

HOWA LANL 111071173



ENTERED

Department of Energy
Albuquerque Operations Office
P. O. Box 5400
Albuquerque, New Mexico 87185-5400

MAR 13 1996

Louis Geoffrion
3125 Nickel St.
Los Alamos, NM 87544

Dear Mr. Geoffrion,

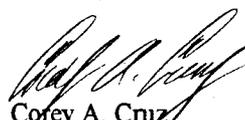
This letter is provided in response to your June 20, 1995, letter to me (enclosed) which expressed a concern regarding the potential disposal of plutonium in the Airport Landfill. Your concerns are being taken very seriously by the Department of Energy (DOE), and I have been working with Los Alamos National Laboratory (LANL) and DOE personnel to further investigate them. I apologize for the amount of time it has taken to provide this response; I trust that you received the initial response from Mr. Joseph Vozella (enclosed) regarding the ongoing efforts of the Environmental Restoration (ER) Program at this Landfill. I also understand that LANL staff members have contacted you in their efforts to resolve this issue.

Since the time that I received your letter, I have been working with LANL to identify the documents you referenced and any other information that could assist in resolving the disposition of the plutonium in question or otherwise assist the ER Program in efforts to address the cleanup of that site. I have enclosed the LANL reports on these efforts, which indicate that uranium was disposed of in this landfill. Additionally, there is a report which indicates plutonium contamination at an undisclosed site which is further described in a classified "special report;" however, the "special report" could not be located. At this time, our efforts to uncover additional information regarding this subject have been unsuccessful. Our efforts to date have been unable to confirm or deny that the events you recounted took place and resulted in plutonium disposal in the Airport Landfill.

By copy of this letter, I am providing the available information to the DOE ER Program elements which are involved in addressing the cleanup of this site. This is intended to ensure that they are aware of the potential for plutonium contamination in this area. We will continue to depend on the ER Program to provide for appropriate characterization and cleanup of this and other sites at LANL. If you have any further information on this subject which can assist in these efforts, please forward them to Mr. Ted Taylor (ER Program Manager at the DOE Los Alamos Area Office) or Ms. Deborah Griswold (ER Program Engineer at DOE Albuquerque). Mr. Taylor and Ms. Griswold can be reached at (505) 665-7203 and (505) 845-4752, respectively. While Mr. Taylor and Ms. Griswold are more directly involved in the ER Program than I, you are also welcome to address your comments to me at DOE Albuquerque.

I appreciate your concern regarding the health and safety of the community surrounding the LANL site, and I look forward to your continued participation in the LANL Site-Wide Environmental Impact Statement process. You are welcome to contact me with further comments, questions, or suggestions at the address on this letterhead or by phone at (505) 845-4282.

Sincerely,


Corey A. Cruz
Project Manager
EIS Projects Office



Printed on recycled paper



4809

TZ

*Jan - review &
then discuss
w/ me pronto*

MAR 3 1996

Enclosures

cc w/Enclosures:

- B. Garcia, NMED
- J. Vozella, LAAO
- T. Taylor, LAAO
- D. Griswold, ERD, AL
- G. Runkle, OSHD, AL
- C. Soden, EPD, AL
- D. Bergman, EIS, AL
- D. Garvey, MS M889, LANL
- D. Ball, GRAM, Inc.
- C. Rodríguez, Los Alamos Community Outreach Center



Los Alamos

NATIONAL LABORATORY

Environment, Safety & Health Division
Site-Wide Environmental Impact Statement Project Office

ESH-EIS, MS M889
Los Alamos, New Mexico 87545
(505) 665-8969, FAX 665-8970

Date: December 4, 1995

Refer to: ESH-EIS:95-419

Mr. Corey Cruz
US Department of Energy
Albuquerque Operations
PO Box 5400
Albuquerque, NM 87185-5400

RE: STATUS OF PLUTONIUM IN AIRPORT LANDFILL

Dear Corey:

No further documentation regarding the alleged plutonium in the Airport Landfill has been found. The only reference is the 1960-61 H-Division Progress Report containing the cryptic statement that "plutonium contamination was found at one of the sites." The "special report" that was referenced cannot be located.

Los Alamos Environmental Restoration personnel have interviewed Louis Geoffrion, the person who wrote you the letter containing the plutonium contamination allegations. He continues to maintain that the plutonium was lost in the landfill, although it could not be found at the time.

Searching for the plutonium at the Airport Landfill is an objective of the ongoing characterization at the landfill; however, the sampling to date has found no evidence that plutonium is there. The fuel rods that supposedly were lost there are small, so it is easily possible that they will not be found short of an exhaustive search. The general feeling is that, if the rods are there, they present no risk unless the landfill is excavated.

Should any further information become available, I will immediately bring it to your attention.

Sincerely,


Doris Garvey,
Project Leader

DG:rma

Cy: R. Hurdle, ESH-EIS, M889
R. Ferenbaugh, ESH-EIS, M889
SWEIS Project Files, 1.1.13
SWEIS Files

To: Corey Cruz 9/22/95

From: Doris Garvey 

Subj: Report on plutonium at airport landfill

As we discussed on the telephone, Roger Ferenbaugh and ER have come up with the internal H-division memo (December 1960-January 1961) cited in the letter to you from L. Geoffrion. Attached are the first three pages of a lengthy memo--the citation is on p. 3 and references a "special report". Roger and ER are still looking for the special report.

I will keep you informed on progress.

6-DIVISION PROGRESS REPORT

December 30, 1960 - January 30, 1961

I. ADMINISTRATION (Thomas L. Wilson, M.D., Leader)

A. Group

1. Radiation Measurements in Space

A somewhat unexpected program in the Biomedical Research Group of the Health Division has involved the development and design of radiation measuring instruments to be carried into outer space on a variety of missiles. The development of the various ionization chambers and scintillation counters at Los Alamos has been done in collaboration with members of I-1. The following table summarizes the rides which these instruments have already made.

Vehicle	Date	Altitude	Results
4 Balloon Flights (Berdji, Miss.)	Summer	To 142,000 ft	Data being analyzed; dose rates below 10 mr/hr. Solar flare activity extremely quiescent. Cosmic rays would produce about 0.5 mr/hr.
Atlas	8/2/60	1700 km	Dose cans not recovered; data delayed and not analyzed.
Atlas	11/9/60	1200 km	Very successful flight; LAM Serial No. 5 ion chamber performed properly. Maximum dose rate was 340 mrad/hr in descending portion of flight shortly after apogee. Temperature almost constant at -20°C.
Blue Scout I	1/1/61	About 1800 km	Successful first flight of a series to probe both Van Allen belts; data not available yet.

Blue Scout I, launched successfully from Cape Canaveral on January 1, was the first of a long series of research and development flights scheduled by the Air Force for 1961 to probe both Van Allen belts to very high altitudes. It was the largest solid-fuel rocket ever flown from the Cape. Flight data are as yet very scant, but the following is what is known at the present writing.

FILE BARCODE

00131196



00131196 001

Maximum altitude (apogee) was about 1800 km; the instrument capsule (not recovered) came to earth about 1900 km down the Atlantic Missile Range. According to the AF evidence, all experiments on board (including LANL space ion chamber Serial No. 2) telemetered back successfully. Numerical data have not yet been processed and received at Wurtsmith Air Force Base. It is expected that the trajectory crossed the lower edge of the inner belt, somewhat similar to previous Atlas flights. A total of 7 ion chambers, with wall thicknesses of up to 1 in. for depth dose measurements, are scheduled on Atlas Scouts in 1961. The flight with 3-00 km apogee is especially interesting, as this will penetrate into the hottest part of the inner belt. The ride that would be most informative would be on a satellite with a very eccentric orbit (like Explorer VI) that crosses both belts and that might also pick up a solar flare. We hope this will be possible to arrange.

As nearly as can be determined, the instruments which have been flown so far have functioned perfectly. As each ion carries its own battery power supply it is independent of any power from the vehicle except for the telemetering. These instruments appear to be providing the most definitive information about the lower Van Allen belts of any in use today.

2. Idaho Falls Accident

On Friday, January 8, a request was received from the General Manager to send a team headed by a pathologist to Idaho Falls for the purpose of making post-mortem examinations on bodies from the reactor accident, and also reducing the contamination on the bodies of these men to a point where they could be buried in a more or less normal manner. The team was in the airplane en route to Idaho Falls approximately 3-1/2 hours after the first request was received here.

In view of the extreme degree of contamination of these bodies (in excess of 500 r/hr), the task was an unusually challenging one. There were certain outstanding points which deserve mention:

1. The greatest part of the contamination seemed to be in the clothing, in the wounds, and in the hair. After the clothing and hair had been removed it then became necessary to decontaminate the more severely injured parts of the bodies by cutting tissue away. After this had been done the post-mortem examinations proceeded along a more or less routine pattern.

2. Of the LANL personnel involved there were no exposures in excess of 4 r and only one in excess of 3 r.

3. A critical consideration of the specific injuries received by the three men permitted what is felt to be a reasonable accurate location of the positions of the men at the precise time of the accident.

4. It is hoped that studies of the phosphorus activation in the hair of the victims will give an adequately accurate calculation of the radiation dosage received.

I. Personnel (1/1 - 1/11/61)

1. NY STATE

1/3	PIERSON, Helen J.	E-30	Property	CASUAL
1/19	BERRY, Mary Rita	E-30	Property	
1/30	SMITH, John P.	E-5	Field	

2. JURISDICTION

1/3	BENDER, Violetta E.	E-30	Property	
1/6	CLIFTON, Billie E.	E-4	Low Level Counting	CASUAL
1/6	ROBERTS, Gary W.	E-5	Field	
1/20	ALLEN, Joseph M.	E-4	Low Level Counting	CASUAL
1/20	BLACK, Ralph E.	E-5	Field	CASUAL

3. Total Personnel

SM	70
Military	1
SCF	123
ABC	53
TOTAL	247*

*Includes 15 casuals.

II. GROUP E-1, HEALTH PHYSICS (Dean D. Meyer, Leader)

A. Incident

On December 23, 1960, plutonium contamination was found at one of the sites. The details of this incident were given in a special report.

B. Special Monitoring

The E-Division emergency monitoring team was sent to Idaho Falls on January 8 to provide monitoring service for the E-4 autopsy team. The radiation dosage of the group was between 3 and 4 r.

An E-1 monitor accompanied the E-2 men to Burlington, Iowa, on January 9-11.

C. Special Work

The local ABC office requested that the Los Alamos Fire Department be supplied with film badges and be trained in radiation monitoring. The film badges have been issued and the training course started. We have loaned the Fire Department survey meters for use until new instruments can be procured.

8/23/95

Doria,

Attached is the page from the SWMU report noting the accidental disposal of uranium into the Airport Landfill, but there is no mention of plutonium. I left a message for Lars asking him what he knows about it. If he has no information, I will contact Garry Allen, who is the Field Project Leader for the Field Unit that contains the Airport Landfill.

RWF

Late update

Neither Lars nor Garry Allen have ever heard anything about Pu at the Airport Landfill. Lars has asked the Records Processing Facility to find the Garcia-to-Meyer memo or the H-Division monthly progress report referenced in the letter to Corey. I'll keep you apprised as I get more information.

RWF

73-001

LANDFILL

11/01/90

SUMMARY

LOCATION : TA-73
 TYPE OF UNIT(s) : LANDFILL
 UNIT USE : DISPOSAL
 OPERATIONAL STATUS : INACTIVE
 PERIOD OF USE : EST. 1943 - 1986
 HAZARDOUS RELEASE : SUSPECTED
 RADIOACTIVE RELEASE : SUSPECTED

MATERIALS MANAGED : SUSPECTED HAZARDOUS WASTE
 RADIOACTIVE WASTE
 SOLID WASTE

UNIT INFORMATION

An extensive landfill used for nonradioactive townsite and laboratory trash is now near the airport landing strip [73-001(a)]. On April 3, 1953, 125 lbs of natural uranium were accidentally picked up by the refuse crew and disposed of in this landfill. Approximately 25 lbs were later recovered and the remaining activity was covered with several loads of dirt. In 1959, a memo noted that disposal practices could cause an explosion, thus indicating that the trash may have contained small quantities of high explosives. Oil from the motor pool and vehicle shop was disposed in an open pit at this landfill [73-001(b)]. This pit was shown as early as 1947 on drawing SFA-ZZ-2/1 where it was labeled "Sludge Drying Pit". A 1963 topographic map (Drawing LA-FW-56) shows the pit area as a depression with water ponded in it. A 1974 engineering drawing (LA-WW-2) shows the waste oil pit with the label "Buried Waste Oil Pit". In 1976 the pit is shown as approximately 40' x 15'; the depth is unknown. A former Zia employee recalls receiving work orders to place clean sand in the waste oil pit in an attempt to solidify the oil. Laboratory trash was burned at the edge of Pueblo Canyon adjacent to the airport. Once a month, combustion residues were moved to the landfill. Los Alamos County assumed operation in 1966. Use of this landfill for disposal of construction debris continued into the late 1980s. Five bunkers for NE storage, built on four pads, were located east of the airport landfill. The bunkers were built in 1947 of concrete covered by an earth berm. Each bunker was approximately 46.7' square. In 1974, the bunkers were decommissioned, and the debris was placed at the southeast corner of the airport landing strip fenced area [73-001(c)]. In addition, a hot mix asphalt batch plant was located at the east end of the airstrip in the late 1940s. Information on the decommissioning of the asphalt batch plant is unavailable. In 1984, a portion of this landfill, located under what is now a private plane tie down area, was removed. Landfill debris was removed from an area that extended 10' to 12' past the eastern boundary of the planned tie down area. This material was buried in two pits [73-001(d)] near the northeast end of the runway. These pits were excavated to approximately 60 ft and were used until late 1986 when they were filled with dirt and hydroseeded.

WASTE INFORMATION

The waste in the landfill near the airport strip is primarily municipal and laboratory trash. The waste could potentially include volatiles, semivolatiles, metals, pesticides, and PCBs. Approximately 100 lbs of uranium is present as well as possible explosive material from pre-1959 disposal. The waste oil pit contained motor oil.

RELEASE INFORMATION

Uranium remains in the landfill; combustion products were released to the air during burning and methane is currently being generated and released to the air from the landing strip landfill. There are no release controls associated with this unit. The waste oil pit has been covered over, but the waste remains in place. The possible contaminants and the extent of releases are unknown. The landfill was investigated as a part of Environmental Problem 22 in the DOE environmental survey. Fourteen samples were collected from sampling points spaced approximately every 60 ft along the north side of the runway. The samples were analyzed for NE, metals, pesticides/PCBs, alpha, beta, and gamma emitters, and volatile organic compounds. No NE or beta emitters were detected. Metals, PCBs, alpha emitters, gamma emitters, and volatiles were present in the samples. Some debris is present on Los Alamos County land on the hillside of Pueblo Canyon.

NOTES

SUMU Nos. 73-001(a) and (b) were formerly SUMU No. 0-007.

SNMU CROSS-REFERENCE LIST

<u>SNMU NUMBER</u>	<u>CEARP IDENTIFICATION NUMBER(S)</u>	<u>REA UNIT</u>	<u>E.R. RELEASE SITE INFO.</u>	<u>ASSOCIATED STRUCTURES</u>
73-001(a)	TAO-4-L-1-WU/RW/PP	0.007	Tek 26 : 26 27 29	AIRPORT LANDING STRIP

(continued)



Department of Energy

Los Alamos Area Office
Albuquerque Operations Office
Los Alamos, New Mexico 87544

AUG - 9 1995

Mr. Louis A. Geoffrion
3125 Nickel St.
Los Alamos, NM 87544

Dear Mr. Geoffrion:

Thank you for your letter dated June 20, 1995, which expresses concern regarding an incident that may have resulted in disposal of Plutonium-239 in the Airport Landfill. The Airport Landfill is currently undergoing a Resource Conservation and Recovery Act (RCRA) Facilities Investigation (RFI) by the Los Alamos National Laboratory (LANL) Environmental Restoration (ER) Program. The requirement for this investigation is mandated in Hazardous Waste Permit NM080010515 (HSWA Permit) which was issued to LANL and the Department of Energy (DOE) by the United States Environmental Protection Agency (EPA), Region 6, RCRA Permits Branch. Under this program, the Airport Landfill carries the designation of Solid Waste Management Unit (SWMU) 73-001(a). As specified in the permit, the RFI must address known or suspected releases from SWMUs by evaluating the nature, rate of migration and extent of any contamination related to SWMU 73-001(a) as well as all other SWMUs listed in the permit.

The HSWA Permit also requires that LANL develop RFI Work Plans outlining ER activities. The investigation planned for SWMU 73-001(a) is discussed in the OU-1071 Work Plan which is available in the LANL Reading Room located at 1450 Central Ave., Suite 101, Los Alamos, New Mexico. Parts of this investigation have been initiated and some results have been obtained. Activities to date include the drilling of 11 holes around the perimeter of the landfill, some of which have been completed for the purposes of evaluating the presence of contamination in leachate and gas associated with the landfill. Currently, no results have been obtained which indicate that contaminants have migrated beyond the immediate SWMU boundaries. The next phase of activities includes the installation of devices to evaluate contamination directly within the unit. This and other phases of investigation will continue into Fiscal Years (FY) 1996 and 1997, but depending upon field results and DOE budgets, activities may continue beyond this current projection. The results of drilling and leachate sampling performed through FY 1997 are scheduled to be submitted to EPA in an RFI Report in November of 1997. This report will also be available in the LANL reading room after EPA has completed their review.

AUG - 9 1995

Mr. Louis A. Geoffrion

2

Mr. Corey Cruz, the individual to whom your letter was addressed, will also be responding to your concerns. If you have any questions regarding LANL ER activities for the Airport Landfill, please call Ted Taylor of my staff at (505) 665-7203, or Bonnie Koch, also of my staff, at (505) 665-7202.

Sincerely,



Joseph C. Vozella
Assistant Area Manager
Office of Environment
and Projects

LAAMEP:2BK-012

Enclosure

cc w/enclosure:

E. Merrill, EM-453, HQ
T. Taylor, AAMEP, LAAO
C. Fesmire, AAMEP, LAAO
J. Jansen, EM/ER, LANL, MS-M992
J. White, ESH-19, LANL, MS-K490
D. McInroy, EM/ER, LANL, MS-M992
T. Baca, EM, LANL, MS-J591
G. Allen, CST-18, LANL, MS-E525
RPF, LANL, MS-M707
D. Griswold, ERD, AL

cc w/o enclosure:

B. Garcia, Bureau Chief
Hazardous & Radioactive Materials
Bureau
New Mexico Environment Department
525 Camino de los Marquez
P. O. Box 26110
Santa Fe, NM 87502
W. Spurgeon, EM-452, HQ
J. Vozella, AAMEP, LAAO
B. Koch, AAMEP, LAAO
G. Rael, ERD, AL
C. Cruz, EIS, AL

3125 Nickel St.
Los Alamos, NM 87544
June 20, 1995

Mr. Corey Cruz
Program Engineer
U.S. Department of Energy
Albuquerque Operations Office
P. O. Box 5400
Albuquerque, NM 87185-5400

REFERENCE: Discussion on June 13, 1995 at the
Hilltop House, SWEIS Hearing about
~ 80 g of Pu²³⁹ buried at the Air-
port Landfill.

Dear Mr. Cruz:

In late 1960 ~ 80 grams of Pu²³⁹ accidentally went with trash to the Airport Landfill and was never recovered. The Pu²³⁹ alloy composition and the geology and hydrology of the landfill creates the worst-case scenario. Contamination of the landfill by the Pu-Fe alloy is increasing rapidly because it is not contained. The alloy has gallium as a stabilizer, so both Fe and Ga are enhancing corrosion. Eighty grams of Pu²³⁹ exposed to the Los Alamos aquifer and the Rio Grande water is unthinkable since the Code of Federal Regulations (40 CFR Part 191.16) protects ground water with Pu²³⁹ (for 1,000 years after disposal) by maintaining it should not exceed 15 picocuries per liter.

In late 1960 the Los Alamos Scientific Laboratory (LASL) was building the Los Alamos Molten Plutonium Reactor Experiment (LAMPRE). The core consisted of tantalum capsules containing Pu-Fe alloy fuel. A Ta capsule was loaded with 170 g of fuel alloy and welded at DP West Site, then sent to GMX Site for weld radiography. The capsule had a weld defect and was mistakenly sent to Ten-Site instead of being returned to DP West Site for re-loading. Ten-Site was not yet prepared to handle plutonium and the capsule was received by inexperienced hands and opened in a cold hood. Later the hood was cleaned and ~ half of the fuel from the capsule disposed as trash. When the mistake was discovered truck loads of trash were returned to Ten-Site while available personnel, mainly PhD's, went through the trash. This lasted for several days, then it was placed on 'hold' without ever locating the missing plutonium.

To: Mr. Corey Cruz

-2-

June 20, 1995

Details of the lost Pu²³⁹ incident were given in a special report by Tony H. Garcia to Dean D. Meyer, Group Leader, H-1 Health Physics (Reference H-Division Monthly Progress Report 12/20/60-1/20/61). Exact quantity of the Pu lost was recorded in the Plutonium Account records by Glen R. Champion, CMB-11, for LAMPRE-1 Core 1.

With todays modern technology the Pu fuel rod should be easily located. I played a key role in LAMPRE-1, Core 1, reactor fuel program. If I can be of any help in locating the fuel rod please call me at (505) 662-2429.

Sincerely,

Louis A. Geoffrion
Louis A. Geoffrion

Cyc.: Mr. Benito J. Garcia
NM Environmental Dept.
Hazardous & Radioactive Material Bureau
P. O. Box 26110
Santa Fe, NM 87502

Mr. Joseph C, Vozella
Assistant Area Manager
Environment, Health, and Safety
Department of Energy
Los Alamos Area Office
Los Alamos, NM 87545



Louis A. Geoffrion
3125 Nickel St.
Los Alamos, NM 87544-2106



Mr. Corey Cruz
Program Engineer
U.S. Department of Energy
Albuquerque Operations Office
P. O. Box 5400
Albuquerque, NM 87185-5400

87185-5400

