Docket 40-3453
PDR
Return
TO
D. CRANER
396-55

Atlas Minerals

Division of Atlas Corporation

P.O. Box 1207 Moab, Utah 84532
(801)259-5131

Betty

MOS

Assign to Kotsch

August 5, 1981

VIA CERTIFIED MAIL #P11 5367062
RETURN RECEIPT REQUESTED

John T. Collins, Deputy Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011

Re: Source Material License No. SUA-917
Docket No. 40-3453

Dear Mr. Collins:

This correspondence addresses the significant findings and the Notice of Violation included in the documents we received July 7, 1981 as a result of the "Special NRC Mill Appraisal" which was conducted at the Atlas mill during the period May 11-15, 1981, by personnel from the NRC and Battelle Pacific-Northwest Laboratories.

As you are probably aware, the Notice of Violation included, as Appendix B, seven itemized violations which were also addressed, in whole or in part, in Appendix A, Significant Appraisal Findings. This response will address the violations first and the significant findings second, although there will inevitably be some overlap.

We appreciate being allowed thirty days to respond instead of the twenty specified in 10 CFR 2.201. We trust you find our corrective actions and responses satisfactory. We are aware of the potential hazards associated with uranium milling and, as always, have every intention of conducting our operations within the reasonable guidelines prescribed by law and regulation.

FEE EXEMPT
Response to Notice

ORIGINAL NOT REC'D

10277
Add'l Info

If you have any questions or comments, please do not hesitate to contact us at your convenience.

I certify that all information contained in this letter, including any supplements thereto, is true and correct to the best of my knowledge and belief.

August 7th, 1981.

Richard E. Blubaugh

Richard E. Blubaugh
Regulatory Affairs Manager

STATE OF UTAH)
) ss.
County of Grand)

ON THIS 7th day of August, 1981, personally appeared before me, the undersigned Notary Public, RICHARD E. BLUBAUGH, the signer of the foregoing certificate, who duly acknowledged to me that he executed the same.

WITNESS my hand and official seal.

L. Carmen

Notary Public
Residing at Moab, Utah.

L. CARMEN FURNELL NOTARY PUBLIC STATE OF UTAH

My Commission Expires:
July 13, 1985

REB:cf
Enclosures.

cc: Mr. Pete Garcia
Mr. C. L. Cain

SUPPLEMENT A

RESPONSE TO NOTICE OF VIOLATION

This document has been prepared in response to the Notice of Violation received July 7, 1981, as a result of the NRC appraisal conducted May 11-15, 1981 at the Atlas Uranium Mill near Moab, Utah. The violations, paraphrased below, are followed by the appropriate response.

- VIOLATION NO. 1:

  Contrary to License Condition 25(c), contamination levels in excess of the values specified in License Annex C, dated November 1976, were present in the acid filter doghouse, a lunch room and office area, during March, June and July 1980, and corrective measures were not taken to prevent recurrence. A study was not performed by the licensee to determine the cause of the buildup.

Response:

Atlas agrees that the contamination levels which were present in the acid filter doghouse in March, June and July 1980 were in excess of the values specified in License Annex C dated November 1976. However, Atlas does not agree that a study was not performed to determine the cause of the buildup or that corrective actions were not taken to prevent recurrence. It is true that the study(s) and the corrective actions were poorly documented.

As demonstrated by the data shown on page 33 of the NRC report, contamination levels were reduced to levels below the average values allowed by Annex C after the high levels were measured in March and June. The high level measured in July immediately preceded the previously planned corrective action to remodel the doghouse (See Exhibits A, B, C and D). Obviously, a study had been performed by the Radiation Protection Staff and had been communicated to the Maintenance Department in order for this work to have been planned and performed. In addition to the need to remodel the doghouse to eliminate sources of airborne radioactive material, emphasis was placed on clean-up and housekeeping in one-on-one discussions with the operators throughout the year.

In addition to the corrective actions indicated above, Atlas has ceased using the grizzly shack and the sample tower doghouse (bottom floor) as eating areas. This action was taken July 20, 1981, not necessarily in response to this violation, but in an effort to further demonstrate implementation of the ALARA principle and practice.

Although License Condition 25(c) does not specify that studies performed to determine buildup causes and corrective actions taken to prevent recurrence be documented, Atlas feels that this detail would further enhance our operation insofar as we could provide written evidence to support our actions, consequently, Atlas agrees to improve documentation of studies and corrective actions.

25(c) require documentation.

- VIOLATION NO. 2:

Contrary to License Condition 39, isokinetic sampling of the yellowcake drying and packaging stacks had not been performed since January 1980.

Response:

Atlas admits that this has been a deficiency in the overall sampling program. Isokinetic sampling equipment was purchased in August 1979 and our Mr. Jeff Atwood is knowledgeable in the use of this equipment as he fully demonstrated to Mr. Dave Kopta, Public Health Engineer with the Bureau of Air Quality, Division of Environmental Health, Utah State Department of Health, on July 21, 1981. The primary reason why the sampling has not been performed is because the platform and access ladder have been in the process of construction. They have recently been completed and will be installed and ready for use by August 15, 1981. The stacks will be sampled within thirty days after the ladder and platform have been installed.

- VIOLATION NO. 3:

Contrary to License Condition 46, remote instrumentation, installed by Atlas, signals an audible alarm as a result of temperature changes rather than as a result of changes in water flow and air pressure differential. Daily checks of the alarm system have been neither performed nor documented since the license condition was issued.

Response:

Atlas acknowledges the deficiency in the remote instrumentation as it was specified in License Condition 46. However, Atlas feels that the temperature-dependent system is adequate for the intended purpose.

There has been no substantive corrective action to date, with the exception of commencing daily checks on the existing alarm system. A bill of material and labor estimate to install an alarmed interlock system as specified in License Condition 46 has been prepared.

Even though we feel the temperature-dependent system is adequate, Atlas, with a cooperative attitude, plans to order the necessary materials by August 7, 1981; and, barring any unforeseen problems, expects to have the specified alarmed interlock system installed and operating by January 1, 1982. The associated daily checks and documentation will be ongoing.

- VIOLATION NO. 4:

Contrary to 10 CFR 20.103(b)(1), the licensee had not undertaken efforts to reduce dust accumulations in airborne radioactivity areas located within the ore crushing and storage areas.

Response:

Atlas recognizes that this violation is one of degrees and that the author probably did not intend to imply that Atlas had made no attempt to

reduce dust accumulations in the ore crushing and storage areas since this is simply not true. Atlas is also aware of the potential hazards associated with airborne radioactivity and, for that matter, airborne dusts of any kind. However, with a system as old as this one is, there are some limitations to the implementation of cost-effective mitigative measures. This accounts for the reliance on the respiratory protection program in areas such as those referenced.

Corrective actions relative to this violation are continuous and ongoing. They include shoveling, vacuum cleaning, limited washdown and employee training, as well as a daily documented inspection by the RSO who informs those responsible of the need of cleanup in all areas of the mill. The mill operations personnel covered all the exposed electrical connections, plugs, electric motors, etc., and proceeded to thoroughly wash down the ore crushing and storage area with the fire water system.

need defined procedure in mill

Corrective actions planned for the future include the ongoing program outlined above with increased emphasis on operator accountability, limited wash down and increased use of vacuum cleaning and conveyor sprays.

- VIOLATION NO. 5(a):

  Contrary to 10 CFR 20.201(b), adequate surveys had not been performed to assess worker exposure to airborne uranium in accordance with 10 CFR 20.103(a). Specifically, sampling had not been performed in a manner which would yield results representative of airborne uranium concentrations inhaled by mill workers.

Response:

Sampling is normally performed in a manner which would yield results representative of airborne uranium concentrations inhaled by mill workers. Atlas recognizes that while some improvements can be made relative to sample collection location, some human factors are more difficult to control. The items referenced on pages 17 and 18 of the NRC report do not significantly affect the adequacy of Atlas' surveys relative to assessing worker exposure to airborne uranium. In addition, the statement that "some exposures may actually be fifty times those documented due to the possible inappropriate application of the protection factor of fifty for full-face respirators" appears to be based on the observation of one worker and unsubstantiated hearsay.

Atlas is distressed that the NRC would issue a violation of this nature based on the inappropriate actions of one individual, hearsay, and conjecture about the representative nature of samples collected from fifty-two different locations. Conjecture about possible timekeeping errors is also used to substantiate the violation.

Corrective actions taken to date are shown below and include procedural, personnel and equipment changes.

A. The individual observed in the "respirator required" area who was not wearing a respirator has been terminated. The subject action was just one of a series of such incidents which resulted in his termination.

B. Workers required to wear lapel samplers have been required to report the flow rate observed just prior to shutting off the sampler in addition to the time worked in the area.

C. Tripods or something similar will be obtained and modified for use with the stationary samplers in order to obtain the most representative sample possible.

The corrective actions shown above as A and B have been implemented. Corrective action C will be completed in approximately two months.

- VIOLATION 5(b):

Contrary to 10 CFR 20.201(b), surveys had not been performed in accordance with 10 CFR 20.106(a) to evaluate radioactivity in airborne effluents released to unrestricted areas north of the mill complex.

Response:

Atlas is of the opinion that this violation has been issued in error. It is required under 10 CFR 20.201(b) that Atlas make or cause to be made such surveys as necessary to comply with the regulations in 10 CFR Part 20. Atlas is restricted, under 10 CFR 20.106(a) to release to an unrestricted area, radioactive materials in concentrations which do not exceed the limits specified in Appendix B, Table II of Part 20, except as authorized. Concentrations may be averaged over a period not greater than one year. License Condition 37 states, "Not withstanding the provisions of Section 5.5.5.1 of the licensee's safety analysis report revised August 28, 1975, the licensee shall implement the environmental monitoring programs specified in Table 6.4 of NUREG 0453 (See Exhibit E). As you can see, Table 6.4 stipulated a NW (northwest) site boundary sample (See map, Exhibit E). In addition, there is a sample station located in the unrestricted area near the Arches National Park Headquarters. The average concentrations from this unrestricted area sampler for the period April 1980 through March 1981, are shown below:

Radionuclide	MPC(uCi/ml)	Average Concentration (uCi/ml)
Uranium, natural	5×10^{-12}	0.15×10^{-13}
Radium 226	2×10^{-12}	0.07×10^{-14}
Thorium 230	3×10^{-13}	0.17×10^{-14}
Lead 210	8×10^{-12}	2.94×10^{-14}

These concentrations do not exceed the limits specified in Appendix B, Table II, of Part 20.

Atlas also has two other sample stations in the unrestricted areas which do not show excessive concentrations.

Since License Condition 37 essentially specifies environmental sample locations, there is no population at risk to the north except for those at the Arches National Park Headquarters, and there is a sample station located there which has not shown any excessive concentrations, Atlas suggests that this violation was issued in error and does not propose to take any corrective action.

- VIOLATION NO. 6:

  Contrary to License Condition 34, on May 11-15, 1981, sprinkler heads in the solvent extraction area were encrusted with mineral deposits which would have prevented their operation.

Response:

Atlas acknowledges the encrusted condition of several sprinkler heads in the SX area, but does not agree that this condition would have significantly impaired the operation of the system to the extent of not providing control over fires in the storage tanks as implied by the violation.

Effective immediately, our current fire prevention checklist form will be modified to include inspection and cleaning, when necessary, of SX area sprinkler heads. This function is performed routinely on a weekly basis by the Maintenance Department. A copy of these inspections will be reviewed by the Safety Engineer.

- VIOLATION NO. 7:

  Contrary to 10 CFR 20.203(d)(2), the ore crusher area known to be an airborne radioactivity area was not so posted on May 11-15, 1981.

Response:

The area of concern had previously been posted with a sign bearing the radiation caution symbol and the words:

CAUTION

AIRBORNE RADIOACTIVITY AREA

Evidently the sign had deteriorated or had been removed or covered up.

The area was properly posted effective June 1, 1981. This minor deficiency should not occur again.

SUPPLEMENT B

RESPONSE TO SIGNIFICANT APPRAISAL FINDINGS

This document addresses the signficant appraisal findings indicated in Appendix A of the NRC documents received July 7, 1981. The findings were based on the conclusions developed by the appraisal team which conducted the special appraisal at the Moab Mill May 11-15, 1981.

The findings will be paraphrased below and followed with a specific response or series of responses as appropriate.

A. ORGANIZATION, MANAGEMENT AND TRAINING.

> The radiation protection function is not fully effective in implementing the mill radiation safety program due to the combination of the function with the metallurgy function and deficiencies in the training and qualifications of its staff members. The radiation protection component lacks the necessary authority for proper implementation of programs and for suspending operations as necessary. Programs have not been fully established in the following areas: maintaining exposures ALARA, effectiveness auditing, formal and complete procedures. Responsibility and authority have not been established for worker radiation safety training and for mill fire protection under single qualified individuals. The training program has not been fully developed.

Response:

Atlas recognizes the need for improvement in these areas and has not been neglectful in this regard. The improvements may seem slow in coming but, as you would probably agree, to make hurried decisions on matters such as these can result in even more problems than what currently exists. There is a sense of urgency involved, but it is, perhaps, somewhat constrained by the fact that, as your Mr. John T. Collins put it, ". . . your overall health and safety program is adequate for present operations. . . ." However, Atlas is committed to providing a safe workplace for its employees and will take reasonable actions to improve programs and operations where necessary and feasible.

A.1 One of the conclusions made by the appraisal team is that the effectiveness and independence of the radiation protection function should be improved by separating matallurgy and radiation protection functions and by outlining a management commitment to fully implement the radiation safety program.

We think that Atlas has outlined a management commitment to the radiation safety program as evidenced by policy, training, and personnel capable of conducting and evaluating the required surveys, as well as providing respirators, bioassays, etc. However, we agree that a small "conflict of interest" could exist with the

present organizational structure. In order to improve this situation, a position with the title of Regulatory Affairs Manager has been developed and is presently occupied by Mr. Richard E. Blubaugh (See Resume Enclosed, Exhibit G). Mr. Blubaugh has considerable training and experience in the areas of regulatory compliance, health physics and uranium extraction and processing. He is currently reviewing the organizational structure, authority and responsibility arrangements and will soon be recommending improvements. He will be assisted in these efforts by Mr. John Panos, Administrative Manager; Hay Associates, Management and Personnel consultants; Mr. Richard Weaver, President of Atlas Minerals; and the other managers effected. A possible separation of metallurgy and radiation protection functions may result. The final organizational structure will be designed to improve more than radiation safety and, consequently, will be developed in a very orderly and deliberate manner. For these reasons, the final organizational changes are not anticipated to be completely finalized until the beginning of the next fiscal year, or July 1, 1982.

A.2 The appraisers also recommended that formal position descriptions be established for the RSO and his subordinates to facilitate a clear assignment of authority and responsibilities within the radiation protection component. Even though position descriptions do exist, we are in the process of developing new position descriptions in conjunction with Hay Associates. These descriptions, which will also include responsibility and authority statements, are expected to be complete by January 1, 1982. It should be pointed out that the positions, although described, might be subject to reassignment under different supervisory positions until the process is finalized with the new fiscal budget.

A.3 It was also recommended that the radiation safety component should have full responsibility for the worker radiation safety training program or otherwise continually review the training program for effectiveness. Mr. Wayne Jensen, General Mill Manager, issued a memorandum July 21, 1981, which complies with this recommendation (See Exhibit H).

A.4 It was also suggested that responsibility for the mill fire protection program should be documented and clearly identified under a single individual. It is not clear what is meant by that suggestion. Ultimately, the responsibility for the mill fire protection program rests with the General Mill Manager, however, since he cannot possibly be directly responsible twenty-four hours a day, he must delegate this responsibility. In fact, it would be physically impossible for one individual to be responsible for fire protection at all times. Therefore, it seems reasonable to assign this responsibility to the most responsible individual who would be at or near the scene of any mill fire. For this reason, the Acid Plant Shift Foreman is designated as the Fire Chief and has the responsibility of fire protection in the mill. The Alkaline Plant Shift Foreman assumes this responsibility when the Acid Plant Shift Foreman is not immediately available. These responsibilities are delineated in the enclosed Emergency Procedures (Exhibit I).

It is possible that these procedures and the responsibility assignments could change during this period of review and reorganization. If there are changes in this area, we will notify you as they occur.

A.5 The appraisers recommended that Atlas should fully develop an ALARA program for milling activities and referred to draft regulatory guide (Task OH941-4) as guidance. Since an ALARA program incorporates all of the specifics referred to throughout Appendix A and the supporting report, Atlas feels that this recommendation will be encompassed by the sum of these responses. Nevertheless, please be assured that Atlas is committed to the ALARA principle. Replacement of the ore storage pad near Tex's Tour Center by a pad more distant from the "nearest residence" is an example of Atlas' commitment to the ALARA philosophy.

A.6 Another recommendation was that Atlas should implement a management audit program which includes mill management evaluations of the radiation protection unit effectivensss and radiation protection unit evaluations of the radiation safety aspects of mill activities. The radiation protection unit does perform evaluations of the radiation safety aspects of mill activities. These evaluations are made with each completed survey, each bioassay, and the numerous inspections made by the RSO and Radiation Technicians, as well as the inspections made by other operations and maintenance personnel in various areas of the mill operations. If there is a deficiency in the evaluations performed by the radiation protection unit, it appears to be a lack of documentation which is observed by inspectors, outside auditors, etc., since the presence of such documentation appears to facilitate an understanding of the operation to persons not familiar with it. However, the purpose of the programs is not to facilitate understanding or quick reviews by outside parties, but rather to provide a safe workplace for Atlas' employees and satisfy the regulatory requirements. Unnecessary documentation is not cost-effective and can only detract from overall program effectiveness.

The establishment of the position of Regulatory Affairs Manager was the major corrective action taken relative to the recommendation for a management audit program. In addition to this action, Atlas is currently using an independent consultant for review and evaluation. Although the mill management can and does perform evaluations of radiation protection unit effectiveness through the use of such data as overexposures, excessive airborne concentrations, high bioassays, etc., a more sophisticated management audit will be developed by the Regulatory Affairs Manager and should be implemented by January 1, 1982.

A.7 An additional recommendation stated that radiation protection procedures should be established which detail each radiation protection program, and that a document control system for both radiation protection and standard operating procedures should be established. Although this recommendation has some merit, Atlas is concerned that the NRC does not take into consideration the fact that improvements in this area are and have been underway, both by Atlas management and the independent consultant, Mr. Noel Savignac, Ph.D. This process should also be completed by October 1, 1981.

A.8 It was recommended that a fully documented radiation safety training program be established which includes indoctrination of radiation protection principles, radiation theory, airborne and surface contamination hazards and control, regulatory limits, biological effects, survey methods, and ALARA policy.

Atlas is distressed that the NRC does not accept the "fully documented radiation safety training program" which is included as a part of the approved MSHA (Mine Safety and Health Administration) training program which includes refresher training once each year. Included in this training is a discussion of radiation theory, a lesson on "self-rescue and respiratory devices" which addresses the use of and reasons for respiratory devices and areas where they are required. The indoctrination handouts (Exhibits J and K) include such items as an ALARA policy statement and airborne and surface contamination hazards and control. The information required by 10 CFR 10.12 is included in the lessons on "self-rescue and respiratory devices" and "mandatory health and safety standards" which are a part of the approved MSHA training program which every new employee receives. This information is used each year for refresher training. Biological affects, regulatory limits and hazards and control, as well as radiation theory are included in the indoctrination materials. There may be room for improvement in this training program, as there probably is in almost any program; however, Atlas and MSHA are confident in the effectiveness of the training program and no major revisions are anticipated at this time other than making the RSO responsible for the radiation aspects. If the NRC has specific recommendations that would increase the overall training program cost-effectively, we would be quite willing to incorporate such improvements.

A.9 It was also recommended that an ongoing training program be established for the radiation protection staff which includes special training in various aspects of applied radiation protection and control, and requirements of NRC regulations and licenses. This recommendation is not really justified since employee training is, by its own nature, an ongoing program. Atlas has provided specialized training for the radiation protection staff in the past and will continue to do so in the future. We certainly hope the NRC understands that there will always be a certain amount of employee turnover, that even the best employee will not recall all of his training at any given time, that on-the-job training is an effective means of providing training, and that there are limited opportunities for the specialized training required. Atlas will continue to endeavor to improve the level of knowledge and experience of its employees.

A.10 The last recommendation made in regard to training states that corrective actions should be taken to assure that positions established for radiation training and back shift radiation safety coverage are assumed by individuals fully qualified to execute the prescribed functions. Atlas acknowledges the concern expressed in this recommendation and would like to assure the NRC that Atlas shares that concern. All supervisors are experienced with regard to the mill operations, supervision, and radiation hazards and control. They also receive training in a formal situation as well as a considerable amount of one-to-one, but undocumented, training by the RSO with regard to survey needs and survey instrument operation and maintenance.

In general, Atlas is of the opinion that the recommendations made relative to worker, radiation protection staff, and supervisor training in the area of radiation protection were apparently made based on an incomplete examination of the training program elements, and an inherent bias which automatically rejects programs which are not of the same caliber or which do not meet the same standards

with which one is accustomed. We believe that the concept of site specificity applies to more than siting a tailings pond or determining the number of monitor wells. What works best in a nuclear research laboratory, or nuclear reactor staffed with highly educated individuals does not necessarily work as well in a uranium mill whose workers are primarily high school graduates and even lesser educated individuals. This would seem to be especially true since the relative radiation hazards and levels of risks are quite different. Also, the task of fully documenting every aspect of all activities may be cost-effective for an organization that deals in paper, procedures and words, but it is not necessarily so for an organization that deals in uranium concentrate or some other tangible product.

B. INTERNAL EXPOSURE AND CONTAMINATION CONTROL.

Atlas' programs for airborne radioactivity sampling, worker exposure determination, respiratory protection, contamination control and bio-assay, were found to be weak as a result of insufficient management commitment to program development, implementation, and enforcement which has resulted in inadequate sampling procedures and analysis techniques, incomplete assessment of worker exposure, and failure to institute process controls in order to maintain exposures ALARA.

Response:

B.1. It was recommended that Atlas include airborne radioactivity areas in routine sampling program, or preferably, use lapel samplers on all individuals who enter such areas. After considering this this recommendation and discussing it with the radiation protection staff, it was agreed that this would not significantly improve our airborne sampling program. Atlas currently takes monthly air samples in ten locations in the crusher and ball mill building, and three weekly air samples in the YC area. Areas which are not normal worker stations are not included in the routine sampling program; however, nonroutine work in these areas is covered by the special authorization and/or the standard operating procedure which requires respirators and lapel samplers.

B.2 It was recommended that mill operational status be considered when air sampling is performed, i.e., the particular area being sampled should be in full operational status at the time of sampling. It is our opinion that, since the mill facilities are not always fully operational, such a sampling requirement would result in nonrepresentative sampling. Needless to say, the results would be on the conservative side; but they would not be representative nor would they accurately depict worker exposure. By taking the samples in a fairly random manner, yet assuring that they are fairly representative of mill operations, Atlas feels that worker exposure is more accurately determined. A conscientious attempt will be made to record the operating condition of the mill on the sampling result form. The faried operations of the Atlas Mill which have to be balanced operationally make an absolute requirement to sample at both a set monitoring frequency and only during operation unrealistic. It should be pointed out that

some activities, such as cleanup, are often performed when all or part of the mill is inoperational; and, that these activities may actually cause higher airborne concentrations than when the mill is operational and the worker is performing normal duties. For these reasons, Atlas does not plan to initiate any corrective actions in regard to this item.

B.3 Another recommendation relative to airborne radioactivity requires that area samplers always be placed at locations representative of air inhaled by workers. Atlas is in agreement with this recommendation and, as indicated in the response to Violation No. 5(a), will obtain and use tripods or similar devices in order to facilitate this type of representative sample. The corrective action should be completed by September 1, 1981.

B.4 It was recommended that the flowmeter valves on lapel air samplers be modified to prevent changes in sample flow rate during use by the worker. Atlas does not think this modification is necessary. However, in an effort to provide assurance that the flow rate remains essentially unchanged during the sampling period without questioning the credibility of the wearer, Atlas has requested that the wearer check the flow rate just prior to turning the sampler off and report the final flow rate along with the time the sampler is worn. This procedure is effective immediately.

B.5 Another recommendation required that airborne radioactivity areas be properly and conspicuously posted, and that areas not so designated not be so posted. Atlas has no argument with this recommendation. The area of concern was posted as required June 1, 1981. There should not be any further problems in regard to this item.

B.6 One of the recommendations concerning sampling required a modification be made to the method used to transfer radon gas from the mylar bag to the Lucus scintillation cell. Since the appraiser apparently based this recommendation on a significant variance from only one sample, Atlas is not convinced that a modification is necessary. We will review this matter more thoroughly and insure that an adequate volume of air is transferred to purge the nitrogen from the Lucas cell. If any further correction is deemed necessary, Atlas will take the necessary action and inform the NRC accordingly.

B.7 It was recommended that Atlas implement a program to reduce accumulations of dust in ore crushing, sampling, and storage areas. This has long been a concern to Atlas and precautions have been taken to minimize the accumulations and to clean up such accumulations periodically. In addition to the ongoing program elements of shoveling, vacuum cleaning and limited wash-down, Atlas will, as stated in our response to Violation No. 4, increase emphasis on operator accountability, limited wash down, increased use of vacuum cleaning and conveyor sprays.

B.8 Another recommendation was that Atlas include an appropriate correction factor in the air sample analytical calculations for filter collection efficiency. Atlas is not aware of another uranium milling firm which uses such a correction factor in the analytical calculations. After further reviewing this matter with Mr. Noel Savignac, an independent health physics consultant, we have concluded that this recommendation does not warrant action at this time since the filters used by Atlas (Gelman A-E glass fibers) are given an efficiency rating of 99.9% in continuous use.

B.9 It was recommended that Atlas establish a program for routine inter-laboratory comparisons similar to those described in NRC Regulatory Guides 4.14 and 4.15. Atlas does not disagree with this recommendation. Such a program was being conceptually developed before the NRC mill appraisal was conducted. The program is in the process of being "fully and formally proceduralized" prior to being implemented. We expect the program to be operational beginning with the fourth quarter of 1981.

B.10 The recommendation that Atlas management audit the program for timekeeping and exposure time reporting appeared to be based on incomplete analysis of the program. The support material in the report consists of one statement which says the timekeeping data may contribute major errors . . . and may not accurately reflect area occupancy time. Atlas conducts an annual audit of the timekeeping data routinely reported by the workers via a full-scale time study. The results of the time study are compared with the time reported by workers and significant discrepancies are further investigated. In addition, the supervisors are responsible for assuring their crews accurately report their time. At this time, Atlas sees no need to develop and implement further management audits.

B.11 Atlas is in agreement with the recommendation that respirators should be worn by workers when required and that protection factors only be applied to exposure calculations when respirators are actually worn. This is the standard procedure in existence at Atlas. Of course, when an individual reports that he was wearing the respirator, the technicians have no alternative but to calculate accordingly. As indicated in our response to Violation No. 5(a), those individuals not willing to perform their duties in accordance with Atlas' procedures will, with cause, be terminated. All levels of management have been advised to increase emphasis on following standard operating procedures and enforcing existing disciplinary practices, effective immediately.

B.12 It was also recommended that record systems be modified to afford the recording of sampler serial number and technician name on sample records. Atlas does not agree that this is a significant finding, but has instructed the radiation technicians and the RSO to proceed as recommended, effective immediately.

B.13 One of the appraisers recommended that a training program be established and documented for the radiation protection personnel who administer the respiratory protection program. Here again, as was discussed in A.8, A.9 and A.10, Atlas feels

that adequate training has been given, but the appraisers were not able to make this determination because there is no formalized program or documentation. Atlas will make a reasonable effort to improve the documentation of the training program. It should be documented to your satisfaction by October 1, 1981.

B.14 It was also recommended that Atlas maintain records of attendees at respiratory user training sessions. This documentation would be a part of the complete program mentioned above in B.13 and will be included in the program, effective immediately.

B.15 The recommendation was made that the radiation protection function should asesss the need for respiratory protection in airborne radioactivity areas during cutting, welding, and grinding operations on contaminated equipment. Atlas has an existing procedure which requires all nonroutine activities which might involve radioactive material be authorized via a special work order which must be signed by a superintendent or the RSO. A determination is made at the time of authorization whether or not special monitoring and/or protective equipment (i.e., respirators, etc.) is required (See Exhibit L). We feel this procedure is adequate to handle the situations mentioned since contaminated equipment would be located in areas which would require the use of the "Authorization for Work in Radiation Areas".

B.16 Another recommendation relative to respirators was that Atlas establish a controlled area for the storage of respiratory equipment with access available only to radiation protection personnel. Again it is noted that a significant finding is apparently based on hearsay and not substantiated by actual observations of the appraisal team. Be that as it may, Atlas has a procedure currently in effect ("Procedure for Maintenance of Respirator", Exhibit M), which requires that clean, bagged respirators be put in the appropriate container and locked up in the catalog room. The RSO maintains that only laboratory and radiation protection personnel have keys to this locked room. This would preclude access to individuals other than radiation protection or laboratory personnel. The technician interviewed may not have been aware of respirators which had been issued by someone else in the group. This will be investigated further and adequate security will be provided if it is not already present.

B.17 It was recommended that each inspected and approved respirator be tagged with the inspector's name and date. This recommendation, although not considered significant by Atlas, has been included in the program, effective immediately.

B.18 It was also recommended that the radiation protection representative issuing equipment assure that each individual requesting use of a respirator have a current medical qualification to use such equipment. Atlas is aware of this discrepancy in the respirator program and has instituted a modification whereby the Personnel Department will update the list of workers not qualified to use respirators as often as necessary to keep the list current. This will insure that respirators will not be issued to individuals who are not medically qualified to use one. This will be effective immediately.

B.19 Another recommendation was that new respirators be inspected to the same standards as used respirators prior to being issued for use. Atlas agrees with NRC on this item and this corrective action has been initiated effective immediately.

B.20 It was also recommended that Atlas take necessary precautions to assure that supplied-air system component failures will not introduce a high-pressure air stream into a respirator during use. Atlas is assured by the supplied-air system vendor that such failures are highly remote and should not occur with the components used at this facility.

B.21 The last respiratory protection-related recommendation states that air compressor intake ports should be located in areas free of fumes and contamination, and that routine tests should be conducted to insure that air quality standards are maintained. Tests will be conducted on a quarterly basis to determine the quality of air in the vicinity of the intake ports. The following parameters will be checked using an industrial-type hand pump and dosimeter tubes:

Nitric-Acid	Ammonia
Chlorine	Hydrogen Sulfide
Carbon Monoxide	Ozone
Sulfur Dioxide	

This corrective action will commence with the current (third) quarter of 1981.

B.22 It was recommended that all new employees submit urine samples for analysis prior to initial work in the mill in order that baselines may be established. Atlas is in agreement with this recommendation and will institute this program modification immediately.

B.23 Another recommendation related to urinalysis was that a laboratory quality assurance program be established which includes frequent laboratory intercomparisons. As discussed in B.9 above, Atlas is in the process of proceduralizing a comprehensive quality-assurance program and should have it completed and operational by the fourth quarter of 1981.

B.24 It was recommended that cases in which action limits are exceeded be fully investigated and a documented evaluation prepared. This recommendation may have been made without fully examining the files and procedures relevant to this item. As evidenced by Exhibits N and D Atlas does conduct an investigation in cases which exceed action limits and does document the evaluation and corrective action. There may be some questions as to the completeness of such investigations and evaluations in the mind of the appraiser, but Atlas feels such actions to be adequate, especially in light of the relatively low exposures received at the mill.

B.25 Another bioassay-related recommendation was that Atlas should reduce its action limit for in-vivo results below 16nCi. The RSO, upon review of this recommendation, stated that he evidently misunderstood the appraiser's question when he was asked about the in-vivo action limit. He quoted the 16nCi limit as the recognized standard which requires action to be taken. However, Atlas has previously accepted the guidance given in NRC Regulatory Guide 8.22 and would take the prescribed actions (i.e., identify source, initiate control measures, etc.) for in-vivo results greater than 9nCi, even though Atlas seriously questions the real benefit in the in-vivo program.

B.26 The last bioassay-related recommendation was that Atlas should report by phone any in-vivo results exceeding the action limit. Atlas does not feel that such a reporting arrangement would benefit anyone. The results of in-vivo counting are not usually available for some time after the tests are conducted. Any concentrations of airborne radioactivity sufficient to yield a result of 9nCi or more would have been detected through the air sampling program and would have been corrected. Also, the urinalysis would, in all probability, indicate a problem because not all respired U_3O_8 is insoluble and the soluble portion of the U_3O_8 would apear in the urine. Any investigation and evaluation performed would be documented for the file and would be available to the NRC during their inspection. Of course, any results greater than 16nCi would be immediately reported.

B.27 It was recommended that Atlas implement mangement controls to assure that dosimeters are worn when required, that they are worn so as to be sensitive to beta radiation, and that the proper use of dosimeters is emphasized in worker training sessions. It is unfortunate that the appraiser making this recommendation was able to observe what we consider to be rare exceptions to the rule. The management controls already exist and workers are properly trained in the use and significance of the TLD badges. Every effort will be made to correct the bad habits of those workers who do not wear their dosimeters properly.

B.28 It was also recommended that Atlas establish a quality assurance program to test validity of vendor-reported TLD data. Atlas has been assured by the TLD vendor, Radiation Detection Company, that they have participated in the NSF national testing program through the University of Michigan for the last fifteen years and, in fact, were the only such company to score 100% on the last audit. They are also audited every quarter by E.A.L. at the request of Southern California Edison and, in addition, are audited periodically by two other utilities (See Exhibit P). We feel this should be adequate.

B.29 Another recommendation made was that beta surveys be performed at all in-plant locations where gamma measurements are made, and that instrument survey data include the following information: date and time of survey, instrument serial number, type of survey, units of measurement, and signature of surveyor. Atlas objects to the beta survey portion since License Condition 37 and Section 5.5.1.1 of the Safety Analysis Report (SAR) specify gamma measurements only. The additional information will be included on the survey forms, effective with the next regularly scheduled survey.

B.30 The recommendation to include all pertinent data on surface contaminations surveys was also made. Atlas agrees to include such data as recommended in B.29 with the next regularly scheduled survey.

B.31 Again, it was recommended that Atlas promptly respond to survey data indicating high contamination levels and thoroughly document any investigations and corrective actions. Atlas feels that prompt response to high contamination levels is part of our normal response, but will endeavor to improve the documentation of such responses.

B.32 It was recommended that the operating voltages of laboratory counters should be set near the middle of the characteristic plateau, and that plateau determinations and operating voltage determinations be fully documented. Atlas has no objection to this recommendation and will institute this modification effective immediately.

B.33 The recommendation that the laboratory counters be routinely source checked to assure that there have been no changes in operating characteristic was apparently made wthout a complete understanding of the current procedures. Lab counters are routinely source-checked as part of normal operating procedures.

B.34 It was recommended that stricter management controls be implemented to assure that all equipment is surveyed prior to release to unrestricted areas. Atlas was pleased to see that the appraisers found this program to be acceptable, and will make every reasonable effort to assure that all equipment and material leaving the plant site will be surveyed prior to release, if appropriate. This program is routinely audited at the management level.

C. FACILITIES AND EQUIPMENT.

> The appraiser found that certain mill facilities and equipment were not designed or used in a manner that would reduce effluents to the environment or maintain exposure to workers ALARA. Methods of detecting failure of stack scrubber and dust collectors had not been established, and mill ventilation and ore pile dust reduction methods had not been fully optimized.

Response:

C.1 It was recommended that Atlas take additional measures to assure the control of airborne dusts from ore pads. Atlas is of the opinion that the procedures currently utilized are adequate for the purpose of controlling all but insignificant quantities of airborne ore dusts from the ore pads. Atlas intends to proceed with the present program unless ambient air samplers indicate a potential problem.

C.2 It was also recommended, in addition to Violation No. 3, that the hearth/scrubber interlock alarm be activated by changes in scrubber water flow and air pressure differential rather than by temperature, and that the audible alarm function be checked daily. As indicated under Violation No. 3, Atlas agrees to make the recommended changes, and these should be completed no later than January 1, 1982.

C.3 It was recommended that dust collector manometer indications should be read and recorded daily in order to provide early detection of bag filter failure. Atlas has no serious objection to this recommendation and agrees to install pressure differential gauges on the dust collectors for the purpose stated above. The installation of these gauges is expected to be completed by September 1, 1981, barring unforeseen circumstances.

C.4 It was also recommended that the exhaust port of the fine ore bin dust collector should be relocated to prevent effluent flow into the ball mill building. Drawings have been completed and materials are in stock in our warehouse. This modification is expected to be completed by September 1, 1981.

C.5 Another recommendation was that all ventilation fans in mill buildings be operated during warm weather in order to reduce airborne radioactivity levels. A form has been prepared for the routine inspection of all ventilation fans. They will be inspected on a routine basis and repaired as necessary to provide ventilation as necessary.

C.6 It was also recommended that the laboratory hoods be modified to enhance safety. Atlas had already planned to make these modifications prior to the appraisal. The design work is completed and the complete bill of materials has been prepared. Barring unforeseen circumstances, the modification should be completed during the scheduled three-week shutdown, or by October 18, 1981.

C.7 It was recommended that the fire system sprinkler heads in the SX area be routinely cleaned in order to assure operational readiness. Atlas is in agreement with this recommendation and has issued instructions to this effect. The SX sprinkler heads will be inspected, and cleaned if necessary, on a weekly basis, effective immediately.

C.8 It was recommended that repairs to the SX facilities be completed to prevent leakage and resultant ponding of flammable process fluids. The repairs were previously scheduled and, barring unforeseen circumstances, should be completed by November 9, 1981.

C.9 It was further recommended that approved self-contained respirators be procurred for use during fires, and that the procedures be amended to require that

such equipment be used under specified conditions. Atlas is in full agreement with this recommendation. The Safety Engineer has been instructed to select and purchase approved self-contained respirators. They should be available for use within one-to-two months. The old unapproved respirators will be properly disposed of, and the procedures modified accordingly.

C.10 It was recommended that a final inspection of product drums be performed and documented prior to shipment to assure that drums are not deformed or distorted to such an extent that package strength is compromised. Every reasonable effort will be made to ship the product in containers which are in good condition.

C.11 It was also recommended that lid retaining rings be secured with a 5/8" or larger bolt to better assure package integrity under accident conditions. Atlas does not feel that a 5/8" or larger bolt will provide a real significant advantage in package integrity under accident conditions. There is no evidence that Atlas is aware of that would suggest a real benefit from this larger bolt, consequently Atlas will not initiate this change.

C.12 Another recommendation called for a detailed monthly inspection of Moab Wash. Atlas is of the opinion that the present inspection program, which includes daily visual inspections of Moab Wash, is adequate for the purpose of determining channel bank erosion, bed aggradation, bed degradation, bed siltation, obstructions to flow, undesirable vegetation, condition of riprap, or other unusual or inadequate operational conditions. It should be pointed out that there are several additional inspections made weekly by various supervisors and managers which are not part of the routine program. Atlas is confident in the inspection program as it is currently being conducted.

C.13 It was also r ded that a quarterly inspection be instituted to include: evidence of ocalized or overall settlements or depressions; irregularities in slo ent and variance from originally constructed slopes; unusual change original crest alignment and elevation; evidence of movement at or beyond the toe; erosion; surface cracks; evidence of seepage; springs and wet or boggy areas; and maintenance of operating facilities and features. Included in this recommendation was a suggestion that procedures and criteria be developed for unscheduled inspections following the occurrence of significant earthquakes, tornadoes, floods, or other unusual events. Again, as stated above, Atlas feels that its present inspectional program is adequate to detect the irregularities, variances, and usual changes itemized. Even though not "fully and formally proceduralized" Atlas does conduct unscheduled inspections after, and even during, unusual climatic events. These unscheduled inspections are often made by management. The recommendation is well taken and Atlas will endeavor to proceduralize and document as time permits.

C.14 The final recommendation made with regard to tailings facilities inspections was that an annual technical evaluation be made covering the topics

contained in C.4 and C.5 of Regulatory Guide 3.11.1, Revision 1. Again, Atlas does not agree that this additional inspection is justified. In addition to the inspections made routinely by the Yard Boss, and the boiler operators, and the inspections made by various supervisors and managers, the facility is routinely inspected by NRC and MSHA officials. It is also frequently tured by visiting contractors, vendors, and members of the public who are escorted by managers and supervisors. Almost all of the above individuals, with the exception of public and some vendors and contractors, are trained and technically competent with regard to detecting potential problems.

D. ENVIRONMENTAL MONITORING.

The appraisers found that the rationale for the environmental monitoring program had not been fully developed. Ambient airborne concentrations were not assessed at a point on the site boundary closest to and predominately downwind from the mill stacks, and equipment was not utilized in order to obtain representative samples at other locations. Stack sampling had not been performed isokinetically. Thermo-luminescent dosimeters for direct radiation measurements were improperly selected and utilized, and specified surface ponds were not sampled. A program for data trend analyses and laboratory quality assurance, including laboratory intercomparisons, had not been established.

Response:

D.1 It was recommended that ambient air and soil sampling be performed at the site boundary north of the complex at a point where maximum airborne uranium concentrations would be expected. AS discussed under Violation No. 5(b), Atlas' environmental monitoring program was reviewed by NRC and approved as shown on Table 6.4 in the FES dated January 1979, which was referenced by Source Material License Condition 37, and the ambient air sampling station in question was specified as being located NW (northwest) of the mill facilities. It must be emphasized that an ambient air monitoring station exists at the Arches National Park headquarters and, as indicated under Violation No. 5(b), the results from the station show no concentrations in excess of the limits specified in Appendix B, Table II of Part 20. Atlas does not anticipate amending this license condition.

D.2 It was also recommended that water sampling of site ponds, Moab Wash, and the site sewer retention area be incorporated into the environmental program. Sampling rationale should be based on radioactivity analyses of initial samples. Atlas is agreeable to sampling the liquid sewage for uranium prior to its removal to the community sewage system. This sampling will commence with the next sewage transfer. However, since the ponds in question are extremely unlikely to contribute any environmental contamination, Atlas does not feel compelled to initiate sampling programs simply to acquire data. The sampling of Moab Wash may be desirable in order to obtain baseline data, but the logistics of such sampling are not conducive to such a commitment from Atlas.

D.3 It was recommended that stack effluents be sampled isokinetically and that it be done when the mill is in full operational status. It was further recommended that the "recarb" stack effluent be sampled for uranium and be included in routine sampling program if the results so warrant. As discussed under Violation No. 2, stack sampling will be performed isokinetically within thirty days of the completed platform and ladder installation and, of course, the stacks and associated equipment would be in full operational status during the sampling. Atlas also agrees to sample the "recarb" stack effluent for uranium at the same time. If uranium is present in the effluent, additional sampling will be scheduled.

D.4 It was also recommended that continuous particulate air samplers be modified to assure representative sampling. The modifications were completed on June 30, 1981 in accordance with specifications provided by the RSO.

D.5 Another recommendation was that Atlas reevaluate the direct radiation measurement program utilizing TLDs. Atlas agreed with this recommendation and TLDs specifically designed for environmental monitoring were ordered and are in place for the third quarter. The environmental monitors will be read quarterly as suggested. The data will be reviewed by the Regulatory Affairs Manager as well as the RSO and General Mill Manager.

D.6 It was recommended that Atlas assure that all environmental data is graphed or otherwise evaluated for trends. Atlas has and will continue to evaluate all data that is generated from the authorized programs. A discerning eye can, as you will probably agree, evaluate data in columns or lines just as well as in graphs. Atlas will continue to evaluate data for trends using the most appropriate means available.

D.7 The final recommendation was that Atlas establish a laboratory quality assurance program in accordance with Regulatory Guide 4.15, and report and record data in a manner similar to that described in Regulatory Guide 4.14. Atlas, as has been previously stated, is in the process of developing a comprehensive laboratory quality assurance program which should be satisfactory to the NRC. The program should be "fully and formally proceduralized" and in effect by October 1, 1982.

RICHARD E. BLUBAUGH

Regulatory Affairs Manager

Born: April 23, 1945,
Iowa City, Iowa.

Married, two children.

B.S., Biology, University of New Mexico, 1972.
M.A., Public Administration (Environmental and Public Health), University of N.M., 1976.
Certificate, Ten-Week Course in Health Physics and Radiation Protection, Oak Ridge Associated Universities, 1977.

Professional/Technical Societies:

National Environmental Health Association;
New Mexico Environmental Health Association;
Texas Environmental Health Association;
Texas Health Physics Society,
South Texas Chapter;
American Nuclear Society, Texas Chapter;
American Institute of Mining Engineers;
American Water Well Society; and
American Soil Conservation Society.

Special Skills:

Portable Radiation Detectors
Radiological Monitoring

Honors/Honorary Societies:

Awarded Full Academic Scholarship by Potash Company of America, Carlsbad, N.M., to University of New Mexico, 1965-1969.
Elected to "Chaaka", Jr. Men's Honorary, University of New Mexico, 1967.
Elected to "Blue-Key", Sr. Men's Honorary, University of New Mexico, 1968.
President of Sigma Chi Fraternity, University of New Mexico, 1968-1969.
Elected to Phi Sigma, Biology Honorary, University Of New Mexico, 1968.
President of New Mexico Enviornmental Health Association, Albuquerque, N.M., 1975-1978.
President's Citation, National Environmental Health Association, 1977.

EXPERIENCE:

- Apprentice Chemist, Potash Company of America, Carlsbad, New Mexico, 1965-1968.
- Customer Service Specialist, General Electric Company, San Francisco, California, 1969.
- Assistant Director of Quality Control, Carnation Company, Oakland, California, 1970-1971.
- Environmental Scientist I, H&SSD - Environmental Improvement Agency, Las Cruces, N.M., 1972-1973.
- Environmental Scientist II, H&SSD - Environmental Improvement Agency, Roswell and Albuquerque, New Mexico, 1973-1976.
- Environmentalist IV, H&SSD - Environmental Improvement Agency, Grants, N.M., 1976-1977.
- Radiation Safety Coordinator, United Nuclear Corporation, Churchrock Operations, Gallup, New Mexico, 1977-1978.
- Environmental Safety Coordinator, Chevron Resources Co., Hobson, Texas, 1978-1980.
- Project Manager, Espey, Huston and Associates, Inc., Denver, Colorado, 1980.
- Environmental Manager, Federal-American Partners, Riverton, Wyoming, 1980-1981.
- Regulatory Affairs Manager, Atlas Minerals, Moab, Utah, 1981-Present.

EXHIBIT G

FIELDS OF EXPERIENCE

Received laboratory experience with PCA in Carlsbad, New Mexcio. While working summers, performed quality control analyses which included metals, salts, pH, suspended solids, and others. Acquired a working knowledge of wet chemistry techniques, atomic absorption spectrometry, colorimetry, etc. During experience with PCA, also did some research with ion exchange resins. Experience in industry was furthered in California at General Electric Co., Great Western Chemical Co., and Carnation Co., where I became more familiar with customer service, office procedures and quality control.

Worked for the Environmental Improvement Agency of New Mexico from September 1972 to November 1977, performing a variety of assignments all of which required the establishment and development of a new position/office for the Agency. Started with an in-depth study of environmental lead (Pb) poisoning in Dona Ana County, New Mexico. This included research and monitoring design; sample collection of air, soil, water, blood (from children), pottery glazes, residential paint, and other sample materials; interview, and report writing.

The next two assignments were related to the food and milk industries. In addition to the environmental concerns of air, water, solid wastes, and hazardous chemicals, was also responsible for enforcing sanitation standards.

Last assignment with the EIA was in Grants, New Mexico, where I served as administrative coordinator, industry liaison and supervisor for field support in the Grants Minerals Belt. These activities were focused primarily on the uranium industry. I inspected all existing uranium mills for compliance with regulations governing radioactive materials and other relevant EIA regulations, receiving on-the-job training from NRC field inspectors; also assisted the licensing section with the review of applications for Radioactive Materials Licenses.

While with the Environmental Improvement Agency of New Mexico, was required to devote part of my time and attention to public relations and interfacing with other federal, state and local government organization; also attended numerous workshops and short courses on relevant subjects in the environmental field.

At United Nuclear, I improved skills and knowledge concerning health physics at uranium mills; was responsible for radiation surveys, exposure calculations and compliance with the regulatory agencies.

At Chevron Resources Co., expanded my administrative skills and supervisory capacity; was responsible for environmental monitoring, radiation safety, occupational health and safety, security, reclamation, and permitting activities at a new uranium mining and milling operation in South Texas, including interfacing and liaison with regulatory agencies such as TACB, TDH, TDWR, and the RRC in Texas, and MSHA, NRC, DOT, and EPA at the federal level.

Am an experienced manager in the environmental field; with the permitting and licensing processes for various mining endeavors in the Southwest and West; with the various elements of both the private and public sectors. As Project Manager for Espey, Huston and Associates, was responsible for coordinating the efforts of specialists from various disciplines in an efficient manner; for developing a professionally sound and attractive document; and for effectively representing clients before regulatory agencies and other interest groups.

As Environmental Manager for Federal-American Partners, I utilized my experience and expertise at reorganizing and managing the Environmental Department which included: responsibility for Radiation Protection; Environmental Monitoring, Reclamation and Permitting. Permitting efforts were pursued with the Wyoming Department of Environmental Quality, the Wyoming State Engineer and the United States Nuclear Regulatory Commission, Environmental Protection Agency, and others.

At Atlas Minerals I have responsibility for assuring that all activities are conducted in compliance with applicable laws, rules, and regulations of the various state, local and federal agencies which govern the activities of mineral extraction and processing; am an integral part of the management team; participate in planning and program evaluations in the areas of occupational health and safety, radiation protection and reclamation, as well as permit and licensing functions of present and future operations.

Technical Reports/Presentations:

- "Metal Removal Properties of Various Ion Exchange Resins in Brine Solutions" Potash Company of America, Carlsbad, New Mexico, 1968.
- "Childhood Lead Poisoning Study in Dona Ana County, New Mexico", New Mexico Environmental Improvement Agency, Sante Fe, New Mexico, 1973.
- Honorarium - "Environmental Management in the Grants Mineral Belt", Environmental Studies Division, Argonne National Laboratory, Argonne, Illinois, 1977.
- "New Mexico Groundwater Regulations", National Environmental Health Association Annual Conference, Coronado Island, San Diego, California, 1977.
- "Application for Surface Mining Permit for Jack Pump Uranium Area", Chevron Resources Co., Hobson, Texas, 1979 (with J. Saucerman, VTN).
- "Proposal to Perform Studies and Prepare Applications for License Renewal for Chevron Resources Co., Panna Maria Uranium Mill, Karnes County, Texas", 1980. For: Espey, Huston and Associates, Inc.
- "Fatal Flaw Analysis for Hazardous Waste Site Near Pueblo, Colorado", U.S. Pollution Control Co., Oklahoma City, Okalahom. 1980. For: Espey, Huston and Associates, Inc.
- "Environmental Report for the Renewal of the Radioactive Source Material License for the Conquista Uranium Project, Karnes County, Texas", Conoco and Pioneer Nuclear, Inc., Falls City, Texas, 1980. For: Espey, Huston and Associates, Inc.
- "Hazardous Waste Evaluation of the Flourspar Mining Facility Near Salem, Kentucky", Marathon Minerals Co., Denver, Colorado, 1980. For: Espey, Huston and Associates, Inc.
- "Revised Proposal for the Subsurface Disposal of Uranium Mill Tailings at Federal-American Partners, Gas Hills, Wyoming", 1981. With: B. Highland, Dames & Moore.

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ATLAS MINERALS

DIVISION OF ATLAS CORPORATION

INTER-OFFICE CORRESPONDENCE

Pet # 1-21-81

To Dale Edwards

From W. M. Jensen *Date* July 21, 1981

Subject Radiation Training, Mill

COPY FOR: R. Squires, J. Johnson, B. Flynn, R. McCormick, R. Blubaugh

Dale, at the present time you have the title of Radiation Safety Officer along with your title of Chief Metallurgist. Following through with recommendations from NRC, it will be necessary for you to assume the total responsibility of radiation training here at the mill. This can be accomplished in conjunction with Randy Squires in the MSHA training classes, and also using Jay Johnson and yourself in conducting radiation training and review in regular safety meetings.

Training should include special emphasis with shiftforemen covering back shifts when radiation people are not on the property. With proper insutruction Randy and Jay would be able to conduct most of these training classes requiring less frequent involvement of yourself. All classes and training should be documented and put in the file.

Wayne

Wayne

lw

EXHIBIT H