton 4M well site.

5. The source of the release of free product underlying the Hampton 4M well site and the associated dissolved phase hydrocarbons are Burlington's operations located upgradient of PNM's former unlined pit.

6. Discharges from PNM's dehydrators to the former unlined pit did not contribute to any free product contamination underlying the Hampton 4M well site.

7. To the extent that PNM could have contributed to any free product contamination under the Hampton 4M site, PNM has already recovered more free product than it could have reasonably discharged to ground water.

8. Burlington is the responsible party for the free product underlying the Hampton 4M well site and for the associated dissolved phase product downgradient from the site.

9. PNM is not a responsible party for any of the free product underlying the Hampton 4M well site or for the associated dissolved phase product down gradient from the site.

10. PNM should be granted closure for its former unlined pit at the Hampton 4M site and relieved of any further responsibility for investigation or remediation at this site.

11. To the extent that any findings of fact contained herein are more properly considered as conclusions of law, they hereby incorporated into the conclusions of law below.

Conclusions of Law.

1. The OCD has jurisdiction over the subject matter and the parties to this appeal.

2. The OCD has issued a final appealable determination in the form of its letter of March 13, 1998 directing PNM to undertake additional remedial measures with respect to free product underlying the Hampton 4M well site.

3. PNM has timely and properly perfected an appeal of this directive to the Division.

4. Burlington is the responsible party for the free product underlying the Hampton 4M well site and for the associated dissolved phase product downgradient from the site.

5. PNM is not a responsible party for any of the free product underlying the Hampton 4M well site or for the associated dissolved phase product downgradient from the site.

6. The Water Quality Act and accompanying Water Quality Control Regulations and Oil Conservation Commission Regulations do not impose either strict liability or joint and several liability for ground water contamination.

7. Liability under the Water Quality Act and accompanying Water Quality Control Regulations and Oil Conservation Commission Regulations is based upon the degree of a party's contribution to contamination.

8. The OCD has the authority to apportion liability for ground water contamination at natural gas wells within its jurisdiction based upon a party's degree of contribution to such contamination.

9. To the extent that PNM may have contributed to the presence of any free product contamination at the Hampton 4M well site, PNM has already remediated any contamination which it could have reasonably caused.

10. PNM should be granted closure for its former unlined pit at the Hampton 4M site and relieved of any further responsibility for investigation or remediation at this site.

11. To the extent that any conclusions of law contained herein are more properly considered as findings of fact, they are hereby incorporated into the findings of fact above.

ORDER

IT IS, THEREFORE, ORDERED AS FOLLOWS:

1. The OCD's determination in its letter of March 13, 1998 directing PNM to undertake additional remedial measures with respect to free product underlying the Hampton 4M well site is hereby reversed and without effect.

2. PNM is not a responsible party for any of the free product underlying the Hampton 4M well site or for the associated dissolved phase product in the vicinity of the site.

3. PNM is hereby granted closure for its former unlined pit at the Hampton 4M site and relieved of any further responsibility for investigation or remediation at this site.

_____

MARK ASHLEY, HEARING EXAMINER

THIS WILL CERTIFY THAT a copy of the foregoing Recommendation and Order for Disposition was mailed to counsel for all interested parties this __ day of _____, 199__.

_____

74419

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December 21, 1998

VIA HAND DELIVERY

Mr. Mark Ashley
New Mexico Oil Conservation Division
2040 South Pacheco
Post Office Box 6429
Santa Fe, New Mexico 87505

Re: NMOCD Case No. 12033; Proposed Order

Application of Public Service Company of New Mexico for Review of Oil Conservation Division Directive Dated March 13, 1998, Directing Applicant to Perform Additional Remediation for Hydrocarbon Contamination, San Juan County, New Mexico

Dear Mr. Ashley:

Enclosed please find Burlington Resources Oil and Gas Company's Proposed Order of the Division in the above-referenced case. The enclosed Order was prepared with appropriate references to the transcript of the November 19 hearing.

The Proposed Order is included in both hard copy and WordPerfect format (ORD-OCC.PNM). If you have any questions, please call.

Very truly yours,

Paul R. Owen

cc: John Bemis, Esq. (w/enclosure)
Rick Alvidrez, Esq. (w/enclosure)

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

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 12033
ORDER NO. R-_____

APPLICATION OF PUBLIC SERVICE COMPANY
OF NEW MEXICO FOR REVIEW OF OIL CONSERVATION
DIVISION DIRECTIVE DATED MARCH 13, 1998,
DIRECTING APPLICANT TO PERFORM
ADDITIONAL REMEDIATION FOR HYDROCARBON
CONTAMINATION, SAN JUAN COUNTY, NEW MEXICO.

BURLINGTON RESOURCES OIL AND GAS COMPANY'S
PROPOSED ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on November 19, 1998, at Santa Fe, New Mexico, before Examiner Mark Ashley.

NOW, on this ____ day of December, 1998, the Division Director, having considered the testimony, the record, and the recommendation of the Examiner, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) The applicant, Public Service Company of New Mexico ("PNM"), seeks an order nullifying the Division directive to PNM dated March 13, 1998 requiring it to perform additional remediation for hydrocarbon contamination located in the area of the Burlington Resources Oil & Gas Company ("Burlington") Hampton Well No. 4 M Well ("the Hampton

well") located in Unit N, Section 13, Township 30 North, Range 11 West, NMPM, San Juan County, New Mexico, and a determination by the Division that PNM is not a responsible person for purposes of further investigation and remediation of contamination at this location.

(3) Burlington Resources Oil & Gas Company ("Burlington") appeared at the hearing and presented testimony in opposition to the application of PNM.

BACKGROUND:

(4) The Hampton well was drilled in 1984 and completed in the Dakota and Mesaverde formations.

(5) The natural gas produced from the Hampton well was sold to PNM and predecessors pursuant to a Gas Purchase Agreement dated March 1, 1990 ("the Gas Purchase Agreement"). PNM Exhibit No. 1, Testimony of Ristau at 65.

(6) The Gas Purchase Agreement provides that PNM may install dehydration equipment at the Hampton well but that "such equipment shall be installed, maintained and operated" by PNM at its "sole expense." PNM Exhibit No. 1, Testimony of Ristau at 20.

(7) Pursuant to the Gas Purchase Agreement, PNM installed and operated dehydration equipment on the Hampton well site, and discharged water and hydrocarbons into an unlined pit ("the dehydration pit.") *See* testimony of Ristau at 78-80, 82 and 96; testimony of Heath at 136, 148. These discharges continued for 12 years. *See* Testimony of Terauds at 326.

(8) During a site assessment of the Hampton well conducted on April 23, 1996, PNM discovered potential hydrocarbon contamination at its unlined dehydration pit at this site. PNM Exhibit No. 26, Testimony of Gannon at 156.

(9) On April 24, 1996, PNM excavated the site of the dehydrator pit to a depth of approximately 12 feet, leaving 12 to 15 feet of contaminated soils below that depth with a photo ionization detector ("PID") reading above 1000 ppm. Testimony of Gannon at 159-161, *See* PNM Exhibit No. 27.

(10) In January 1997, PNM performed a soil boring at the location of the dehydration pit. PNM bored to approximately 27.8 feet and encountered ground water with two inches of free-phase product in the bailer at that depth. Testimony of Gannon at 164.

(11) In February 1997, PNM discovered contamination up gradient contamination from the dehydration pit at the Hampton well site. Testimony of Gannon at 169-170.

(12) On April 14, 1997 Burlington reported a hydrocarbon seep along the northwestern edge of the well pad adjacent to the dehydration pit. *See*, PNM Exhibit No. 4, Testimony of Gannon at 172. A meeting was held at the site with representatives of the OCD and on April 17, 1997, Burlington conducted excavations around the northwest perimeter of the well pad and constructed a collection trench. Testimony of Gannon at 173.

(13) Burlington also excavated an area in the southern portion of the Hampton well site where it had previously maintained a 300-barrel fluids tank. Testimony of Gannon at 173.

(14) Additional monitor wells were installed at the Hampton well site between June and November 1997. PNM Exhibit No. 3, Testimony of Gannon at 174-177.

(15) On January 12, 1998 PNM commenced free product recovery at the Hampton well site. Testimony of Gannon at 182.

(16) On March 13, 1998 the OCD wrote to PNM and directed it to remove remaining source areas with free phase hydrocarbons in the vicinity of and downgradient from the Hampton Well site.

(17) PNM appealed the March 13, 1998 directive and sought a stay of the directive pending a decision on its appeal.

(18) On April 14, 1998, free product was discovered up gradient from the dehydration pit in the monitor well no. 8 ("MW-8") Testimony of Gannon at 185.

(19) The Division denied PNM's request for stay on August 20, 1998.

(20) On September 1, 1998, the OCD directed PNM and Burlington to conduct additional investigation and to determine the complete downgradient extent of contamination at the dehydration pit at the Hampton well site. PNM Exhibit No. 39.

(21) Burlington asked PNM to undertake remediation of the Hampton well site but PNM declined to do so. Testimony of Gannon at 230-231.

(22) Burlington has undertaken the remediation of the Hampton well site and its activities have been witnessed by and are acceptable to the OCD. Testimony of Olson at 440.

(23) PNM could have remediated, or participated in the remediation of, this site but did not, and now complains about the methods used by Burlington to remediate the contamination at this site. Testimony of Ristau at 95.

PNM IS A RESPONSIBLE PERSON:

(24) The Oil Conservation Division Environmental Rules and Regulations define "Responsible Person" as "the owner or operator who must complete Division approved corrective action for pollution from releases." 19 NMAC 15.8.7

PNM OWNED AND OPERATED THE DEHYDRATOR AND DEHYDRATION PIT:

(25) PNM is not required to install or operate dehydration equipment or use an unlined surface disposal pit at the Hampton well site. PNM Exhibit No. 1 at page 20, Gas Purchase Agreement.

(26) At its sole discretion PNM installed dehydration equipment and used an unlined surface pit at the Hampton Well Site. Testimony of Ristau at 78.

(27) PNM owned the dehydration equipment at the Hampton well site. Testimony of Ristau at 78.

FINDING: PNM owned and operated dehydration equipment and an unlined earthen surface disposal pit at the Hampton 4M Well site.

PNM RELEASED HYDROCARBONS TO THE ENVIRONMENT AT THE HAMPTON WELL SITE:

(28) The purpose of the dehydration equipment at the Hampton well site was to remove liquids from the gas stream produced from the Hampton well. *See* Testimony of Heath at 132.

(29) PNM owned and operated dehydration equipment at the site until 1995. Burlington Exhibit No. 1, Hampton 4M Synopsis; Testimony of Ristau at 89.

(30) PNM controlled the production stream from the Hampton well when it was in the dehydrator (Testimony of Ristau at 88) and was responsible for discharges of any liquids which came through its dehydration unit. Testimony of Ristau at 96.

(31) PNM could have refused to accept the gas tendered to it by Burlington from the Hampton well but, instead, took the gas stream into its dehydration equipment, extracted liquids from this gas and discharged water and liquid hydrocarbons into an unlined earthen pit. Testimony of Ristau at 79-80.

(32) PNM admitted that its dehydrator could have discharged free phase hydrocarbons into the unlined pit at the Hampton well. Testimony of Ristau at 81-82, testimony of Heath at 148-149.

(33) All hydrocarbons discharged into the dehydration pit had to come through the dehydrator. Testimony of Heath at 150.

(34) Hydrocarbons were released to the environment while under the management and control of PNM. *See* testimony of Heath at 136.

FINDING: PNM released hydrocarbons at the Hampton 4M well site.

PNM CONTAMINATED SOIL AND GROUND WATER AT THE HAMPTON WELL SITE.

(35) PNM alleged that the contamination under the Hampton site shown on PID readings of soil under its dehydration pit originated from the free product under the site at the depth of the ground water table. Testimony of Ristau at 99, Testimony of Terauds at 362.

(36) The concentrations of contaminants in the soil under PNM's dehydration pit were too high to originate from the free product under the site at the ground water table and appeared to be from hydrocarbon discharges into the pit. Testimony of Rosasco at 416.

(37) The evidence established that to a reasonable degree of scientific certainty that free product was released from the PNM dehydration pit and moved down the water table. Testimony of Rosasco at 380

(38) Burlington's evidence also established that:

A. the water table was not uniform and was not uniformly saturated with product floating on it as described by PNM but, instead, that water and hydrocarbons occurred in thin discrete seams below the site (Testimony of Rosasco at 393-394);

B. contrary to the evidence of PNM that the gradient under this site is from southeast to northwest (Testimony of Terauds at 298), recent data on ground water flow under the site indicates that there is uncertainty as to the actual gradient and that it appears that it is not in a northwesterly direction from the Burlington operations toward the location of the PNM dehydration pit but, instead, lacks a northerly component and is toward the west, across the well pad toward the arroyo (Testimony of Rosasco at 400); and

C. the data available showed that hydrocarbon releases occurred at the facilities of both PNM and Burlington. Testimony of Rosasco at 408.

FINDING: PNM's activities contaminated soil and ground water at the Hampton well site.

PNM FAILED TO REMOVE CONTAMINATED SOIL AT THE HAMPTON WELL SITE:

(39) PNM asserts that a source of the contamination at the Hampton well site is a one foot layer of contaminated soil which was left at the base of the Burlington excavation in the southeast corner of the well pad. PNM Exhibit 40, Testimony of Gannon at 214.

(40) Burlington testimony indicated that this pit was excavated to a depth of 17 feet and there were clean samples taken at the base of the pit. Testimony of Rosasco at p. 395.

(41) PNM testified that it "completely remediated the contaminated soils" in its dehydration pit (Testimony of Ristau at 76, 95), and removed all of the contaminated soils that were in place at the time that their pit was operated at the Hampton well. Testimony of Terauds at 318.

(42) Although it was the usual practice of PNM in the remediation of sites to clean up the bottom of the pit (testimony of Ristau at 97-98), PNM only remediated the site of the Hampton dehydration pit to a depth of 12 feet. When it stopped its remediation "...soils remaining at the bottom of the excavation exceeded 1000 ppm as measured by a photo-ionization detector." PNM Exhibit 40, March 31, 1998 letter from PNM to OCD, Testimony of Ristau at 92, Testimony of Terauds at 357.

(43) This contamination exceeds accepted environmental standards. Testimony of Terauds at 357.

(44) PNM, at the request of the OCD, conducted vertical profiling at the location of their pit and "discovered the free-phase and contaminated groundwater beneath the pit." Testimony of Ristau at 92.

(45) At the time of the September 1, 1998 directive from the OCD, there existed documented contamination in 12 to 15 feet of soil at the base of the PNM excavation at its dehydration pit that could be a continuing source of contamination at the Hampton 4M well site. PNM Exhibit 40, Testimony of Ristau at 105, Testimony of Gannon at 215-216, 218-219.

FINDING: PNM released hydrocarbons and caused contamination of soil and ground water at the Hampton 4M well site.

PNM MUST COMPLETE DIVISION APPROVED CORRECTIVE ACTION:

(46) By letter dated March 13, 1998 the OCD required PNM take additional remedial action within 30 days to remove the remaining source areas with free-phase hydrocarbons in the vicinity of and immediately downgradient of the dehydration pit at the Hampton 4M well site. PNM Exhibit No. 39.

(47) PNM sought a stay of the March 13 directive which was denied by the Division on August 20, 1998.

(48) Although soils remaining at the bottom of the PNM excavation at the site of the dehydration pit had a PID reading in excess of 1000 ppm, (PNM Exhibit 40), PNM did not remove additional source areas because it determined there was no PNM source area left to remove. Testimony of Ristau at 93.

(49) PNM only continued to recover free product (Testimony of Gannon at 219) and contends that this met the requirements of the OCD directive of March 13. Testimony of Terauds at 329.

(50) PNM admits that its free product recovery is not effective remediation (Testimony of Ristau at 104) and that its remediation efforts did not address the source of the contamination or the continued migration of contamination from the well site. Testimony of Ristau at 77, testimony of Gannon at 219, testimony of Terauds at 353.

(51) Free product recovery will never remove the remaining contamination source areas in the vicinity of and immediately downgradient of the dehydration pit at the Hampton 4M well site. *See* testimony of Sikelianos at 276-277, Testimony of Olson at 431.

(52) PNM did not remove additional source material. Testimony of Olson at 444.

FINDING: PNM has failed and refused to complete the March 13, 1998 Division approved corrective action for pollution from releases.

(53) On September 1, 1997, The Oil Conservation Division directed PNM to conduct additional investigation to determine the complete downgradient extent of groundwater contamination at the Hampton 4M well site. PNM Exhibit Nos. 47 and 48, Testimony of Gannon at 219.

(54) PNM contacted the OCD and requested that Burlington also be involved in this investigation of the extent of the downgradient contamination. Testimony of Gannon at 200, 220.

(55) The OCD then asked Burlington and PNM to cooperatively work together to investigate and to determine the complete downgradient extent of groundwater contamination at the Hampton 4M well site. Testimony of Gannon at 226.

(56) Although PNM met with Burlington to determine what actions could be taken in response to the OCD's September 1, 1998 directive (Testimony of Gannon at 226-227) PNM refused to pay any of the costs of this effort and even asked Burlington to pay for PNM's personnel to monitor Burlington's work. Burlington Exhibit No. 3, Testimony of Gannon at 227-230.

(57) In response to the OCD's September 1, 1998 letter to PNM requiring additional investigation at the Hampton well site, PNM did nothing other than what it had been doing prior to receipt of the letter. Gannon at 246

(58) PNM refused to pay for any additional investigation or remediation. Testimony of Gannon at 226-230.

(59) PNM testified that it will not be willing to pay for remediation with which it does not agree. Testimony of Ristau at 110.

FINDING: PNM has failed and refused to complete the September 1, 1998 Division approved corrective action for pollution from releases.

CONTAMINATION AT THE HAMPTON WELL SITE WAS A THREAT TO PUBLIC HEALTH AND SAFETY:

(60) The Oil Conservation Division has power "to regulate the disposition of non-domestic wastes resulting from the exploration, development and production or storage of crude oil or natural gas to protect the public health and the environment." NMSA 1978, § 70-1-12 (21) (1989).

(61) The dissolved phase contamination plume from the Hampton well site is moving down gradient at a rate of as much as 500 feet per year (Testimony of Terauds at 301) and was at least 800 feet long at the time of the Examiner hearing in this case. Testimony of Terauds at 354.

(62) A water well and home are located approximately 1000 feet downgradient from the Hampton well site. Testimony of Terauds at 354.

(63) The Division's principal concern in requesting additional investigation and remediation at the Hampton well site was the downgradient migration of the contamination plume. Testimony of Olson at 445.

(64) PNM admits that its free phase recovery efforts should not stop the movement of the plume downgradient. Testimony of Gannon at 219.

(65) PNM admits that it has done nothing to address this movement of the dissolved phase plume. Testimony of Terauds at 355.

(66) The remediation activities of Burlington do not have an invasive effect on the environment. Testimony of Olson at 441.

FINDING: The contamination at the Hampton 4M well site was a potential threat to public health and safety.

FINDING: Immediate remediation of the Hampton well site was necessary to protect public health and safety.

FINDING: PNM is an owner and operator who must complete Division Approved corrective action for pollution from releases at the Hampton well site.

FINDING: PNM is a responsible person for the contamination at the Hampton Well site.

ALLOCATION OF RESPONSIBILITY:

(67) Burlington admits that it is a responsible person for contamination at the Hampton well site but asserts that PNM is also a responsible person. Testimony of Rosasco at 387.

(68) In response to the OCD September 1, 1998 directive, Burlington has investigated the source of contamination at the Hampton well site and has undertaken remediation which has been witnessed by the OCD. Testimony of Rosasco at 388-397.

(69) The OCD has determined regulatory responsibility for this contamination and directed both PNM and Burlington to undertake investigation and remediation of the site. *See* PNM Exhibit Nos. 47 and 48, September 1, 1998 letters to PNM and Burlington.

(70) The Oil Conservation Division determines who are the responsible persons for contamination as a result of exploration, development and production or storage of crude oil or natural gas operations but does not apportion that responsibility between the responsible persons. Apportionment of responsibility for contamination is determined by the courts. Testimony of Olson at 434, 448.

FINDING: PNM and Burlington share the regulatory responsibility for the contamination at the Hampton well site. Any allocation of that responsibility between PNM and Burlington is a matter to be resolved in the courts.

THIS CASE SETS NO PRECEDENT:

(71) In this case PNM seeks the establishment of a regulatory precedent whereby every case of contamination which involves free phase hydrocarbons is the responsibility of the producer. *See* Burlington Exhibit No. 1, Hampton 4M Synopsis at p.1.

(72) The contamination under the PNM dehydration pit is not a unique occurrence for OCD records establish that there are numerous sites where there is free phase product contamination from dehydrators. Testimony of Olson at 427-428.

(73) Other sites with soil contamination similar to the contamination under the PNM dehydration pit at the Hampton well site have resulted in free-phase hydrocarbon contamination. Testimony of Olson at 433.

(74) PNM admitted that there are cases where free product is not associated with a release by an upstream producer. *See* Burlington Exhibit No. 1, Hampton 4M Synopsis at p.2.

(75) PNM testified that the contamination issues at this site are atypical. Testimony of Terauds at 335.

(76) Each case of contamination at an oil or gas well must be evaluated on a site specific basis. Testimony of Olson at 443.

FINDING: This case will not establish a precedent before the OCD concerning responsibility for contamination of soil and ground water from oil and gas production related activities for each case of contamination requires a site specific evaluation.

IT IS THEREFORE ORDERED THAT:

(1) The application of the Public Service Company of New Mexico ("PNM"), for an order nullifying the Division directive to PNM dated March 13, 1998 requiring it to perform additional remediation for hydrocarbon contamination located in the area of the Burlington Resources Oil & Gas Company Hampton No. 4-M Well located in Unit N, Section 13, Township 30 North, Range 11 West, NMPM, San Juan County, New Mexico, is denied.

(2) The application of the Public Service Company of New Mexico for a determination that it is not a responsible person for purposes of any further investigation or remediation of contamination of soil and groundwater at and downgradient from the Hampton 4M well site is denied.

(3) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinbefore designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

LORI WROTENBERY
Director

S E A L