

SURVEILLANCE PLAN FOR THE LONDON ROAD FACILITY

Submitted to:

Advanced Medical Systems, Inc.

1020 London Road
Cleveland, Ohio 44110
(216) 692-3270

by:

Integrated Environmental Management, Inc.

1680 East Gude Drive, Suite 305
Rockville, Maryland 20850
(301) 762-0502

Report No. 94009/G-125
September 5, 1995

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INTRODUCTION

On November 2, 1979, Advanced Medical Systems, Inc. (AMS) was issued a license (No. 34-19089-01) by the U. S. Nuclear Regulatory Commission (USNRC) authorizing possession of Cobalt-60 (^{60}Co) in the form of both loose material and sealed sources. Beginning on this date, AMS disposed of ^{60}Co into the sanitary sewer system under the provisions of Title 10, Code of Federal Regulations, Part 20.303. All discharges were accounted for and below permissible limits.

As part of a 1989 decommissioning effort, the lateral connection from the AMS facility to the sewer system interceptor owned by the Northeast Ohio Regional Sewer District (NEORSO) was partially decontaminated and covered with a layer of concrete in order to stabilize residual materials. In May, 1989, AMS ceased generating any liquid radioactive waste, and discontinued the disposal of licensed material into the sanitary sewerage system.

In 1994, the NEORSO isolated AMS from the sewage treatment system.¹ This action rendered the facility drainage system non-functional, increased the hydrostatic pressure on the foundation structure, and caused groundwater to leak into the basement of the AMS facility. AMS made timely notification to the USNRC about the deteriorating conditions and implemented remedial actions.²

Pursuant to USNRC authorization, the remedial activities included "isolation and remediation of the radioactively contaminated manhole and sewer line exiting the facility to the London Road Interceptor" and recovery of the facility drainage system.³ The remedial action selected by AMS was to fill the inside of the sewer discharge line, the manhole and the lateral connection to the interceptor with grout.⁴ This existing system was then abandoned, and a new connection to the interceptor will be installed elsewhere on the property.

¹ Since that time, AMS has installed portable toilets for employees, and is collecting all other liquids in above-ground storage tanks.

² Integrated Environmental Management, Inc. Report No. 94009/G-2110, "Report of Water Treatment and Sewer Remediation", (in press).

³ Letter from W. L. Axelson, U. S. Nuclear Regulatory Commission to David Cesar, Advanced Medical Systems, Inc., December 15, 1994.

⁴ Integrated Environmental Management, Inc., "ALARA" Analysis for Remediation of the AMS Lateral Connection to the Sewer System", Report No. 94009/G-115, January 26, 1995.

1 To demonstrate that the radioactivity secured within the abandoned piping remains in place until
2 such time as AMS undertakes facility decommissioning, a long-term surveillance program is being
3 implemented. This report contains a general description of radiological conditions at the London
4 Road facility, a plan for monitoring radiological conditions in order to identify any migration of
5 radioactivity that might occur, the means by which the quality of the surveillance program will
6 be ensured, and a description of the records and reports that will be maintained as part of this
7 effort.

CHARACTERISTICS OF THE SITE

Background

AMS (and its predecessor) manufactured and fabricated sealed sources of ^{60}Co for teletherapy and radiography machines. Under their USNRC license, AMS may possess up to 285,000 curies of ^{60}Co , in any form, for manufacture, installation and servicing of sealed sources. Table 1 shows the current inventory of radioactive materials at the site.

AMS is located in an industrial/residential neighborhood. The AMS facility, which occupies approximately 25% of a large warehouse/manufacturing building, is comprised of three floors. The main floor includes an office area, the Isotope Shop Area, a hot cell, a shielded work room, and miscellaneous unoccupied areas. The second floor contains additional unoccupied office space, a mechanical equipment room, and the ventilation system equipment room. The basement contains a source storage area (Source Garden), a former dry waste storage area, a liquid waste handling room, additional unoccupied space, and a liquid waste holdup tank room (WHUT room).⁵ The majority of the 6.3-acre property is covered with asphalt or concrete. Figure 1 shows the layout of the AMS facility.

Findings from Previous Surveys

During October, 1985, a site survey was performed by Oak Ridge Associated Universities (ORAU) in response to a USNRC request. In the final report from that survey, it was noted that facility contamination levels appeared somewhat excessive.⁶ As follow-up to that report, AMS initiated decontamination efforts on August 31, 1987.

In 1989, after decontamination efforts were complete, ORAU was asked by the USNRC to re-survey the AMS site and facilities in order to determine its current radiological status. The results of that survey indicated that the decontamination efforts implemented by AMS were "successful in reducing levels of contamination and direct radiation".⁷ Outside of the facility, ORAU noted

⁵ In 1989 AMS ceased discharging liquid radioactive waste to the sewer system. Shortly thereafter, a survey of the WHUT room indicated that exposure rates were in excess of 1,000 R per hour. Consequently, and after authorization by the USNRC, the WHUT Room was sealed to permit the residual radioactivity to decay prior to implementing additional remedial actions.

⁶ Oak Ridge Associated Universities, "Evaluation of the Operational Radiation Safety and Fire Protection Programs of the Advanced Medical Systems, Inc., London Road Facility, Cleveland, Ohio", December, 1985.

⁷ Cotten, P. R. And G. L. Murphy, "Radiation Survey of the Advanced Medical Systems, Inc. London Road Facility, Cleveland, Ohio", Oak Ridge Associated Universities Report No. ORAU 89/B-145, April, 1989.

that radiological conditions were generally indistinguishable from background, with elevated exposure rates noted at locations that were adjacent to source and waste storage areas. Furthermore, the following information was provided:

"Soil and sediment from storm drains contained above background Co-60 levels but not at sufficient concentrations to pose an environmental concern. Levels of Co-60 in the sanitary drain have been reduced, but the direct radiation level is still significant, relative to NRC limits for unrestricted areas. Access to the sanitary sewer manhole at the front of the AMS facility should be controlled."⁸

ORAU noted that ambient gamma exposure rates, at a height of one meter above the manhole at the front of the property, were a maximum of 10 microR per hour. The ⁶⁰Co concentrations in surface soil samples collected in this area ranged from nondetectable to 2.2 ± 0.1 picocuries per gram. A water sample collected from the manhole indicated the presence of 150 ± 10 picocuries of ⁶⁰Co per liter. A sediment sample collected from this same location contained 640 ± 10 picocuries per gram.

Between August 17 and October 14, 1994, the USNRC performed a special inspection of the London Road interceptor and the lateral connection from the AMS building to the interceptor.⁹ During this inspection, samples of sewer debris, water effluent, and a series of wipes were collected and analyzed. The findings of the inspection were that residual radioactive materials in excess of the criteria contained in USNRC Regulatory Guide 1.86, "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material" were present in the interceptor in the immediate vicinity (outfall) of the AMS lateral connection.¹⁰ However, there was no evidence of removable ⁶⁰Co activity above the release criteria in the outlet from the AMS processing drain, the sewer walls, or inside the lateral itself.¹¹ Furthermore, there was no evidence that the ⁶⁰Co activity in water samples collected from this location was insoluble pursuant

⁸ In response to ORAU's recommendations, the manhole at the front of the property was designated a restricted area and sealed to prevent inadvertent personnel access.

⁹ The connection is comprised of a sewer line, a manhole, and a lateral.

¹⁰ Removable activity in excess of 1,000 dpm per 100 cm² was found on the sewer interceptor brick directly below the AMS lateral. Other locations (e.g., the iron ladder below the lateral, the outer surfaces of the lateral, and at the 2:00 position of the lateral approximately one foot into the lateral from the interceptor) demonstrated measurable activity, but at levels well below the release criterion.

¹¹ A site characterization study performed by ORISE in 1989 confirms the lack of significant residual activity in the AMS system. During this study, ambient gamma exposure rates in excess of background were not identified in the vicinity of the lateral. Furthermore, soil samples collected in this area were negative for the presence of ⁶⁰Co.

to American Public Health Association's Method 7110 "Gross Alpha and Gross Beta Radioactivity (Total, Suspended, and Dissolved)" from Standard Methods for Examination of Water and Wastewater.

Site Conditions after Sewer Remediation Activities

During the 1995 sewer remediation activities that were implemented in order to recover from the NEORSD's installation of a compression plug into the lateral, it was discovered that the foundation drainage system (e.g., drain tile and gravel layer) was contaminated with ^{60}Co . Removable activity as high as 100,000 dpm/100 cm² was noted in the drain tile during excavation and investigation efforts. However, the shale layer upon which the building is built and which forms the base of the footer drains, did not contain detectable ^{60}Co . In fact, no ^{60}Co was identified other than directly below the drain tile. In fact, no ^{60}Co was identified other than directly below the drain tile. This finding confirms that contaminant migration did not occur.

The footer drains along the east (front) and south sides of the building were replaced and the area back-filled with clean gravel and soil. However, the footer drains in the vicinity of the Source Garden could not be replaced because of the presence of high ambient gamma exposure rates in the work area. Therefore, this portion is scheduled to be grouted in, and new foundation drains were laid outside of those that were abandoned. A concrete slurry wall was installed between the abandoned drains and the new drains. After back-filling, the ground surface between the building and the new drainage system was sloped from the building toward the new system and covered with an impermeable liner to minimize the potential for water infiltration into the abandoned drains.

Prior to abandoning the lateral connection from the west side of the AMS facility to the London Road interceptor, the four-inch discharge line from the AMS building, the AMS manhole and the 15-inch lateral connection were filled with grout.¹² In advance of this action, the length of the lateral connection was visually surveyed using a video camera. The ambient exposure rates within the lateral, measured with a microR meter, ranged from one (1) to four (4) milliR per hour. The contamination status of the lateral was determined using dry disk smears and a pancake GM detector. The results from this effort were negative for removable activity.

¹² A new manhole was installed elsewhere on the property and a new lateral connection will be installed at a future date.

SURVEILLANCE PLAN

General Approach

Residual radioactivity identified during the sewer remediation effort exists in the abandoned lateral connection on the east side of the building and in the abandoned foundation drainage system on the south side of the building. There is no evidence to date that migration of the radioactivity that has been present in these locations has occurred. Therefore, surface surveys coupled with a well water sampling methodology will be used to monitor the abandoned lateral location until site-wide decommissioning occurs.

Surveillance for the abandoned foundation drainage system is not necessary. Placement of a slurry wall and liner precludes water intrusion into this area.

Sampling Frequency

In general, the frequency of surveillance activities depends on the site environment and the likelihood of changes along the pathways for transport. Pathways or receptors affected by seasonal variations or weather patterns generally require multiple sampling at different times of the year. For the abandoned systems at the AMS facility, there are no known environmental variations or tidal influences which might affect the concentration of radioactive materials contained therein, and there is no evidence that migration through the shale layer is likely. Therefore, a once per year surveillance effort is deemed sufficient.

Collection Locations

A "necessary and sufficient" number of ambient exposure rate measurements and samples collected from the areas in question will be obtained in order to meet the objectives of this program. Figure 2 shows the "affected area" of the abandoned lateral and Figure 3 shows the affected area of the abandoned footer drains. There shall be two (2) sampling locations selected from the abandoned lateral affected area.¹³

Preparation for Surveillance

The following program elements, which may affect field operations, safety, sample validity, and analytical results, shall be prepared in advance of the surveillance effort:

¹³ In regard to specific instructions contained in this Plan, the term "shall" indicates a requirement, "should" indicates a recommendation, and "may" indicates that the decision is left to the discretion of the individual.

- The effort shall be scheduled with the radioanalytical laboratory to assure timely delivery of results, proper analytical capabilities, and timing of sample arrival.
- Ambient gamma surveys shall be performed using a microR meter (or equivalent).
- Two monitoring wells shall be installed to detect any migration of radioactive materials from the abandoned manhole and lateral. One well will be positioned in the vicinity of the manhole and one will be located at the point of greatest depth for that portion of the lateral that is on the AMS property (i.e., adjacent to the sidewalk). Soil removed during well installation will be collected and analyzed for the presence of ^{60}Co . Once wells are installed, water samples will be collected on an annual basis using a baler or equivalent equipment.
- All surveillance equipment shall be checked for serviceability prior to deployment.
- All instrumentation intended for use shall be checked and calibrated, if necessary. The instrumentation shall be response-checked prior to and after the surveillance effort to ensure consistent operability.
- Labels, shipping forms, chain-of-custody forms, and request for analysis forms shall be prepared.
- Sufficient packing materials, shipping containers, and shipping labels shall be available on-site prior to initiating the sampling effort.

Surveillance Team

The surveillance team should consist of a team leader and a team member. The team leader should select the team, brief the team, record the results of the walk-over survey, assist with sample collection, and generate deliverables and reports. The team member should perform the walk-over survey, collect the samples, analyze samples, and oversee packaging and shipping of samples sent for confirmatory analysis.

Methodology

A walk-over survey, using a microR meter (or equivalent) shall be performed over the affected areas shown on Figures 2 and 3. Ambient exposure rates (e.g., exposure rates with the sensitive volume of the survey instrument at a distance of approximately one meter above the ground) shall be measured and recorded pursuant to ISP-2, "Area Survey Procedure".

Soil samples collected for radiological analysis during well installation shall be taken as a continuous core. After each filled coring tube is extracted from the sampling location, the sample shall be removed and separated into one-foot segments. A composite sample of each segment shall be placed into a marinelli beaker. Each sample shall be analyzed by the method of gamma

spectroscopy pursuant to ISP-34, "Operation of the Gamma Spectrometer". Samples with detectable ^{60}Co shall be forwarded to a commercial analytical laboratory for confirmatory analysis.

Water samples collected for radiological analysis shall be taken from each monitoring well using a sample baler or equivalent means of retrieving samples. Samples will be placed into a marinelli beaker for on-site analysis. Each sample shall be analyzed by gamma spectroscopy in accordance with ISP-34 and ISP-38, "Assessment of Radioactivity in Water Samples". Water samples containing detectable ^{60}Co shall be forwarded to a commercial analytical laboratory for confirmatory analysis.

Decontamination

All sampling equipment and tools used for this effort shall be decontaminated prior to collection of the first sample, and between successive samples thereafter. Decontamination activities should be performed by scrubbing off visible dirt and debris, rinsing in potable water (obtained from an on-site potable water source) and wiping the item dry with a clean towel. Decontaminated sampling equipment shall be monitored for radioactive contamination.

Disposal

If ^{60}Co is positively identified in any soil sample, the potable water used for decontamination shall be collected and an aliquot shall be analyzed by ISP-34 and ISP-38. Water or soil samples with no detectable ^{60}Co may be disposed of by conventional means. Water containing detectable insoluble ^{60}Co or more than 200 pCi/l of soluble ^{60}Co shall be stored on-site. The solubility of the radioactivity in the water shall be determined as described in ISP-38.

Sample Identification

Samples collected for radiological analysis shall be marked for identification at the time of collection. Sample labeling shall consist of a tag or label attached to the sample container, and shall include, as a minimum a unique sample number, the sampling location, the sampling date, and the individual(s) performing the sampling. All samples shall be contained in one-liter marinelli beakers with lids. Following collection, as much standing water as possible should be removed prior to compositing the cores into sample collection containers. Samples sent to commercial analytical laboratories will be contained in sample containers provided or recommended by the laboratory.

Sample Shipping

Samples sent to the commercial analytical laboratory for confirmatory analyses shall be shipped via next-day delivery (e.g., Federal Express) at the end of each day of sample collection. The

2 samples shall be shipped in accordance with Department of Transportation (DOT) Title 49 CFR,
3 Parts 171 through 177. Included with the sample shipment shall be the chain-of-custody and
4 request-for-analysis forms. The laboratory shall be notified in advance to expect a sample
shipment.

QUALITY ASSURANCE PLAN

This surveillance effort shall be performed to assure that the results are accurate and that uncertainties have been adequately considered. The quality assurance (QA) plan shall define the data quality objectives of the program and shall operate throughout all stages of the surveillance program, including final validation of the data. The consensus nuclear industry standard for quality assurance is ASME NQA-1 (ASME 1989). The USNRC has also issued guidance for an acceptable QA plan (NRC 1979). The QA plan for this effort shall be consistent with the information contained in these documents, and with the following specific instructions.

QA Coordination

The AMS Radiation Safety Officer (RSO) shall serve as the QA officer for this effort. Therefore, the RSO should not be involved in activities that generate data. The QA officer shall be responsible for ensuring that all quality assurance objectives are met, reviewing selected field and analytical data to ensure adherence to procedures, approving the quality of data before they are used, serving as the focal point for quality assurance activities to ensure that they are conducted in accordance with established policies and procedures and overseeing sampling activities.

Documentation

All aspects of this surveillance program shall be documented. For field or analytical activities, the procedures contained in the ISP Manual shall be either adopted in whole or adapted to meet the requirements of this plan. Changes or exceptions to established procedures, if required, shall be documented, signed, and dated.

Training of the Sampling Team

All members of the sampling team shall receive training in the procedures to be performed. The extent of training and qualifications shall be commensurate with the education, experience, and proficiency of the individual and the scope, complexity, and nature of the specific task. Training shall be designed to achieve initial proficiency for the duration of the surveillance effort.

Equipment Maintenance and Calibration

Measuring equipment shall be maintained, calibrated, and tested to assure the validity of the sampling/survey/analysis data. Further, the procedures, responsibilities, and schedules for calibrating and testing and measuring equipment shall be documented. All equipment shall be tested before initial use and shall be recalibrated if maintenance or modifications could invalidate earlier calibrations. Field and laboratory instrumentation shall be calibrated with standards traceable to the National Institute of Standards and Technology (NIST).

Survey instruments should be tested for operability at least once for every day the equipment is used. Test results should be recorded in tabular or graphic form and compared to predetermined, acceptable performance ranges. Equipment that does not fall within the acceptable performance range shall be immediately removed from service.

Data Management

A consistent method of data generation, handling, evaluation, and reporting shall be developed and documented as part of this surveillance program. Information and data shall be recorded in logs or on standardized field and laboratory record forms. Data shall not be obliterated by erasing or through the use of "whiteout". Incorrect entries shall be corrected by striking a single line across the entry and entering new data. The correction or change shall be initialed and dated by the person making the entry.

A system of data review and validation should be instituted to ensure consistency, thoroughness, and acceptability. This should include regular reviews of field data and final reports by the QA officer. All reviews shall be signed and dated. Any questionable or invalid data shall be identified in the final report. Active records shall remain under the direct control of the team leader. Final reports shall be maintained by the RSO.

Sample Chain-of-Custody

To ensure the integrity of each sample collected as part of this program, and to ensure that there is an accurate record of sample collection, transport, analysis, and disposal, a sample chain-of-custody form shall be maintained for each sample collected. A chain-of-custody form shall be completed by the team leader at the time of sample collection. This form shall accompany the sample at all times and shall become a part of the records after final sample disposition.

Sample custody shall be assigned to one individual at a time. All transfers of custody shall be documented on the chain-of-custody form. Samples are considered to be in an individual's custody if the samples are in his physical possession, the samples are within view after being in possession, or the samples are sealed and placed in a secure area by the last individual with custody of the samples. When a shipping container is ready for shipment to the analytical laboratory, a tamper-evident seal should be affixed to the container in such a way that the container cannot be opened without breaking the seal. A copy of the chain-of-custody form shall accompany the samples throughout transportation and analysis. Any break in custody or evidence of tampering shall be documented.

TABLES

Table 1 - Inventory of Radioactive Materials at AMS

Item	Form	Material Description	Estimated Activity (Ci)
Licensed Material	Solid	Bulk Metal	23,000
Licensed Material	Solid	Sealed Sources	75,000
Packaged waste	Solid	Materials contained in high-level waste storage, LSA boxes and drums in the basement of the facility.	29
Packaged waste	Solid	Solid waste generated during the water treatment project.	0.4
Unpackaged waste	Solid/sludge	Materials contained in WHUT Room	53
Surface contamination	Solid	Uncharacterized surface activity in the restricted areas of the facility	- 11
TOTAL			98,093.4

FIGURES

Figure 1 - Site Layout

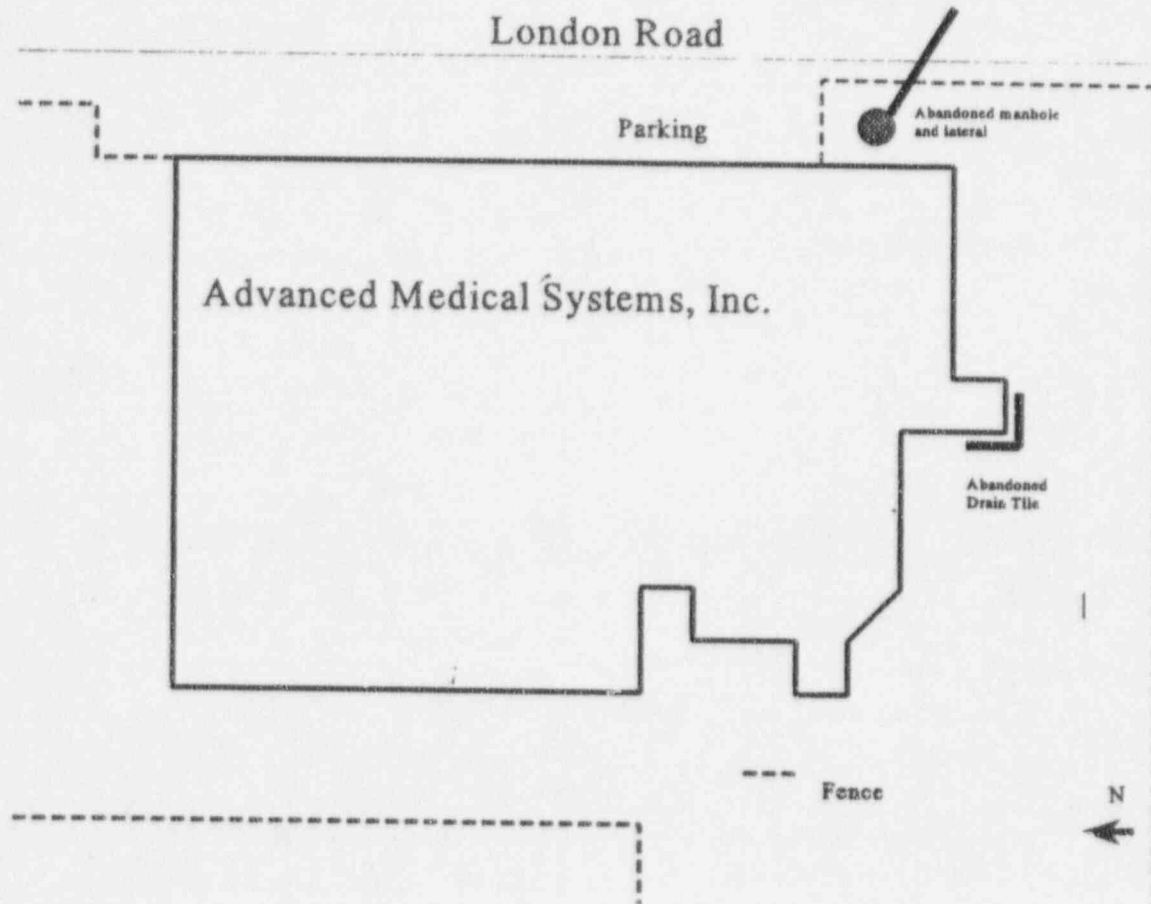


Figure 2 - Survey/Sampling Locations for Abandoned Lateral

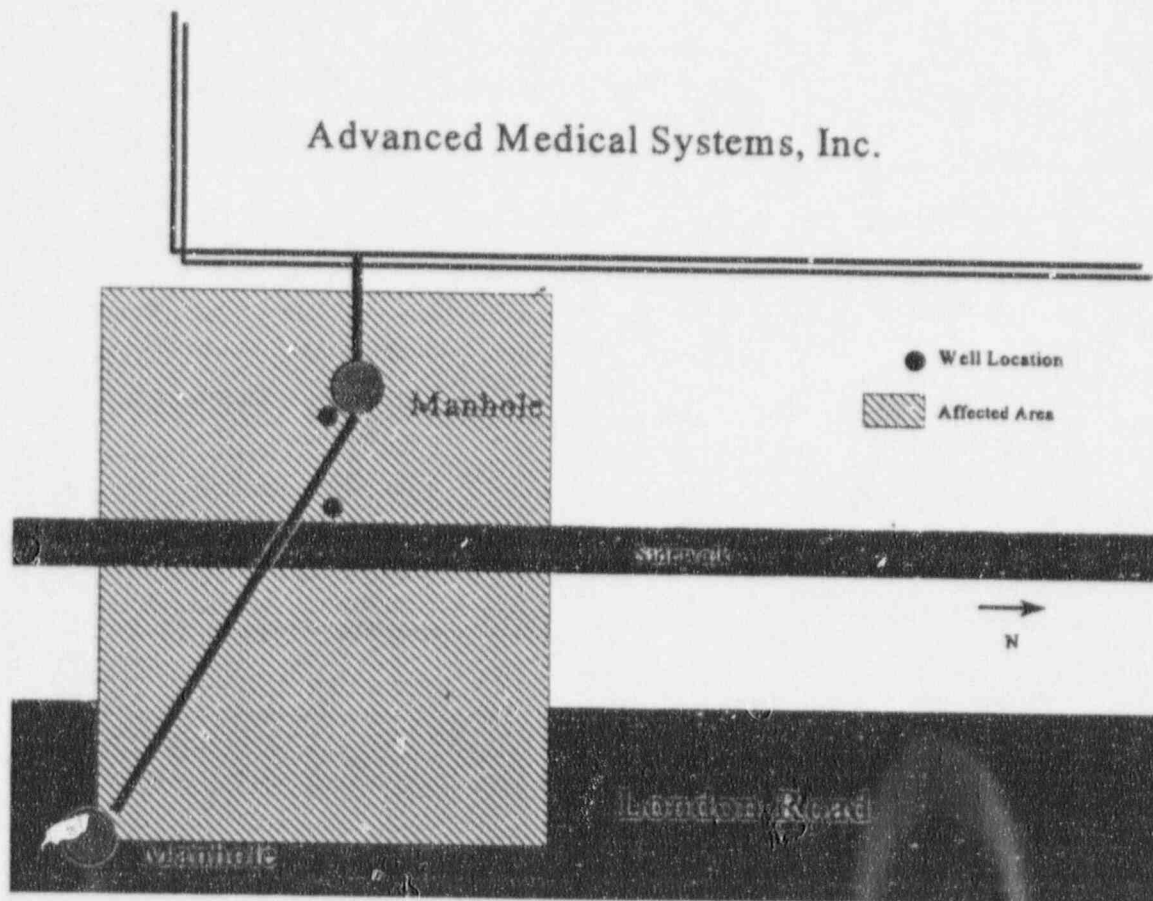
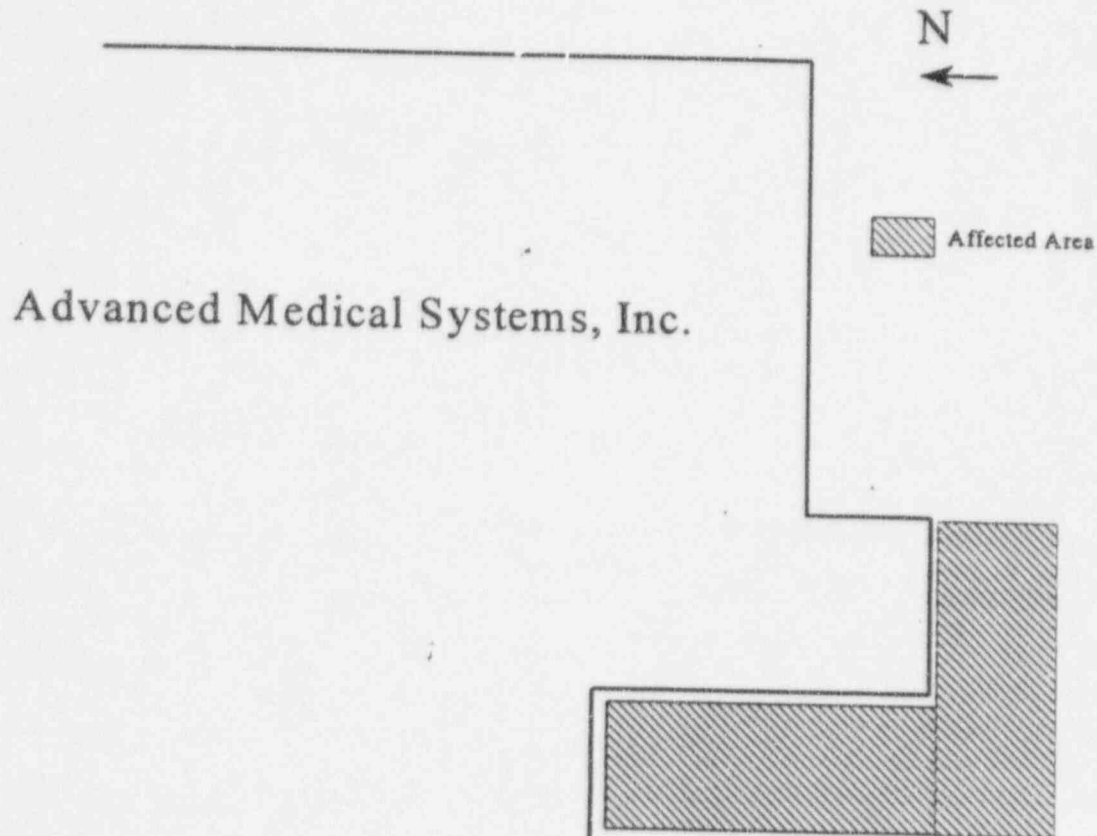


Figure 3 - Survey Locations for Abandoned Footer Drains



1 This report was prepared under the direction of
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GEORGE V. VOINOVICH
Governor

PETER SOMANI, M.D., Ph.D.
Director of Health

SEP 11 1995

James P. Thomas
184 West 11th Avenue
202
Columbus, Ohio 43210

Dear Mr. Thomas,

Thank you for your May 12, 1995 letter addressed to Governor George V. Voinovich regarding Advanced Medical Systems, Inc. (AMS). This letter was forwarded to my attention by Mr. Donald R. Schregardus, Director of the Ohio Environmental Protection Agency.

The regulations covering AMS's present and past operations are enforced by the NRC. The participation of the Ohio Department of Health in the AMS matter has involved overseeing the United States Nuclear Regulatory Commission (NRC) activities at the AMS facility. By statute the NRC is the regulating agency for this type of radioactive material.

The pace of the clean-up has not always been as swift as we might have liked. However, the primary goal of the Ohio Department of Health is the continued protection of the health and safety of the citizens of Ohio. That goal has been met.

For example, AMS has removed over 100,000 gallons of contaminated water from the basement of the facility, treated the water to remove the radioactive contamination, and is now storing the clean water pending an acceptable method of disposal. AMS has also decontaminated its drainage system. These activities have been accomplished without endangering the public or workers at the facility.

Both the Ohio Department of Health and the Nuclear Regulatory Commission are following the Advanced Medical Systems activities closely.

If the Department can be of any further assistance please contact Ruth Vandegrift, Contaminated Sites Supervisor at (614) 644-2727.

Sincerely,

A handwritten signature in cursive script that reads "Peter Somani".

Peter Somani, M.D., Ph.D.
Director, Ohio Department of Health

PS/ft

cc: Donald R. Schregardus, Ohio EPA
John Madera, USNRC Region III
Roger Suppes, ODH
Ruth Vandegrift, ODH

E187



State of Ohio Environmental Protection Agency

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AUG 23 1995

*Ruth -
Please coordinate
response for
Director's SO
C: Director
Schregardus
Roger*

MEMORANDUM

TO: Roger Suppes, Ohio Department of Health
FROM: Laura H. Powell, Legislative Liaison *HP* Ohio EPA
DATE: August 18, 1995
RE: Advanced Medical Systems, Inc./NRC involvement

Please find attached a copy of a letter that was sent to the Governor in May from a citizen who is concerned about the time it has taken the NRC to remediate the site of Advanced Medical Systems, Inc. in Cleveland. Ohio EPA's Division of Surface Water has been involved in this site from the standpoint of contaminated discharge to NEORSD. We responded to Mr. Thomas's concerns from that perspective.

Because he is concerned with the work done, or not done, by the NRC to this point, our letter to him indicates that we are forwarding a copy of his letter to the Ohio Department of Health. I would appreciate any assistance you can provide to route this letter to the appropriate division at ODH. Any assistance you can provide in expediting any actions taken by the NRC at this site would also be appreciated.

Thank you for your assistance and attention to this matter. If you have any questions, please feel free to call me at 644-2782.

enclosure



State of Ohio Environmental Protection Agency

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Columbus, OH 43215-1099

TELE: (614) 644-3020 FAX: (614) 644-2329

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P.O. Box 1049
Columbus, OH 43216-1049

August 15, 1995

Mr. James Thomas
184 W. 11th Avenue
#202
Columbus, Ohio 43210

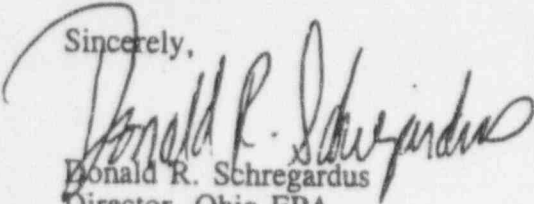
Dear Mr. Thomas:

Thank you for your May 12, 1995, letter addressed to Governor Voinovich regarding Advanced Medical Systems, Inc. (AMS). The Governor requested that I respond to your concerns. I apologize for the lengthy delay in responding. The involvement that Ohio EPA has had to date with AMS involved controlling the discharge of waste water to the Northeast Ohio Regional Sewer District (NEORS) sanitary sewer system. Under current state pretreatment regulations, NEORS was the lead authority in this matter. The Ohio EPA worked successfully with NEORS to prohibit the discharge of potentially radioactive contaminated waste water to the sewers. This effort resulted in no further radioactive contamination of the sewer system or the treatment plant receiving the waste.

As you may know, responsibility for continued clean up of the site lies with the Nuclear Regulatory Commission (NRC). This is clearly expressed in federal regulations governing such activity. However, the Ohio Department of Health (ODH) has limited authority over the disposal of radioactive wastes in the state of Ohio. Therefore, I am forwarding your letter to ODH for their consideration.

I understand your concern regarding AMS and suggest that you contact John Kwolek of the Northeast District Office of Ohio EPA at (216) 963-1251 to address any additional concerns you may have.

Sincerely,


Donald R. Schregardus
Director, Ohio EPA

DRS/jk

cc: Rich Conley, NEDO
John Kwolek, NEDO

000095 MAY 19 95

EPA EWD
~~901~~

May 12, 1995
154 W. 11th St. # 2002
Cleveland OH 44115

Mr. George V. Voinovich
Governor of the State of Ohio
100 Statehouse
Columbus, OH 43217

Dear Mr. Governor:

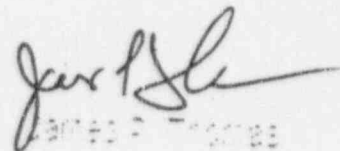
I am a lifelong Cleveland area resident who is currently attending Case Western Reserve University. I will be returning to Cleveland to attend Cleveland State for graduate school.

I am concerned about the radioactive contamination problem of the old Radiochemical Systems, Inc. in the Cleveland area. I believe that the Nuclear Regulatory Commission is moving too slowly in cleaning up this site.

Governor, I was in high school when you were Mayor of Cleveland and I remember the fine work you did there. I feel that you have the best interests of the City of Cleveland at heart.

Could you lobby Senators John Glenn and Michael Dewine, and Representative Martin Hoke to pressure the NRC to speed up the clean-up of this site?

Thank you for your attention to this matter.


James P. Thomas

RECEIVED
JUL 19 1995
OHIO EPA NEDO



Northeast Ohio Regional Sewer District

1826 Euclid Avenue • Cleveland, Ohio 44115-2504 216 • 881 • 6600 FAX: 216 • 881 • 9709

September 13, 1995

Mr. John Madera
U. S. Nuclear Regulatory Commission
Region III
901 Warrenville Road
Lisle, Illinois 60532-4351

Re: Advanced Medical Systems, Inc. "Conceptual" Decommissioning Plan

Dear Mr. Madera:

We are in receipt of a copy of a letter sent by the Radiation Safety Officer of Advanced Medical Systems, Inc. ("AMS") to you on September 1, 1995 regarding NRC approval of AMS' submission of a "Conceptual Decommissioning Plan." Your August 17, 1995 letter to AMS directed AMS to use the *Draft Branch Technical Position on Site Characterization for Decommissioning* in re-characterizing their facility in light of the invalidity of prior estimates of contamination around and under the AMS facility.

We have reviewed the *Draft Branch Technical Position* and found no provision whatsoever for a "conceptual" decommissioning plan. At your earliest opportunity, please provide us the guidelines and standards of review for such "conceptual" decommissioning plans and how such conceptual plans are generally implemented at contaminated and potentially contaminated sites.

We are particularly concerned with the adequacy of the actual decommissioning plans for the AMS facility in light of recent results of testing conducted on samples collected outside the AMS facility. We have attached as Exhibit "A" a copy of a report of 11,200 picoCuries/liter in water samples from around the 4" basement pipe outside of the building. Such a high concentration of nuclear material outside of the building warrants very serious scrutiny of the actual conditions around and beneath the building.

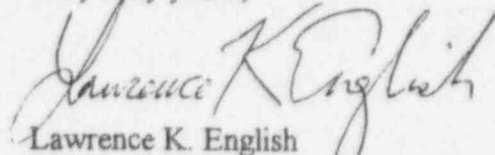
The need for actual, scientific characterization of the AMS facility is underscored by the length of time contamination has been known to exist outside the AMS building. While the contamination of the sewer and manhole at AMS has been well documented over the years, contamination beyond these structures has been documented for many months.

For example, as long as eight months ago, the NRC was aware that an AMS consultant would not pump water that collected in a sump outside of the AMS building because of the radioactive contamination observed in the water. See Exhibit "B", January 26, 1995 letter regarding ground-

water control from Quality Environmental Solutions, Inc. to Dwight A. Miller, attorney for AMS. This letter was faxed to the District by the NRC on January 30, 1995.

We would appreciate your prompt attention to this matter and look forward to seeing the guidelines and standards of review for "conceptual" decommissioning plans.

Very truly yours,

A handwritten signature in dark ink, appearing to read "Lawrence K. English", is written over the typed name.

Lawrence K. English
Assistant General Counsel

cc: Mayor Kathleen Edwards, Newburg Heights, Ohio
Martha McCorkle, City of Cleveland Law Department
Michael S. Kalstrom, Cuyahoga County LEPC
Michael Weber, NRC Headquarters
Cynthia Perderson, NRC Headquarters
Donald A. Cool, NRC Headquarters
James L. Caldwell, NRC Region III
Chief Thomas Root, Cleveland Fire Prevention Bureau
James Williams, Ohio Emergency Management Agency
Jane Harf, Ohio State Emergency Response Commission
Richard Connelly, Northeast Ohio Regional Sewer District
Thomas Lenhart, Northeast Ohio Regional Sewer District

BARRINGER LABORATORIES INC.

15000 W. 6TH AVE., SUITE 300 GOLDEN, CO 80401 (303) 277-1687 FAX (303) 277-1688

Ted Adams
B. KOH & ASSOCIATES
11 W. Main Street
Springville, NY 14141

21-Aug-95
Page: 11

Attn:
Project:

PO. #:

Received: 24-Jul-95 10:05

Job: 952763E

Status: Final

Lab-ID	Matrix	Client Sample ID	Sampled
952763-1	Liquid	LRW-5182-134	01-Jul-95
952763-2	Liquid	LRW-5190-135	09-Jul-95
952763-3	Sludge	LRW-5187-136	06-Jul-95
952763-4	Water	LRW-5187-137	06-Jul-95
952763-5	Water	LRW-5188-138	07-Jul-95

Exhibit "A"

Meeting The Analytical Challenges Of A Changing World

BARRINGER LABORATORIES INC.

15000 W. 5TH AVE., SUITE 300 GOLDEN, CO 80401 (303) 277-1687 FAX (303) 277-1689

21-Aug-95

Page: R-1

Job: 952763E

Status: Final

B. KOH & ASSOCIATES**Gamma Spec**

Sample Id: LRW-5182-134

Lab Id: 952763-1

Date Sampled: 1-Jul-95

Project:

Matrix: Liquid

Analyte	Fraction	Conc. + 2σ	LLD	Date Analyzed
Co-60	GS	<10 pCi/l	---	08/15-08/17

Sample Id: LRW-5190-135

Lab Id: 952763-2

Date Sampled: 9-Jul-95

Project:

Matrix: Liquid

Analyte	Fraction	Conc. + 2σ	LLD	Date Analyzed
Co-60	GS	<10 pCi/l	---	08/15-08/17

Sample Id: LRW-5187-137

Lab Id: 952763-4

Date Sampled: 6-Jul-95

Project:

Matrix: Water

Analyte	Fraction	Conc. + 2σ	LLD	Date Analyzed
Co-60	GS	<9 pCi/l	---	08/15-08/17

Sample Id: LRW-5188-138

Lab Id: 952763-5

Date Sampled: 7-Jul-95

Project:

Matrix: Water

Analyte	Fraction	Conc. + 2σ	LLD	Date Analyzed
Co-60	GS	11200±300 pCi/l	---	08/15-08/17

PHONE: (216) - 641-8000

PHONE: (301) - 356-6612

Page 1 of 1

Sampler(s): (Print and Sign)			Sample Collection and Chain of Custody		
Sample Number		Collection	Matrix	Remarks or Sample Location	Analysis Requested
LRW - 5182 - 134	7-1-95	WEEKLY COMPOSITE	SEWAGE SLUDGE	Easterly WWTP Pumped Sludge	CO 60
LRW - 5190 - 135	7-9-95	WEEKLY COMPOSITE	SEWAGE SLUDGE	Easterly WWTP Pumped Sludge	CO 60
LRW - 5187 - 136	7-6-95	12:15 AM	SEWAGE SLUDGE	15" STORM PIPE N. of MAIN ENTRANCE	CO 60
LRW - 5187 - 137	7-6-95	4:45 AM	H ₂ O	REAR DOCK DISCHARGE MANHOLE	CO 60
LRW - 5188 - 138	7-7-95	11:15 AM	H ₂ O	Water Around 4" DRAINAGE PIPE	CO 60
Relinquished By: <i>[Signature]</i>	Date: 7-7-95	Time: 9:00	Received By: <i>[Signature]</i>	Date: 7-12-95	Time: 10:05
Relinquished By:	Date:	Time:	Received By: <i>[Signature]</i>	Date: 7-12-95	Time: 10:05
Relinquished By:	Date:	Time:	Shipped Via: UPS	Shipping Ticket No: 5701 471 735	

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SEP 06 '95 03:03PM B. KOH & ASSOCIATES

P. 4

Quality
Environmental
Solutions, Inc.

January, 26, 1995

Mr. Dwight A. Miller
Attorney at Law
STAVOLE & MILLER
1604 Illuminating Building
55 Public Square
Cleveland, Ohio 44113

SUBJECT: Ground-Water Control Program
AMS London Road Facility
Cleveland, Ohio

Dear Mr. Miller:

I appreciated the opportunity to meet with you on Monday to review the water issues at the AMS facility. Based on our discussions and a detailed site inspection, QES has prepared a summary of findings and recommendations.

FINDINGS

- As of Monday, January 23, 1995, there was approximately 19 inches of water in the basement. The water initially entered the basement slowly through the basement wall/floor interface. Subsequently, the water level increased through a standpipe, which was then plugged. Currently, the only apparent way for water to enter and exit the basement is through the wall/floor interface or other slab penetrations.
- A sump was recently excavated adjacent to the building. The excavation extended to the building tile drain system which was designed to divert ground water to the sewer system. However, the lateral connection to the municipal sewer system has been plugged, thereby preventing the discharge of water from the tile drain system. This has resulted in a rise in water levels outside of the building. The sump was excavated as an alternative method of removing water from the tile drain system. Prior to the scheduled pumping, the water was tested and detectable levels of radionuclides were observed. Therefore, water was not pumped from the sump. On January 23, 1995, the water level in the sump was approximately three feet higher than the water level in the basement.

Corporate Office
Post Office Box 526 - Sherwood Forest, Maryland 21405 - (410) 849-5522

Exhibit "B"

Quality Environmental Solutions, Incorporated

Mr. Dwight A. Miller

January 26, 1995

Page Two

- There is a sewer access point along the London Road side of the AMS building. The water level in the manhole appears to be approximately the same as the level in the sump. Water in the manhole has been pumped several times, with no effect on the water level in the basement. A video of the inside of the manhole after pumping indicates that the water in the manhole is derived from infiltrating ground water and surface water.
- The roof drains, floor drains and storm drains on the property have been sealed or diverted away from the building.

RECOMMENDATIONS

Based on the above findings, ground-water and surface-water runoff appear to be the primary sources of water in the basement and manhole. A conceptual ground-water control program has been developed with the goal of reducing the water levels in the manhole and sump and providing a long-term alternative subsurface drainage system. The following recommended course of action has been developed to address the current situation as well as the prevention of future water problems.

- *Installation of three ground-water monitoring wells.* The four-inch diameter PVC wells will extend to a depth of approximately 20 feet. The wells will be installed with a hollow-stem auger drilling rig equipped with an air hammer for drilling in bedrock. The wells will be located near the manhole, between the railroad tracks and AMS building, and near the truck loading dock.
- *Analysis of water sample from monitoring wells.* Following the completion of the wells, a ground-water sample will be obtained to verify the absence of detectable radionuclides.
- *Elevation survey of monitoring wells, manhole and sump.* The location and relative elevation of the monitoring wells, sump, and manhole will be surveyed in order to determine the ground-water flow direction and gradient and to obtain comparative data concerning water levels.

Quality Environmental Solutions, Incorporated

Mr. Dwight A. Miller

January 26, 1995

Page Three

- *Completion of aquifer pumping test.* A pumping test will be completed to determine aquifer characteristics. The water levels in the basement, manhole, sump and monitoring wells will be determined prior to the start of the test. Water will be pumped from one of the monitoring wells at a steady rate for approximately eight hours. During pumping, water levels will be obtained at regular intervals at the monitoring wells, sump, manhole and basement.
- *Design and installation of a ground-water pumping system.* Based on the results of the aquifer pumping test, a ground-water pumping system will be designed. As envisioned, the design will include the use of one of the monitoring wells as a pumping well. Initially, ground water pumped from the well will be directed to a temporary storage tank, sampled and discharged if radionuclides are not present above a nominal detection level. After one week of pumping, the water will be discharged directly to the ground if radionuclides are still not present in the ground water. The pumping system will operate automatically as long as water is present in the well. The goal of the program is to maintain a ground-water level below the basement slab elevation at all times. As a back-up, the sump will remain available as an emergency pumping location. The commencement of pumping from the well is scheduled to coincide with the pumping of water from the basement, manhole and sump.
- *Preparation of documentation report.* A report will be prepared which will document the field methodology, testing results, ground-water pumping system design and initial operational results.
- *Completion of other activities.* There are several other activities which will be completed in conjunction with the ground-water control program. These include: an evaluation of the 15-inch drain line to verify that there are no other sources of water flow; sealing of the two drains in the parking area; and, site grading to ensure that surface-water runoff is diverted away from the building.

The monitoring wells are tentatively scheduled for installation on Monday, January 30, 1995. This schedule is dependant upon utility clearance and the weather. Assuming that the wells are installed at the beginning of next week, the pumping test and data analysis will be completed by the end of the week. Should one of the monitoring wells prove to be acceptable for use as a pumping well, pumping could commence early in the week of February 6, 1995.

Mr. Dwight A. Miller
January 26, 1995
Page Four

Please review these findings and recommendations and give me a call at (410) 849-5522 with any questions or comments.

Sincerely,
Quality Environmental Solutions, Inc.

Donald E. Jones, C.F.G.
President

[REDACTED]

CONVERSATION RECORD

Time
~1:30 pmDate
9/19/95

Visit

Conference

X Telephone

X Incoming
Outgoing

Contact

Jerry Personnen

Organization

FBI agent, Cleveland

Phone No.

216-622-6677

Subject

AMS

Summary

Recently Mr. Personnen received a phone call from Mike Palmer, who works for the Geneva, Ohio sewer dept. Apparently Mr. Palmer recently heard rumors that AMS was planning on discharging its 100,000 gallons of slightly contaminated H2O into Geneva's sewer plant. (The implication was that the discharge was to be without the knowledge/approval of the Geneva officials.) Mr. Personnen called Hal Walker, OI, who called Kevin Null, who contacted me.

I told Mr. Personnen that NRC was aware that AMS was negotiating w/ Geneva about the 100,000 gallons of water. I told him about the 8/12/95 article about this in the CPD - and I read some of the article to him. I further indicated that I was not aware of the results of the negotiations. I explained how the NRC regs allow a licensee to discharge liquid wastes into the sewer system if the concentrations of RAM are below certain limits. I then discussed the amount of Co-60 in AMS' water, the Part 20 limits, etc. I explained that NRC does not force sewer depts. to take contaminated waste water, even if the levels of RAM are below our limits. I indicated that NRC was invited to a meeting with AMS and Geneva a few weeks ago to discuss the discharge of the water, but that the meeting did not take place. I then stated that there was supposed to be a meeting between AMS and Geneva yesterday, but I was not aware if the meeting had actually taken place. I also described what AMS does at the Geneva and London Rd. facilities, and I explained teletherapy units, sealed sources, etc.

I asked Mr. Personnen why the FBI was involved with AMS. He indicated that he has been working on this case with the NEORSD for a long time, and that AMS had lied to the NEORSD and others. Moreover, the FBI was looking for criminal violations by AMS - but they were restricted to issues outside the jurisdiction of the NRC. It was very clear that Mr. Personnen knew a great deal about AMS and its history and interactions with the NEORSD. It was also clear that Mr. Personnen was only familiar with the NEORSD's "side of the story."

Mr. Personnen indicated that he would get call Mr. Palmer and tell him about our conversation. He also indicated that he would be contacting me in the future.

Later - I checked with Hal Walker and was told that indeed Mr. Personnen is an FBI agent.

Action

Alert RIII management.

Name

Michael F. Weber

Signature

Date

9/19/95

E189



COUNTY OF
CUYAHOGA

**Cuyahoga Emergency Management
Assistance Center (CEMAC)**

Commissioners

Mary O. Boyle
Timothy F. Hagan
Lee C. Weingart

September 26, 1995

Robert Meschter, RSO
Advanced Medical Systems, Inc.
1020 London Rd.
Cleveland, Ohio 44110

Dear Mr. Meschter:

I write in response to your letter of September 12, 1995, wherein you have requested a letter of agreement with the Cuyahoga County Emergency Management Division "to support AMS in the event of an emergency." We do not normally enter into individual facility agreements to respond to emergency incidents, and this letter should not be represented as such an agreement. We do, however, have agreements with *Incident Communities*, including the City of Cleveland. These agreements and the protocols for the Cuyahoga Major Emergency Incident Management System (CMEIMS) are the means of access for the emergency assistance available to the City of Cleveland from the Division of Emergency Management. The information below should serve as an introduction to the procedures required to access the CMEIMS.

The Cuyahoga County Division of Emergency Management responds to requests for assistance according to protocols outlined in the CMEIMS. We would respond to any emergency request which is made via those protocols, and would provide emergency assistance as addressed by the CMEIMS. A copy of the CMEIMS Manual, which outlines the protocols, is available for your review at CEMAC Monday through Friday from 8:30 A.M. to 4:30 P.M. The CMEIMS Manual can also be purchased for a nominal fee. The CMEIMS can be activated via telephone 24 hours a day by calling (216) 443-5700.

The Division of Emergency Management, in cooperation with the Cuyahoga County Local Emergency Planning Committee (LEPC), also provides for the resources required for the annual update of a comprehensive emergency response plan for hazardous materials (current update is SARA Plan, Version 7). The current plan includes emergency information regarding over three hundred facilities which store Extremely Hazardous Substances. The CMEIMS provides for the response protocols for communities which include facilities in the plan.

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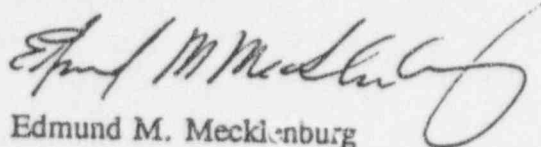
Robert Meschter, RSO
Advanced Medical Systems, Inc.
September 26, 1995

The purpose of the SARA Plan is to provide emergency responders with information for emergency response planning that will provide for a more effective response. We would welcome the addition of Advanced Medical Systems, Inc. to the next update of the SARA Plan and have asked that the Ohio State Emergency Response Commission assist us in that endeavor. The provision of information required for the annual update of this plan is one of the best means currently available to assure an effective emergency response at Cuyahoga County facilities.

Finally we believe it is important to provide notice that the 24 hour telephone number for reporting spills of hazardous materials is (216) 771-1365. Spills of any of the materials listed in the attached USEPA Document Number EPA 740-R-001 must be reported to the LEPC if the reportable quantity (RQ) listed is exceeded. I have also attached a copy of the LEPC's guidance for reporting spills (*Hazardous Materials Emergency Release Notification Guidelines for Cuyahoga County Facilities, Transporters or Vessels*).

If you have further questions please contact me at (216) 443-5700.

Sincerely,



Edmund M. Mecklenburg
Manager

encl.

cc: James Caldwell, NRC Region III
Richard Connelly, NEORSD
Jane Harf, Ohio SERC
Michael S. Kalstrom
Robert J. Patton, Chairman, Cuyahoga County LEPC
Edwin C. Price
Chief Thomas Root, Cleveland Fire Marshal

Thompson



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

September 27, 1995

Advanced Medical Systems, Inc.
ATTN: Mr. David Cesar
Executive Vice President
121 North Eagle Street
Geneva, OH 44841

SUBJECT: DEMAND FOR INFORMATION

Dear Mr. Cesar:

Over the past several years, a number of significant issues, some of which have been long-standing, have emerged that required Advanced Medical Systems' (AMS') attention and action. These issues, at times, have presented conflicting demands, especially the recent issue associated with ground-water intrusion into the facility basement. This issue has been addressed, although the final disposition of the processed water and any future connection to, and/or remediation of the sewer district's interceptor, still need to be resolved. It is imperative that AMS now focus its attention on significant issues of concern that remain at the facility. These are: (1) the removal of large quantities of radioactive material and low-level radioactive waste from the facility; (2) completion of the physical inventory of radioactive materials and performance of an emergency exercise, as required by your license; (3) reduction of extensive facility surface contamination; and (4) re-characterization and disposition of the Waste Hold-Up Tank (WHUT) room.

At a recent inspection exit meeting, AMS discussed its plans to take actions that would alleviate many NRC concerns about conditions at its London Road facility. The enclosed Demand for Information (DFI) is being issued to obtain, from AMS, a schedule to address the significant issues that currently exist at the AMS facility.

As discussed in the DFI, it is necessary that NRC have an integrated, comprehensive schedule from AMS, outlining the sequence and steps, with projected milestone dates, that AMS will take to address the aforementioned four issues, including the priority and description of each activity. In responding to the DFI, AMS should particularly emphasize what activities it plans to take with regard to the reduction of the radioactive material inventory within its facility, as this material poses the greatest risk relative to other issues confronting AMS. In that regard, we understand that AMS will soon be returning a quantity of sealed sources to the manufacturer.

NRC intends to use the information obtained from this DFI to establish a formal mechanism in order to achieve completion of the actions within agreed upon timelines.

Failure to comply with the provisions of this DFI may result in further Nuclear Regulatory Commission action.

E/91

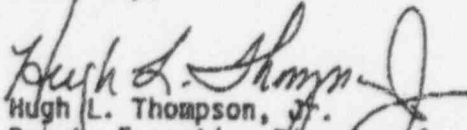
Mr. David Cesar

-2-

Questions about this DFI should be addressed to Mr. James L. Caldwell, Deputy Director, Division of Radiation Safety and Safeguards, Region III, who can be reached at (708) 829-9801.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and the enclosure will be placed in the NRC's Public Document Room.

Sincerely,


Hugh L. Thompson, Jr.
Deputy Executive Director for
Nuclear Materials Safety, Safeguards,
and Operations Support

Enclosure:
"Demand for Information"

License No. 34-19089-D1
Docket No. 030-16055

cc w/enclosure:
Michael R. White, Mayor
City of Cleveland
601 Lakeside Avenue
Cleveland, OH 44114

Lisa Mehringer
City of Cleveland Law Department
601 Lakeside Avenue Room 106
Cleveland, OH 44114

Robert E. Owen, Administrator
Radiological Health Program
Department of Health
246 North High Street, 3rd Floor
P.O. Box 118
Columbus, OH 43266

Frv Ball, Deputy Director
Cuyahoga County Board of Health
1375 Euclid Ave. Suite 524
Cleveland, OH 44115

Erwin J. Odeal, Executive Director
Northeast Ohio Regional Sewer District
3826 Euclid Avenue
Cleveland, OH 44115

Mr. David Cesar

-2-

Questions about this DFI should be addressed to Mr. James L. Caldwell, Deputy Director, Division of Radiation Safety and Safeguards, Region III, who can be reached at (708) 829-9801.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and the enclosure will be placed in the NRC's Public Document Room.

Sincerely,

Original signed by
Hugh L. Thompson, Jr.
Hugh L. Thompson, Jr.
Deputy Executive Director for
Nuclear Materials Safety, Safeguards,
and Operations Support

Enclosure:
"Demand for Information"

License No. 34-19089-01
Docket No. 030-16055

DOCUMENT NAME: G: & A:\DFI_LTR.10

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure
"N" = No copy * See previous correspondence

OFFICE	IMOB*		NMSS/Editor	*	IMOB*	E	IMOB	R III	R III
NAME	JDeCicco/11	EKraus	CJones	GPagburn	CPederson	HMiller			
DATE	09/20/95	9/21/95/Fax	09/22/95	09/22/95	09/22/95	09/22/95			
OFFICE	OGC*		OE*		IMNS		IMNS		NMSS
NAME	JGoldberg	JLieberman	FCombs	DCO		MKnapp			
DATE	09/22/95	09/21/95	09/ /95	09/25/95		09/26/95			
OFFICE	NMSS		EDO						
NAME	CPaperiello	HThompson							
DATE	9/26/95	9/29/95							

OFFICIAL RECORD COPY

LETTER TO: DAVID CESAR, AMS

DATED: September 27, 1995

DISTRIBUTION: NMSS 9500421

NRC Central File	JCaldwell, RIII
INOB r/f	MWeber, RIII
IMNS r/f	CJones
NMSS r/f	MStein, OGC
CPoland	PDR
CEstep	LPDR
MZobler, OGC	EDO r/f

cc w/enclosure:

Michael R. White, Mayor
City of Cleveland
601 Lakeside Avenue
Cleveland, OH 44114

Lisa Mehringer
City of Cleveland Law Department
601 Lakeside Avenue Room 106
Cleveland, OH 44114

Robert E. Owen, Administrator
Radiological Health Program
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1375 Euclid Ave. Suite 524
Cleveland, OH 44115

Erwin J. Odeal, Executive Director
Northeast Ohio Regional Sewer District
3826 Euclid Avenue
Cleveland, OH 44115

UNITED STATES
NUCLEAR REGULATORY COMMISSION

In the Matter of)

Advanced Medical Systems, Inc.)
Cleveland, Ohio)

Docket No. 030-16055
License No. 34-19089-01

DEMAND FOR INFORMATION

I

Advanced Medical Systems, Inc. (AMS or Licensee) is the holder of U. S. Nuclear Regulatory Commission License No. 34-19089-01, issued by NRC (or Commission) pursuant to 10 CFR Part 30. The license authorizes the Licensee to possess and use up to: (1) 5,550 terabecquerels (TBq) [150,000 curies (Ci)] of cobalt-60 as solid metal, for storage only incident to waste disposal or transfer; (2) 5,000 TBq (135,000 Ci) of cobalt-60 in sealed sources for installation in, maintenance on, servicing and dismantling of, and training on teletherapy units; (3) 1,480 TBq (40,000 Ci) of cesium-137 for installation in, maintenance on, and servicing and dismantling of radiography and teletherapy units; (4) 4,040 kilograms (8,907 pounds) of depleted uranium for shielding in radiography and teletherapy units; (5) 555 TBq (15,000 Ci) of cobalt-60 in non-NRC-approved sealed sources, for storage only; and (6) 555 megabecquerels (15 millicuries) of cobalt-60 in sealed sources, for calibration of survey instruments. The license was originally issued on November 2, 1979, was renewed on December 13, 1989 (with an expiration date of December 31, 1994), and was most recently amended on August 8, 1995. The Licensee submitted a timely renewal application, and the existing license continues to be effective, pending completion of NRC's review of the renewal application.

II

NRC is concerned about the avoidable risks posed by the storage of large quantities of radioactive material at the AMS facility, and the Licensee's continued noncompliance with two NRC license requirements, as described below.

A. Avoidable Risks from Unused Materials and Extensive Contamination

Pursuant to 10 CFR 20.1101(b), a licensee is required to use, to the extent practicable, procedures and engineering controls to achieve radiation doses to workers and members of the public that are as low as is reasonably achievable.

Enclosure

We understand that AMS no longer intends to manufacture sealed sources and has no plans to make use of the majority of the sealed sources currently stored at the facility. In light of this, the radioactive material inventory, composed of "tens of TBq" ("kilocurie") quantities of sealed and unsealed sources, does not benefit AMS, and is not necessary for AMS operations. Although the material is properly stored, this storage poses avoidable risks to the workers, and potential risk to members of the public.

There also remains a large quantity of packaged low-level radioactive waste in the AMS facility basement, and radioactive surface contamination in various rooms in the facility, which have been accumulating for many years. This radioactive waste material serves no useful purpose to AMS operations and also poses avoidable risks to the workers, and potential risk to members of the public.

Furthermore, based on radiological surveys, "several TBq" ("tens of Ci") of radioactive material exist in the waste hold-up tank (WHUT) room, which is no longer used and was made inaccessible to workers in the late 1980s. In a letter to AMS dated October 20, 1988, NRC authorized isolation and postponement of decontamination of the WHUT room for a 5-year period, at which time the decision would be reevaluated. Because of the recent flooding of the AMS basement and the subsequent water removal and treatment project, it is possible that the radiological conditions in the WHUT room have changed. Therefore, it is appropriate at this time to reevaluate the decision to postpone the decontamination of this room.

B. Failure to Complete Physical Inventory

On July 26, 1990, a Notice of Violation (NOV) was issued to the Licensee for a violation of License Condition No. 14, which had become effective on January 26, 1988, and required the Licensee to conduct a physical inventory every 6 months to account for all sources and/or devices received and possessed under the license. During the period January 1988 through January 26, 1990, the Licensee had not conducted this physical inventory. Subsequently, License Condition No. 14 was amended to require the Licensee to conduct a physical inventory of radioactive materials on or before June 1, 1993, and thereafter every 60 months, to account for all sources and/or devices received and possessed under the license. On August 13, 1993, NRC issued a letter to the Licensee stating that as a result of letters received from the Licensee dated May 17 and May 27, 1993, the NRC staff believed that the majority of the inventory was completed before June 1, 1993. In addition, the August 13 letter reflected the staff's understanding that an inventory of the radioactive material in the front well of the "hot cell" had not been performed before June 1, 1993, because the well plug could not be removed, and thus the sources within the well could not be inventoried.

Although the Licensee made several attempts to remove the stuck floor plug in 1993 and in 1994, the Licensee was unsuccessful and no inventory was conducted to determine the number of sources in the well. Thus, to date, the Licensee's inventory requirement has not been satisfied.

C. Failure to Conduct Emergency Exercise

License Condition No. 18 of Amendment 25, which became effective on July 30, 1992, required the Licensee to conduct an emergency exercise every 2 years. During an NRC inspection conducted at AMS in October 1994, NRC inspectors identified that the Licensee failed to conduct an emergency exercise. On November 29, 1994, NRC issued an NOV for, among other violations, this failure to conduct an emergency exercise. On December 29, 1994, AMS submitted a written response to the NOV in which a full-scale exercise with offsite emergency response personnel was estimated to be completed by August 31, 1995. On March 3, 1995, NRC acknowledged receipt of AMS' response to the NOV and stated that with regard to a full-scale exercise involving offsite emergency response personnel, the exercise should be conducted as soon as all off-site participants were prepared, and should not be delayed beyond July or August, 1995.

To date, the emergency exercise has not been conducted and this requirement has not been satisfied. However, NRC is aware that AMS will soon be submitting a revised emergency plan incorporating comments from both NRC and the local emergency response agencies. We understand that an emergency exercise will be planned and conducted after NRC review and approval of the emergency plan.

III

To provide NRC with the assurance that these significant issues will be appropriately prioritized, evaluated, and addressed, it is necessary for the Licensee to develop a comprehensive, integrated schedule outlining the sequence and steps, with projected milestone dates, that will be taken to reduce the radiological risk to occupational workers and members of the public, and to achieve compliance with NRC license conditions. The Licensee should particularly emphasize the reduction of the radioactive material inventory located within the facility, as this material poses the greatest risk relative to other issues confronting AMS.

Accordingly, pursuant to sections 161c, 161o, 182, and 186 of the Atomic Energy Act of 1954, as amended, and the Commission's regulations in 10 CFR 2.204 and 10 CFR 30.32(b), for the Commission to determine whether your license should be modified, suspended or revoked, or other enforcement action taken to ensure compliance with NRC requirements, the Licensee is required to submit to the Regional Administrator, Region III, 801 Warrenville Road, Lisle, IL 60532, within 45 days of the date of this Demand for Information, the following information in writing and under oath or affirmation:

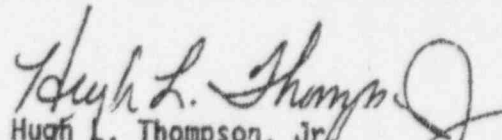
A schedule, including the sequence of activities, with projected milestone and completion dates and priorities, for the following activities. Include for each activity an outline describing how the activity will be completed. If some or all the activities will occur sequentially, justify why they cannot occur in parallel.

- A. Reduction of Inventory - 10 CFR 20.1101(b)
 - 1. Offsite transfer of sealed byproduct material
 - 2. Offsite disposal of wastes
 - 3. Offsite transfer of unsealed byproduct material
- B. Inventory - License Condition 14
 - 1. Removal of the stuck plug of the front storage well
 - 2. Completion of the physical inventory
- C. Emergency Exercise - License Condition 18
- D. Decommissioning/decontamination of the WHUT room - NRC letter dated October 20, 1988
- E. Decontamination - 10 CFR 20.1101(b)
 - 1. Decontamination of the hot cell
 - 2. Decontamination of the basement
 - 3. Decontamination of the Isotope Shop
 - 4. Decontamination of the Isotope Warehouse
 - 5. Decontamination of the high efficiency particulate air (HEPA) filter room
 - 6. Decontamination of other contaminated areas

A copy shall also be sent to the Assistant General Counsel for Hearings and Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

After reviewing your response, NRC will determine whether further action is necessary to ensure compliance with regulatory requirements.

FOR THE NUCLEAR REGULATORY COMMISSION


Hugh L. Thompson, Jr.
Deputy Executive Director for
Nuclear Materials Safety, Safeguards,
and Operations Support

Dated at Rockville, Maryland
this ____ day of

ATTACHMENT 3
Radiation Protection Program Plan



Northeast Ohio Regional Sewer District

3826 Euclid Avenue • Cleveland, Ohio 44115-2504 216 • 881 • 6600 FAX: 216 • 881 • 9709

September 27, 1995

Roger L. Suppes
Chief, Radiation Protection
Ohio Department of Health
246 N. High Street
Columbus, Ohio 43215

Re: Your Memorandum of September 8, 1995

Dear Mr. Suppes:

We have received a copy of your memorandum to Jane Harf, Chair, State Emergency Response Commission, dated September 8, 1995. Your memorandum refers to my own letter of August 9, 1995. Because it appears that our concerns for the safety and health of emergency responders have not been understood, we seek here to clarify those concerns.

Your memorandum confirms that materials generating from 100 to 30,000 mR/hr were indeed found at the Advanced Medical Systems ("AMS") facility. While you state that "No person, including workers, was actually exposed to anything approaching 30,000 mR/hr," you go on to state that "All contaminated materials are stored on-site." With on-site storage of such extremely highly radioactive materials, it is clear that the potential for exposure to high doses of radiation remains. This is particularly true in emergency situations.

You state that the contaminated materials on-site are "roped off" and that the radiation level at the rope is 0.19 mR/hr. Since radiation exposure rates fall as the inverse square of the distance from the radiation source, this statement does not foreclose the potential for much higher dose levels within the roped-off area. Inadvertent entry into such high exposure areas could easily occur during emergency response, in adverse working conditions such as fire or loss of electricity.

You also state that "there is no on-going potential exposure to emergency responders that would result in excessive safety risks to persons outside the facility." We are troubled by this statement for two reasons. First, we believe that any safety risk to emergency responders that *can* be eliminated *should* be eliminated. There is no sound reason to forego action merely because a safety risk is not "excessive".

Second, your statement refers only to excessive safety risks "to persons outside the facility." The largest potential problems to emergency responders are those presented *within* the

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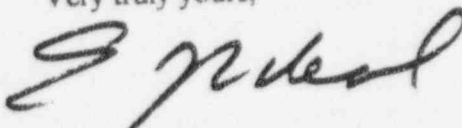
Mr. Roger L. Suppes
September 27, 1995
Page Two

facility. While no two estimates of the location of radioactive material appear to agree with one another, all such estimates do agree that many thousands of curies of Cobalt-60 are presently harbored within the facility. It thus appears that the only way for emergency responders to avoid excessive safety risks is to avoid entering the facility. Such a situation is unreasonable and unacceptable.

It is obvious that emergency responders are interested in eliminating unnecessary risks. It should also be the manifest interest of the State Emergency Planning Commission. A first step toward accomplishing that interest would be a vote in favor of designating the AMS facility as an additional facility for emergency planning purposes, as requested by the Local Emergency Planning Committee ("LEPC").

Please call me at (216) 881-6600 if you wish to discuss this matter further. You may also reach Thomas Lenhart or Lawrence English of our legal staff at the same number. You may reach Richard Connelly, Manager of our Water Quality and Industrial Surveillance department, at (216) 641-6000. Mr. Connelly is also an LEPC member.

Very truly yours,



Erwin J. Odeal
Executive Director

cc: Jane Harf, Chair, State Emergency Response Commission
Robert Staib, Commissioner, Division of the Environment
Martha McCorkle, City of Cleveland Law Dept.
Chief Thomas Root, Cleveland Fire Prevention Bureau
Michael S. Kalstrom, Cuyahoga County LEPC
James L. Caldwell, NRC Region III



COUNTY OF
CUYAHOGA

File

**Cuyahoga Emergency Management
Assistance Center (CEMAC)**

Commissioners

Mary O. Boyle
Timothy F. Hagan
Lee C. Weingart

September 29, 1995

James L. Caldwell
U.S. Nuclear Regulatory Commission - Region III
801 Warrenville Road
Lisle, IL 60532-4351

Re: Accumulation of Contaminated Water at Advanced Medical Systems, Inc.

Dear Mr. Caldwell:

On August 23, 1995 we forwarded a letter to William Axelson regarding a hazardous situation at Advanced Medical Systems, Inc. ("AMS"). Specifically, we expressed concerns about the Nuclear Regulatory Commission's ("NRC") failure to hold AMS to its promises to remove about 100,000 gallons of contaminated water via a method approved by the NRC in Amendment No. 38 of the AMS Material License No. 34-19089-01. In that Amendment, dated July 17, 1995, NRC License Condition Nos. 21 and 22.I. were changed to authorize operation of the water evaporation device described in AMS letters dated March 22, 1995, June 8, 1995 and June 29, 1995.

Our letter of August 23rd expressed concerns regarding the hazard presented by the accumulation of "up to 100,000 gallons" of contaminated water in storage containers apparently designed for temporary use. We believe it is important that this hazard be removed from the community as quickly as possible to prevent any emergency incident that might result from an unforeseen event involving these tanks. It has been almost one year since the accumulated water in and around AMS was identified as a problem. We continue to believe that this water should be removed as quickly as possible by the method approved by the NRC in its July License Amendment.

On September 13, 1995 we received a call from the NRC regarding our August 23rd letter. At that time we were offered the opportunity to file a 2.203 petition regarding this issue. Unfortunately, as you pointed out, the petition process could take at least 120 days. Since our request is about an ongoing community hazard that represents a potential emergency incident, we will forego the petition process to avoid any further delay. We believe that a deadline should be established for the removal of this hazard as quickly as possible.

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CECOMS CENTER 443-3196

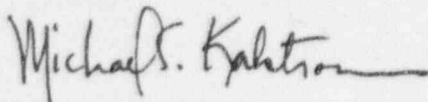
CRIS CENTER 443-7940

EMERGENCY MANAGEMENT 443-5700

James L. Caldwell
U.S. Nuclear Regulatory Commission - Region III
September 29, 1995
Page 2

Please call me at (216) 443-7597 if you have further questions regarding our request.

Sincerely,



Michael S. Kalstrom
Secretary, Cuyahoga County LEPC

cc: Jeri Chaikin

Mayor Kathleen M. Edwards, Newburgh Heights
Lawrence K. English, NEORSD
Chief William Fisher, Vice Chairman, Cuyahoga County LEPC
Jane Harf, Ohio SERC
Martha McCorkle, Cleveland Law Department
Edmund M. Mecklenburg, Cuyahoga County Emergency Management
Robert J. Patton, Chairman, Cuyahoga County LEPC
Edwin C. Price, Cuyahoga County Community Services
Chief Thomas Root, Cleveland Fire Marshal
Kenneth Schultz, Ohio SERC
Robert Staib, Cleveland Health Department
James Williams, Ohio Emergency Management Agency

FROM: IDEPA EMERGENCY RESPONSE

614 644 3250

1995.10-18

07:58

#959 P. 01/02



"Working to improve statewide preparedness and response to chemical emergencies and to improve public awareness of potential chemical hazards."

Ohio State Emergency Response Commission

Emergency Planning and Community Right-to-Know
P.O. Box 163669, 1800 WaterMark Drive
Columbus, Ohio 43216-3669

Post-It® Fax Note

7671

Date	10/10	# of pages	2
To	Carl O'Clair	From	Les to Field
On/Dept.		CC	
Phone #		Phone #	
Fax #		Fax #	

October 6, 1995

Henry E. Billingsley, Esq.
Arter & Hadden
1100 Huntington Building
925 Euclid Avenue
Cleveland, Ohio 44113-1475

Dwight A. Miller, Esq.
Stavole & Miller
1604 Illuminating Bldg.
Cleveland, Ohio 44113

Dear Messrs. Billingsley and Miller:

Thank you for your August 2, 1995 letter commenting on SERC Resolution No. 95-74. Your comments, along with others, have been distributed to all of the SERC members for their consideration. SERC is scheduled to meet on October 11, 1995, 1:15 p.m., at 1800 WaterMark Drive, Columbus, Ohio to vote on whether to issue an order designating Advanced Medical Systems, Inc. ("AMS") as an "additional facility" pursuant to Revised Code Section 3750.05.

In evaluating whether to designate AMS as an additional facility, SERC is required to make a factual determination from the Cuyahoga County Local Emergency Planning Committee request that "due to the size of the facility, the nature of its operations or its proximity to a residential area or an area where significant numbers of people work or congregate, participation in the emergency planning process... is necessary or appropriate to protect the public health or safety or the environment." Revised Code Section 3750.05(A). Each voting SERC member will decide whether the facts presented satisfy the statutory criteria for designation. Therefore, any response to assertions of fact contained in your letter pertaining to the necessity or appropriateness of designating AMS as an additional facility is not appropriate at this time, but will be addressed by the SERC through its vote on October 11, 1995.

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FROM IOEPA EMERGENCY RESPONSE

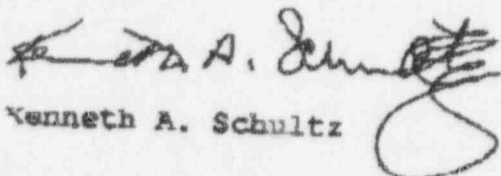
Henry E. Billinsley, Esq.
Dwight A. Miller, Esq.
Page 2

Your legal assertion that SERC is without statutory authority to designate AMS as an additional facility, is unfounded. The Atomic Energy Act of 1954 does not preempt the Emergency Planning and Community Right-to-Know Act of 1986 ("EPCRA") or Revised Code Chapter 3750. EPCRA preserves state authority in this area. Furthermore, EPCRA explicitly regulates the reporting and release of radionuclides, including cobalt 60, which is a hazardous chemical and a hazardous substance as those terms are defined in Revised Code Section 3750.01. In addition, SERC at no time conceded in its July 5, 1995 notice that cobalt 60 is neither a hazardous nor an extremely hazardous substance within the terms of Chapter 3750 or SARA Title III as represented on page 5 of your comments.

With respect to your second argument, the Ohio General Assembly promulgated Revised Code Section 3750.05 which gives SERC the legal authority to designate AMS as an "additional facility." If at least 60% (11) of SERC's voting members vote to issue the order, AMS will be directed to designate an emergency coordinator who would be required to participate in the LEPC's emergency planning process, as set forth in Revised Code Sections 3750.04(A)(5) and 3750.05(B).

Thank you for your comments.

Sincerely,


Kenneth A. Schultz

KAS/JM/lf

cc: Jane Harf, Chair
Jackie Mallett, AGO
Dale Shipley, Ohio EMA



Northeast Ohio Regional Sewer District

826 Euclid Avenue • Cleveland, Ohio 44115-2504 216 • 881 • 6600 FAX: 216 • 881 • 9709

October 9, 1995

James L. Caldwell, Deputy Director
Division of Radiation Safety and Safeguards
U.S. Nuclear Regulatory Commission, Region III
801 Warrenville Road
Lisle, IL 60532-4351

Re: Emergency Response

Dear Mr. Caldwell:

By your letter of June 8, 1995, the Nuclear Regulatory Commission ("NRC") confirmed that the Northeast Ohio Regional Sewer District ("District") is indeed a first responder to emergencies such as fires, floods and spills. As you may know, the District has already responded to potentially radioactive releases at both the Advanced Medical Systems, Inc. ("AMS") facility and the McGean-Rohco facility.

It appears, however, that AMS has chosen to ignore our actual status as a first emergency responder, and has chosen to ignore your June 8, 1995 letter. See September 22, 1995 letter from Robert Meschter to Richard Connelly, attached hereto. We chose the word "ignore" advisedly, inasmuch as both the Treasurer and Radiation Safety Officer of AMS were copied on your letter.

Pursuant to 10 CFR Part 30.32(I)(4), the District is entitled to review and respond to the emergency plan proposed by AMS, and to have its comments formally considered. Please take those steps necessary to correct the error that your licensee has committed. Please call me at (216) 881-6600 if you have any questions.

We look forward to your prompt response to the foregoing.

Very truly yours,

Lawrence K. English
Lawrence K. English
Assistant General Counsel

att.

cc: Chief Thomas Root, Cleveland Fire Prevention Bureau
Robert Staib, AMS Task Force
Martha McCorkle, City of Cleveland Law Department

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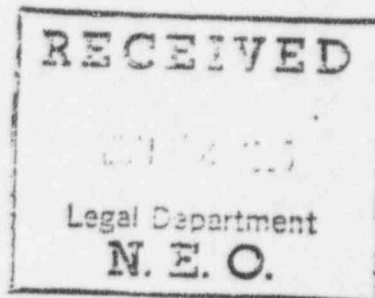
Mayor Kathleen Edwards, Newburgh Heights, Ohio
Michael S. Kalstrom, Secretary, Cuyahoga County LEPC
James Williams, Ohio Emergency Management Agency
Jane Harf, Ohio State Emergency Response Commission
Erwin J. Odeal, Northeast Ohio Regional Sewer District
Richard Connelly, Northeast Ohio Regional Sewer District



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION III
801 WARRENVILLE ROAD
LISLE, ILLINOIS 60532-4351

June 8, 1995



Northeast Ohio Regional Sewer District
ATTN: Lawrence K. English
Assistant General Counsel
3826 Euclid Avenue
Cleveland, Ohio 44115-2504

Dear Mr. English:

This responds to your letters dated April 6, 1995 and May 4, 1995, regarding Advanced Medical System's (AMS's) submittal of its radiological emergency plan (EP) to the Northeast Ohio Regional Sewer District (NEORSO) for review and comment. Your April 6, 1995 letter informed us that NEORSO is a first responder to emergencies including fires, floods and spills. The NEORSO's radiological emergency response status was not known to our organization prior to your April 6, 1995 letter.

On May 12, 1995, our office was informed by AMS that its EP was delivered via certified mail to the NEORSO on April 26, 1995, and a return receipt was obtained. This information was confirmed in a May 22, 1995 letter from AMS.

Based on your May 22, 1995 telecon with Mr. Madera of my staff, we understand that the NEORSO received the AMS EP. Pursuant to 10 CFR Part 30.32(i)(4), AMS is required to allow offsite response organizations, expected to respond in case of an accident, 60 days to comment on its EP. Comments received within the required time frame shall be provided to the NRC. Accordingly, should the NEORSO have comments on the AMS EP, please provide them to AMS within 60 days of your receipt of the plan.

If you have any other questions regarding this matter, please do not hesitate to contact Messrs. John Madera or Wayne Slawinski of my staff.

Sincerely,

James L. Caldwell, Deputy Director
Division of Radiation Safety and Safeguards

Docket No. 030-16055
License No. 34-19089-01

See Attached Distribution

Northeast Ohio Regional
Sewer District

-2-

Distribution

cc w/ltrs dtd 4/6/95; 5/4/95
and 5/22/95:

D. Cesar, Treasurer
Advanced Medical Systems, Inc.
121 N. Eagle Street
Geneva, OH 44041

Robert Meschter
Radiation Safety Officer
Advanced Medical Systems, Inc.
121 N. Eagle Street
Geneva, OH 44041

Michael R. White, Mayor
City of Cleveland
601 Lakeside Avenue
Cleveland, OH 44114

Erwin J. Odeal, Executive Director
Northeast Ohio Regional Sewer District
3826 Euclid Avenue
Cleveland, OH 44115

Michael Kalstrom, Secretary
County of Cuyahoga
Cuyahoga Emergency Management
Assistance Center
1255 Euclid Avenue, Room 102
Cleveland, OH 44115-1807

Marian Zobler
U.S. Nuclear Regulatory Commission
Rockville, MD 20852

Robert E. Owen, Administrator
Department of Health
246 North High Street, 3rd Floor
P.O. Box 118
Columbus, OH 43266

Lisa Mehringer
City of Cleveland Law Department
601 Lakeside Avenue, Room 106
Cleveland, OH 44114

Erv Ball, Deputy Director
Cuyahoga County Board of Health
1375 Euclid Avenue, Suite 524
Cleveland, OH 44115

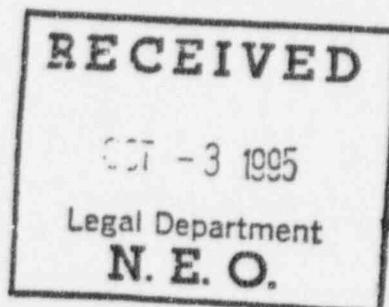
Jane Harf, Chairperson
Ohio State Emergency Response
Commission
1800 Watermark Drive
P.O. Box 163669
Columbus, OH 43219-3669

Advanced Medical Systems, Inc.

121 North Eagle Street • Geneva, Ohio 44041
(216) 466-4871 FAX (216) 466-0186

September 22, 1995

Mr. Richard Connelly
Northeast Ohio Regional Sewer District
Water Quality Industrial Surveillance
3826 Euclid Avenue
Cleveland, Ohio 44115-2504



RECEIVED
WATER QUALITY & INDUSTRIAL
SURVEILLANCE

OCT - 2 1995

NORTHEAST OHIO REGIONAL
SEWER DISTRICT

RE: Advanced Medical Systems, Inc. Emergency Plan

Dear Mr. Connelly:

Enclosed is a copy of the Advanced Medical Systems, Inc. (AMS) Emergency Plan. This revised plan has been submitted to the USNRC and to providers of emergency services (e.g., first responders) in order to address comments submitted previously by these agencies. It is being submitted to the NEORSD as a courtesy since you clearly went to a great deal of effort to respond to the initial version of the Plan. However, the NEORSD is not a first responder to emergencies at AMS, as the NEORSD cannot provide support in an emergency at AMS, no additional action or comment on your part is necessary.

Enclosed also are responses to your June 23, 1995, comments on the original version of the Emergency Plan.¹ Please note that significant changes to the Plan have been made since your last review. Therefore, many of your comments are no longer relevant. Also, since a large number of your June 23 comments had little applicability to emergency response issues, or they did not appear to require a response from AMS, no action was taken in many cases. However, wherever possible, a response or reference to the applicable section of the revised Plan was provided.

Please call me at 216/692-3270 if I can answer any questions.

Sincerely,

ROBERT MESCHTER
Radiation Safety Officer

RM/cs

Enclosures

cc: D. Cesar

D. A. Miller, Esq. - Stavole & Miller

J. Madera - USNRC, Region III

¹ Because the NEORSD submitted well over 600 comments (more than eight times more than the rest of the commenting agencies combined), the individual comments were not re-stated on the enclosed responses. Instead, your comments were numbered and responses were given in that order.



Northeast Ohio Regional Sewer District

3826 Euclid Avenue • Cleveland, Ohio 44115-2504 216 • 881 • 6600 FAX: 216 • 881 • 9709

October 9, 1995

VIA OVERNIGHT DELIVERY

Ohio State Emergency Response Commission
c/o Ohio EPA/DERR
attn: Kenneth A. Schultz
1800 WaterMark Drive
Columbus, Ohio 43216-1099

Re: SERC Order Designating Advanced Medical Systems, Inc.
As An Additional Planning Facility

Dear Members of the Commission:

By now you should have received letters from the following emergency responders and local government agencies that have indicated their support for the issuance of an order designating Advanced Medical Systems, Inc. ("AMS") as an additional planning facility:

City of Cleveland
Cuyahoga County Commissioners
Cuyahoga County Emergency Management Division
Cuyahoga County Local Emergency Planning Committee
North East Ohio Fire Chiefs Association
Northeast Ohio Regional Sewer District

That is, each of the first responders who would be most affected by the unsafe conditions at AMS have sought your support in this effort.

In addition to these emergency response professionals, several environmental groups have also expressed their support for the issuance of the order:

American Industrial Hygiene Association, N.E. Ohio Local Section
Sierra Club, Northeast Ohio Group
Environmental Health Watch
Citizen Action
EcoCity Cleveland
Earth Day Coalition

E/96

Members of the Commission
October 9, 1995
Page Two

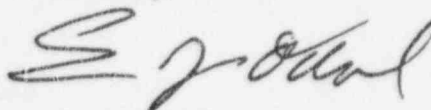
In addition, the people of the surrounding community have spoken out in support of efforts to bring AMS under realistic control. As reflected in the newspaper articles attached to this letter, the public is in vocal support of local initiatives to remove the dangers presented by the AMS facility. In editorials and in news items, the public's impatience with prolonged inaction by AMS and the NRC is manifest. The concerns are focussed on the level of contamination at the plant, the thousands of gallons of contaminated water collected at the site, conflicts with local emergency planning and government interests, and overall physical security at the contaminated facility.

The news reports also indicate that the NRC would not oppose the order. See the *Plain Dealer* on June 28, 1995.

Accordingly, your vote in support of the order will be a vote in support of local emergency responders and the public surrounding the AMS facility. Moreover, it will not be in conflict with NRC regulations or their public position with respect to the order. We look forward to your vote in favor of the issuance of the order designating AMS an additional planning facility.

Thank you for your consideration.

Sincerely,



Erwin J. Odeal
Executive Director

att.

cc: Jane Harf, Chair, State Emergency Response Commission
Robert Staib, Commissioner, Division of the Environment
Martha McCorkle, City of Cleveland Law Dept.
Chief Thomas Root, Cleveland Fire Prevention Bureau
Michael S. Kalstrom, Cuyahoga County LEPC
James L. Caldwell, NRC Region III

THURSDAY
APRIL 20, 1995

In Scoop Journal

Stop muddying the waters

Just how long are Collinwood residents going to have to worry about contaminated water in their neighborhood?

Not as long, we hope, as it takes the dirty water in the basement of Advanced Medical Systems to evaporate through natural means. But that's what it seems like sometimes — especially times like April 10, when water leaked out of the former plant's supposedly plugged sewer and into main sewer lines.

Maybe the water was no danger to the community as one Northeast Ohio Regional Sewer District official said. That's good to know, but it doesn't justify the situation dragging on for months while neighborhood residents must wait, wonder and worry about why no one can or apparently wants to take action to get rid of the problem.

Those residents don't know, or care, about whose responsibility it is to get rid of the accumulated water by whatever means available. All they know is that other neighborhoods don't worry constantly about a potentially toxic reservoir, and neither should Collinwood.

It's well past time to dry up this problem — permanently.

Firm to remove water, but not neighbors' fears

By CLIFFORD ANTHONY
Staff Writer

Advanced Medical Systems will soon remove Cobalt-60 contaminated water from the basement of its plant at 1020 London Road, a spokesman for the Geneva-based firm says.

Dwight A. Miller, AMS lawyer, said the company has already submitted a water removal plan to the Nuclear Regulatory Commission for its approval.

He said he hoped the AMS would be able to treat and remove the contaminated water "within the next week."

He also assured that the water doesn't pose any health hazard to neighbors.

The contamination occurred as storm water infiltrated the basement of the facility which had Cobalt-60 dust on the floor and the walls, according to John A. Grobe, chief of nuclear materials inspection for the NRC.

The firm manufactured Cobalt-60, used for radiation treatment of cancer patients, from 1979 to 1985 and from mid-1989 to 1991. In 1986, the plant was closed briefly and was fined \$10,000 for violating the NRC rules. The plant's basement was found contaminated and was entombed with concrete blocks and other materials in 1988.

"There's about 23 inches of water, a little over 1,000 gallons," Grobe said. "But there's no danger of overflow or threat to the neighborhood."

The NRC is studying the AMS proposals and a few items are to be ironed out before approving them, he said.

As per the plan, the AMS will filter and treat the contaminated water on site and will bring it to the purity level of drinking water. It is not yet known where the decontaminated water will be discharged.

The basement was flooded because the AMS' sewer system was plugged by the Northeast Ohio Regional Sewer District which is trying to collect clean-up cost of Cobalt-60 residues from its sledge and sewer pipes.

AMS will replace the contaminated sewer pipes and will dig a pit to collect storm water to prevent further flooding in the basement, according to Grobe.

"The water in the soil is also slightly 'contaminated,'" he said. "But a number of samples taken from there showed very low level of contamination."

He also allayed fears of health hazards to residents, saying the soil samples from 15 to 40 feet around the plant showed no contamination of Cobalt-60.

"The end result is that all contamination will be removed and will be prevented," he said, adding that his goal is to put a proper plan before the winter thaw.

Laura Casilina, who lives about 50 yards from the plant, wants to know what's really happening there.

"We don't know what's the truth," the London Road resident said. "One party is saying there's nothing and another party is saying there's contamination. Who do you believe? I hope that thing doesn't blow up or something."

Casilina said she is concerned
See WATER, page A5

Water

from page A1

that the contaminated water might spill over the neighborhood.

Similar fears were raised by Albert Yevchak, a resident of neighboring Alhambra Road.

"I'm afraid it's going to be another Love Canal," he said, referring to the nuclear contamination in New York in the 1970s.

Yevchak added that if the radiation contaminated water overflowed, officials may have to

evacuate the entire neighborhood as occurred in Love Canal.

Ward 11 Councilman Michael D. Polensek lamented that the legal battle between the AMS and the NEORS is "like a soap opera. It's not who's right and who's wrong. We want the water to be removed. We cannot allow the radioactive water to be there. This issue has to be abated."

Another major worry of Polensek is who will foot the clean-up bill if AMS declares bankruptcy.

"The community will be left with massive problem," he said. "Who's going to take care of the water?"

Sun Scoop Journal 8/10/95

Council urges denial of AMS license renewal

By CLIFFORD ANTHONY
Staff Writer

Two Collinwood councilmen are urging the Nuclear Regulatory Commission not to renew the license of Advanced Medical Systems.

The company, which makes radioactive Cobalt-60, has a plant at 1020 London Road.

Roosevelt Coats and Michael D. Polensek, councilmen of wards 10 and 11 respectively, have mustered the help of City Council to push for their cause.

In an emergency resolution introduced by Coats and Polensek and unanimously adopted on July 19, council urged the federal agency "to deny the license renewal application currently under consideration until such time as the AMS develops tests and has in place an emergency response plan and decommissioning fund plan that adequately safeguards the health, safety and

property of the surrounding neighborhood."

The license to manufacture Cobalt 60 was yanked in 1991 by the Chicago-based NRC because of a lack of qualified manufacturing personnel. The Geneva-headquartered firm is now trying to renew the license.

"I'm very concerned about what's happening there," Coats said, referring to the construction of a four foot thick concrete dyke-like wall 15 feet below the ground around the plant which is located in his ward. The 30-foot long wall was built to prevent radiation contamination on the southwestern corner of the building.

It is also designed to prevent any possible seepage of contaminated water into the new storm sewer that AMS is building. A high level of radioactive contamination was detected there while digging the grounds for the sewer system.

"I don't know what this all means," Coats said. "They need to provide an emergency plan that deals

with the entire community."

Coats said he is concerned about the absence of plans to evacuate residents in a preliminary emergency response plan submitted by AMS. It is being circulated among government agencies before NRC renews the license.

Coats said that AMS and NRC officials assured him that there's no cause for alarm. "They said several months ago that nobody should be concerned," he said. "Now it's a different story. They are business people and they conduct this in a business-like manner."

Similar views were expressed by Polensek. "There may be more about the fear of the unknown," he said. "We have to take the word of the people who say there's no fear for the community."

Polensek, whose ward begins at the northern part of the building, said, "I've some major concerns about it. We need to stay on top of the place."

Polensek said he frequently goes to the neighborhood to visit his mother-in-law, who lives just across the street from the plant. During such visits, he has noticed the AMS facility is neglected.

"They don't maintain the property. The fence has been damaged and there are high weeds and grass," he said. "It shows the lack of respect for the community. As I look at it every time, it makes me angry."

Polensek said the city cannot intervene directly and force AMS to spruce up the area or deny its operating license because it is under the purview of the NRC.

"The city has a great disadvantage as it is a federal issue," he said. "We have to make sure that NRC is not lenient (on AMS)."

AMS attorney Dwight A. Miller said the emergency response plan will be "fine tuned" after receiving suggestions from various departments.

See RENEWAL, page A8

Renewal

from page A1

"We'll amend the plan to include the recommendations and to conform with rules," Miller said. "We are trying to protect and safeguard the community."

He contended that NRC would thoroughly scrutinize the plan before renewing the license and the "city didn't need to go for it (the resolution)."

"But we agree with the city's concerns," he said.

Jan Strasma, NRC public information officer, said the NRC "will not approve the license without an adequate decommissioning fund."

Normally, emergency plans submitted by private companies don't include evacuation of residents because it is the government's responsibility, Strasma said.

However, he said, companies provide relevant information and assistance to the government to develop an evacuation policy.

Collinwood plant security is criticized

By TED WENDLING

PLANT DEALER REPORTER

CLEVELAND — Although Advanced Medical Systems has finally pumped 50,000 gallons of radioactive water from the basement of its Collinwood plant, city and state officials are still frustrated by the firm's unwillingness to provide emergency planning information and maintain adequate security.

In separate incidents at the London Rd. manufacturer in recent months, a mobile environmental radiation laboratory owned by the U.S. Nuclear Regulatory Commission was broken into, and a stolen truck was driven through the plant's gate and set ablaze.

In the first incident March 27, \$10,000 worth of computer equipment and tools were stolen from the NRC's locked mobile lab. An NRC report stated none of the radioactive sources in the lab were disturbed.

At the time of the burglary, the lab was parked inside Advanced Medical's locked fence and was not visible from the street, according to the report.

In the second incident, which occurred over the April 29-30 weekend, someone rammed a pickup truck through Advanced Medical's chained gate, left numerous skid marks in the parking lot and then set the truck on fire. The NRC said no one discovered the charred remains of the truck until employees reported for work on Monday morning, May 1.

Kenneth A. Schultz, an official at the Ohio State Emergency Response Commission, told commission members last month that "security at this facility is nonexistent."

But John A. Grobe, chief of the NRC's Nuclear Materials Safety and Safeguards branch in Lisle, Ill., said yesterday that neither incident posed a threat to the building. The facility contains a large quantity of cobalt-60, which Advanced Medical formerly used in the manufacture of radiation-therapy equipment.

"Security has not been a problem in the past," Grobe said, adding that the building has both security and fire-protection systems.

Local officials are particularly concerned because Advanced Medical's basement has a room that the NRC ordered sealed for up to 30 years because it contains lethal levels of cobalt.

Cleveland officials have complained that Advanced Medical has rebuffed their efforts to obtain information on access, lighting, location of firefighting equipment and other details that would be critical in an emergency.

"They [Advanced Medical officials] give us a lot of double-talk on everything," said David Glauner, an assistant Cleveland

fire chief. "They have a plan, but it's not good enough."

Glauner also criticized the NRC, saying the agency "is trying to take a hands-off attitude because they're afraid if they push them, they may drive Advanced Medical into receivership or bankruptcy."

Grobe disputed that charge.

"I can tell you that by no means are we taking a hands-off approach," he said, adding that the NRC has been involved "in extensive activities which should reduce risk at that site."

Advanced Medical attorney Dwight A. Miller, the only person authorized by the company to respond to press inquiries, could not be reached for comment.

SUN SCOOP JOURNAL
BEACHWOOD, OH.
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AUG-3-95

City, AMS at odds over wall

Construction may spur legal action

By CLIFFORD ANTHONY
Staff Writer

Piqued at Advanced Medical Systems for not obtaining permission to build a 4-foot underground wall around a section of its Collinwood plant, city officials threatened the Geneva-based firm with legal action for violating the city building and housing rules.

But an attorney for the Cobalt-60 manufacturers called the situation "a misunderstanding" and said there's no problem with the city.

AMS last month built the 30-foot long dyke-like wall around the southwestern corner of its plant at 1020 London Road.

A high level of radiation contamination was detected in that part of the building during the construction of a new storm sewer system. It was caused by "source garden," a storage area for depleting radioactive materials.

As a result, the construction of an under-drain system there was abandoned and the firm decided to build the 4-foot concrete wall as a shield from possible radiation. It is also designed to prevent seepage of contaminated water into storm sewer, according to Dwight A. Miller, AMS attorney.

Martha R. McCorkle, assistant law director, said the construction was unauthorized.

"I understand that the trench for this new wall has already been dug, and that concrete has already been poured," McCorkle stated in her letter to AMS. "Construction of this type must be reviewed and permitted by the City of Cleveland's Di-

vision of Building and Housing.

"I was surprised to learn of this new construction and distressed that the city received no notification, either formally through a written application, or informally by a phone call, to bring us up to date on this project and to notify us of AMS' decision to construct a new wall at the site."

McCorkle also pointed out that the AMS had failed to obtain permission from the city's chief engineer or to the building and housing division as required by city regulations.

Miller said the issue has been sorted out. "There was some misunderstanding," he said. "The wall was not above the ground. In fact, it is not a wall and is buried 12-15 feet below the ground."

AMS, he said, poured 4-foot thick concrete around the area and covered it with plastic sheets "to prevent any possible radiation contamination. We want to preclude any possible radiation leak."

The contents of the source garden, he said, are depleting radioactive materials and really hazardous materials are stored in a hot cell in the center of the plant's basement.

The new sewer system is being built to persuade the Northeast Ohio Regional Sewer District to unplug its sewerline. In November, the NEORSD plugged the storm sewerline following a court order it obtained.

The AMS and the NEORSD are involved in a legal battle over the source of Cobalt-60 residues found in NEORSD's sewer lines.

The firm manufactured Cobalt-60 pellets, used for cancer treatment, from 1979-85 and 1989-91. In 1966, AMS was fined \$10,000 for violating

NRC rules and it was closed for decontamination.

In 1988, Cobalt-60 dusts and contaminated materials were found in a section of the basement which was entombed with concrete, silicone and epoxy.

THE PLAIN DEALER / WEDNESDAY, JUNE 28, 1995

Company drains radioactive 'soup' from building

By TED WENDLING

PLAIN DEALER REPORTER

CLEVELAND — Advanced Medical Systems of Collinwood has drained its basement of the radioactive soup that began building up six months ago when sewer district officials plugged its storm sewer lines.

Advanced Medical attorney Dwight A. Miller said nearly 50,000 gallons of groundwater contaminated with cobalt-60 has been filtered and pumped into 25,000-gallon collapsible bladder.

The 30-by-70-foot basement once held as much as 35 inches of ground water contaminated with radioactive particles that had been in the basement when the sewers were plugged.

Advanced Medical has obtained permission from the U.S. Environmental Protection Agency to evaporate the water. The company is awaiting final approval from the Nuclear Regulatory Commission, which has principal regulatory jurisdiction over the now-dormant plant.

Miller said concerns of Cleve-

land and Cuyahoga County officials that evaporating even trace amounts of cobalt might pose an airborne health hazard are groundless. "It's got so little cobalt in it that you could drink it, other than the fact that it's been in the basement," he said.

Nearly 6,000 people live within a half-mile radius of the London Rd. plant. The neighborhood also has two schools, with a total enrollment of 587 children.

Michael Murphy, an EPA health physicist, agreed that the treated water was clean, saying it

contained less than 200 picocuries per liter, the standard for drinking water.

"My conclusion is that it more than meets our standards," Murphy said of the company's evaporation plan, which will simply involve heating and vaporizing the water. "It's a quick way to get rid of clean water. This is water that's already been processed and had almost all of the radioactive component removed from it."

Advanced Medical's basement flooded after the Northeast Ohio Regional Sewer District obtained

a court order last November that allowed the district to install plugs in the company's sewer lines to prevent radioactive discharges. Heavy January rains caused groundwater to enter the basement.

Of primary concern to local authorities is a room in the basement that the NRC ordered sealed in 1988 because it contained lethal levels of cobalt. Measurements taken by the NRC last November showed it still contained dangerous levels of radiation.

In a related matter, the State Emergency Response Commission, at the request of Cleveland and Cuyahoga County officials, passed a resolution this month that would force Advanced Medical to submit emergency-planning information to the Cuyahoga Emergency Management Association Center.

The resolution was passed over the objections of the company and the NRC, which claims sole jurisdiction, although a spokesman said the NRC would not oppose the resolution during the 45-day public comment phase.

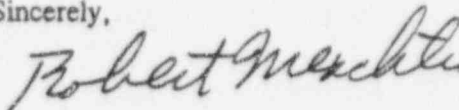
Decommissioning Plan for the AMS Facility", a copy of which will be submitted to the USNRC as committed to in the Plan - by October 23, 1995.

In regard to the individual action items shown in the Plan, during the August 29th meeting we informed the USNRC that it would not be possible to provide completion dates for all of the outstanding activities at once because the "start date" for some cannot be scheduled until others are completed. We also informed the USNRC that it would not be possible, in many cases, to fully specify all sub-actions for certain tasks until previously-scheduled tasks were completed. Therefore, many of the commitment dates in Revision 0 of the Plan are given as "TBD" (to be determined).

However, as the activity specifications in the Plan become solidified and as items are completed, revisions to the Plan will be made and forwarded to the USNRC. We are hopeful that periodic status reports will facilitate communications, confirm that mutual expectations are met, and ensure expeditious identification and resolution of any problems that might be encountered. As agreed upon in our August 29th meeting, we intend to submit quarterly revisions of the Plan.

AMS is prepared to address all of the outstanding items referenced in the "Demand for Information" in a timely and well-managed fashion. We remain hopeful that the USNRC still wishes to pursue a mutually-beneficial working relationship in spite of the tone and the untimely issue of the "Demand for Information". Thus the USNRC's comments on Revision 0 of the enclosed Plan, particularly at this early stage of its implementation, are encouraged and will be appreciated. If you have any questions or if I can provide you with additional information, please call me at (216) 692-3270.

Sincerely,



Robert Meschter, R.S.O.

cc: D. Cesar
D. A. Miller, Esq. - Stavole & Miller
C. D. Berger, C.H.F. - IEM
Assistant General Counsel for Hearings and
Enforcement, USNRC
D. A. Cool - Director, Division of Industrial and
Medical Nuclear Safety, USNRC
C. D. Pederson - Director, Division of Radiation
Safety and Safeguards, USNRC
J. Caldwell - Deputy Director, Division of
Radiation Safety and Safeguards, USNRC

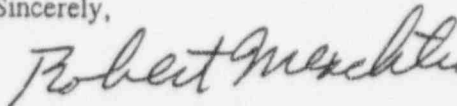
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Sincerely,



Robert Meschter, R.S.O.

cc: D. Cesar
D. A. Miller, Esq. - Stavole & Miller
C. D. Berger, C.H.P. - IEM
Assistant General Counsel for Hearings and
Enforcement, USNRC
D. A. Cool - Director, Division of Industrial and
Medical Nuclear Safety, USNRC
C. D. Pederson - Director, Division of Radiation
Safety and Safeguards, USNRC
J. Caldwell - Deputy Director, Division of
Radiation Safety and Safeguards, USNRC

***STRATEGIC PLAN FOR THE
LONDON ROAD FACILITY***

STRATEGIC PLAN FOR THE LONDON ROAD FACILITY

Submitted by:

Advanced Medical Systems, Inc.

1020 London Road
Cleveland, Ohio 44110
(216) 692-3270

Report No. 94009/G-3113
October 11, 1995

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INTRODUCTION

Advanced Medical Systems, Inc. (AMS) manufactured and fabricated sealed sources of ^{60}Co for teletherapy and radiography machines. Under the provisions of U. S. Nuclear Regulatory Commission (USNRC) license No. 34-19089-01, AMS currently possesses 60,974 curies of ^{60}Co , and 2,200 kilograms of depleted uranium (nickel plated) for use as shielding material.¹

At AMS, there are approximately 40 curies of radioactive material in a potentially dispersible form. This material, which consists primarily of dry solid waste, carbon granules and ion exchange resins, is stored in sealed 55-gallon drums or B-25 (steel) boxes. The types and quantities of all licensed materials currently in the possession of AMS are shown in Table 1.

As part of its license compliance efforts, AMS is faced with completing a number of tasks ranging from license renewal efforts to significant reductions in the existing radionuclide inventory. Timely completion of these activities is critical since they will ultimately result in streamlined routine operations, recovery of needed building/facility capabilities, and reduced regulatory demands on the operating staff.

However, due to limited personnel and financial resources, it is not possible for AMS to complete all of the outstanding activities in a single campaign. Therefore, to avoid unnecessary and negative financial impacts on the company, yet ensure steady and well-managed progress toward completion, the activities were prioritized based upon an activity's ability to improve the implementability of other activities, AMS's ability to fund the activity in the near-, intermediate- and long-term, and on the cost/benefit associated with the activity's timely completion. Table 2 shows the listing of the outstanding activities, along with their priorities (e.g., high priority, intermediate priority, and lower priority).²

A number of additional activities not shown in Table 2 will run concurrent with the prioritized activities. These include audit/assessment of the radiation protection program, upgrade of standard operating procedures, improvements in housekeeping, and institution of a community relations program.

¹ There is negligible radiological hazard associated with the depleted uranium inventory. Therefore, it is not addressed further in this report.

² In general, high priority items are scheduled for completion within the next year, intermediate priority items within the next one to three years, and lower priority items within the next three to five years.

The remainder of this report contains additional discussion on each of the outstanding activities. Included is a brief discussion of the AMS strategy for each activity, the plan of action for completing the activity, a description of the current status (as of the date of this report) and an implementation schedule, where appropriate.

Over the intermediate and long term, as actions are completed and as the scope/approach of specific activities (subitems) become solidified, the individual action plans will be expanded and specific dates will be entered in the implementation schedules. Therefore, this report will be revised on a quarterly basis and numbered revisions will be issued.

HIGH PRIORITY ACTIONS

Complete the Remediation Report

In late 1994, the Northeast Ohio Regional Sewer District (NEORSO) intentionally isolated AMS access to regional sewage treatment system. This action rendered the facility drainage system non-functional, increased the hydrostatic pressure on the foundation structure, and caused groundwater to enter the basement of the AMS facility.

After AMS made timely notification to the USNRC about the deteriorating conditions at the building, AMS initiated action to drain the basement, remove the ^{60}Co from the water in the basement, remediate the foundation drainage system, isolate the residual radioactivity in the manhole and sewer line exiting the facility to the London Road Interceptor, and remediate the residual radioactivity in the London Road interceptor.³

One commitment made to the USNRC as part of the remediation project was to provide a final report that contains a description of the events that led to the site conditions, a review of the remedial actions implemented and their results, and a summary of all data acquired during the process.

Since all remedial activities are not yet complete, the final remediation report is still being compiled. Outstanding items are disposition of water in the collapsible storage tanks, disposition of contaminated solids (e.g., soils and water treatment media), demobilization and shipment of water treatment equipment, implementation of the long-range surveillance plan for residual radioactivity that exists outside of the AMS building (e.g., in the abandoned footer drains and lateral connection from the building to the London Road Interceptor), removal/solidification of water in the WHUT Room, and remediation of the London Road Interceptor.

Currently, decisions on the remedial alternative for the WHUT Room and on disposition of the contaminated solids are pending. Once the agreed-upon actions are complete, the remediation report will be finalized and submitted to the USNRC. However, for reasons that are beyond AMS's control, final implementation of the surveillance plan and remediation of the London Road Interceptor may be delayed significantly. Therefore, the Remediation Report will be submitted in advance and exclusive of these items. Table 3 shows the action plan for this task.

³ As of the date of this report, the NEORSO has not permitted AMS access to the London Road Interceptor. AMS's ability to complete the remediation is beyond its control.

License Renewal Application

Recently AMS submitted an application to renew its USNRC license. After initial USNRC review of the application, a letter of deficiency was issued and additional information was requested. Subsequently, an in-house review of the application, in light of the short- and long-range plan of AMS was completed. This review confirmed that the application was indeed cumbersome and permitted AMS little flexibility in achieving its intermediate- and long-term goals. Therefore, a significantly revised application is under development.

The revised application will contain detailed descriptions of the AMS organization, equipment and facilities, and operations. It will also contain a Radiation Protection Program Plan, which describes AMS policy on Organization and Administration; Facilities and Equipment; Training in Radiation Protection; Radiation Exposure Control; ALARA Program; Contamination Control; Instrumentation and Surveillance; Posting and Labeling; Receipt and Control of Radioactive Material; Packaging and Transportation of Radioactive Materials; Control of Radioactive Waste; Radiation Protection Records; Documentation; Emergency Response and Notifications; and Quality Assurance in Radiological Protection. In addition, a standard operating procedure that describes how procedures to implement the Radiation Protection Program Plan are developed, reviewed, issued, revised or rescinded will be attached to the application.⁴ Once the revised application package is complete, it will be forwarded to the USNRC. Table 3 shows the action plan for this task.

Emergency Plan

As part of recent license renewal efforts, an emergency plan was submitted to the USNRC for review and comment. On June 7, 1995, after initial USNRC review of the Plan, a letter of deficiency was issued and additional information was requested. Because the magnitude of deficiencies was significant, a revised Plan will be submitted.

This revision will be consistent with the guidance contained in USNRC Regulatory Guide 3.67 (1992), "Standard Format and Content for Emergency Plans for Fuel Cycle and Materials Facilities". Once complete, it will be forwarded to the USNRC. Table 3 contains the action plan for this task.

⁴ The implementing procedures will not be submitted as part of the application package. However, the USNRC will be a recipient of controlled copies of all of the procedures.

Decommissioning Funding Plan

As part of the recent license renewal efforts, a decommissioning funding plan was submitted to the USNRC for review and comment. On August 17, 1995, after initial USNRC review of the Plan, a letter of deficiency was issued and additional information was requested. Specifically, the USNRC indicated that the January 1995 cost estimate and site characterization submitted by AMS "are no longer valid". However, the January 1995 estimate was based upon a "decontaminate and release" decommissioning option, which is not suitable for a facility like AMS where the primary radionuclide of concern has a radiological half life of only five years. Therefore, AMS is preparing a Conceptual Decommissioning Plan for the facility pursuant to 10 CFR 40.46(d) that is based upon a "safe storage" decommissioning option.

The Plan will describe the decommissioning objective for the facility and its basis, a description of the items to be decommissioned, the proposed decommissioning methodology, an ALARA analysis to support the proposed methodology, a cost estimate (1995 costs) for implementing the methodology, and a review schedule for ensuring the Plan's continued applicability for the duration of License No. 34-19089-01. Once completed, it will be submitted to the USNRC. Once approved, the Plan will be funded by the corporation and reviewed for continued applicability on a planned and periodic basis. Table 3 contains the action plan for this task.

INTERMEDIATE PRIORITY ACTIONS

Recover Hot Cell Capabilities

In order to decontaminate, leak test, package and ship sealed sources of ^{60}Co from the AMS facility, a functional hot cell is needed. Currently, the Hot Cell contains significant residual removable radioactivity. Consequently, cross-contamination of items that enter the Hot Cell is a concern. Therefore, AMS intends to recover sufficient Hot Cell capabilities to support inventory reduction efforts. This may include decontamination of all or only part of the Hot Cell.

Currently, the Hot Cell requirements needed to facilitate inventory reduction are under review. Once the review is complete, the methodology for Hot Cell recovery will be specified and implemented. Table 3 contains the action plan for this task.

Return NPI Sources

There are currently 35 sealed sources in the AMS inventory that belong to Neutron Products Inc. (NPI). As part of on-going operations, AMS purchases sources from NPI for delivery to a customer. When the shipping cask is sent to NPI, one of the sources in the AMS permanent inventory is enclosed, thereby reducing the inventory. AMS intends to escalate the return of all of the remaining sources once the Hot Cell has been recovered.

As part of this effort, AMS intends to evaluate whether there is residual radioactivity on the remaining NPI sources, decontaminate and leak test the sources as necessary, lease a shipping cask if necessary, package the sources, and ship them to NPI. As sources leave the London Road facility, the inventory log will be debited appropriately. Table 3 contains the action plan for this task.

Identify a Market for Remaining Bulk Material

There are approximately 11,750 curies of bulk ^{60}Co metal in the AMS inventory. AMS intends to identify a domestic or foreign market for this material, prepare and submit whatever permit or license applications are necessary, package the material, and ship it to a buyer.

AMS has initiated discussions with a variety of source distribution firms, with brokers, and with public health departments in a number of countries. Possible foreign uses being pursued include medical (therapy), industrial (gauges and sensors), health (food and medical products irradiation), and education (universities). Once one or more markets are identified, permitting requirements will be determined, applications will be filed, and materials will be packaged/shipped. Table 3 contains the action plan for this task.

Train First Responders in Emergency Plan Provisions

As part of its emergency response requirements, AMS must provide annual radiation safety training for first responders. Pursuant to the revised Emergency Plan, this training must include a review of items of mutual interest, instruction in emergency procedures, radiation protection guidelines, and the responder's anticipated role in an emergency. During the training session, the emergency response team activation scheme, notification procedures, and overall response coordination process will be reviewed.

Immediately after USNRC approval of the revised Emergency Plan, a training session for first responders will be scheduled. After training is complete, agency attendance will be documented and letters of agreement will be updated, as necessary. The training sessions will be scheduled annually thereafter. Table 3 contains the action plan for this task.

Stage Emergency Exercise and Perform Critique

As part of its emergency response requirements, and in order to maintain emergency preparedness, AMS must conduct an emergency exercise on a planned and periodic basis. After all first responders have received initial training in the provisions of the AMS Emergency Plan, the emergency exercise will be scheduled and staged.

Pursuant to the revised Emergency Plan, the exercise will include one or more of the accident scenarios postulated for the facility, and will involve off-site agencies that have provided letter agreements for support services (e.g., first responders). The scenario will not be known in advance by exercise participants, and a non-participating observer will provide an evaluation of the effort, along with recommendations for improvement.

The critique of the exercise will be used as a basis for modifying the Emergency Plan or for supplementing the training of off-site agencies. Deficiencies identified during critiques will be corrected and closure will be documented. As necessary, changes to the Emergency Plan, based upon the findings of the critique, will be implemented. Table 3 contains the action plan for this task.

LOWER PRIORITY ACTIONS

Remove Plug in the Hot Cell

An estimated 4,000 curies of ^{60}Co in the form of sealed sources are located in a storage well in the Hot Cell. Because the well plug has become lodged in the well, these sources cannot be removed and included in the inventory reduction efforts. Therefore, AMS intends to dislodge the plug.

A methodology for dislodging the plug has been determined, and a contract for services has been let. Once the decision is made to proceed and the work plan and Radiation Work Permit have been completed, equipment and personnel will be staged, "dry runs" will be completed, and the plug will be removed. Table 3 contains the action plan for this task.

Decontaminate the Hot Cell

After the plug removal project is complete, significant residual radioactivity will likely exist within the Hot Cell. In order to ensure its continued usefulness, AMS intends to decontaminate the Hot Cell to levels necessary to support planned future operations.

The first step in the process will be determination of the methodology for Hot Cell decontamination. Once complete, the work plan will be prepared, outside services, if necessary, will be contracted, and the project will begin. Table 3 shows the action plan for this task.

Complete/Confirm the Physical Inventory and Transfer/Ship Remaining Sources

After removal of the plug, AMS will be able to confirm the physical inventory of licensable radioactive material present at the London Road facility. AMS then intends to identify a market for the remaining sources, evaluate their levels of residual radioactivity, decontaminate and leak test the sources as necessary, package the sources, and ship them to the purchaser. As sources leave the London Road facility, the inventory log will be debited appropriately. Table 3 contains the action plan for this task.

Disposition of Solid Waste at the Facility

As shown in Table 1, there is a significant quantity of solid waste at the AMS facility. These materials are stored either within the AMS facility, or in a secured storage location within the fenced portion of the property. The disposition of this solid waste is dependent upon the decommissioning methodology selected for the facility, and upon the availability/cost of off-site disposal at the time of project initiation.

AMS intends to evaluate disposition options and select/implement the one that results in the lowest personnel exposures and disposal costs. Justification for the preferred option will be prepared and presented. Table 3 contains the action plan for this task.

Disposition of Treated Water in Collapsible Storage Tanks

As part of the 1995 sewer remediation project, approximately 100,000 gallons of water was treated by the methodology of sub-micron filtration and reverse osmosis in order to reduce its radionuclide content to below drinking water standards. There are approximately 40 microcuries of ^{60}Co in the water, which is currently stored in collapsible storage tanks at the London Road facility. The solubility of the residual radioactivity was confirmed using American Public Health Association's Method 7110 "Gross Alpha and Gross Beta Radioactivity (Total, Suspended, and Dissolved)" from Standard Methods for Examination of Water and Wastewater.

AMS requested and received permission from the U. S. Environmental Protection Agency (USEPA) and the USNRC to evaporate this water. However, due to delays and difficulties in implementing the treatment process that were beyond AMS's control, more than four times the original amount of water had to be treated to reduce its concentration of radioactive cobalt at a cost that went well-beyond the original projection. In light of the magnitude of these unbudgeted expenses, the evaporation option became significantly more costly. Therefore, AMS is pursuing other options for disposing of the water.

Since the treated water meets the USEPA's criteria for man-made radionuclides in drinking water pursuant to 40 CFR 141, and since it contains no other hazardous substances, its presence at the AMS facility poses no radiological risk. Therefore, there is no urgency to ensure its final disposition. Nonetheless, AMS will pursue a direct discharge option until such time as it becomes patently unattainable. At that time, the evaporation option will be re-visited in light of available financial resources. Table 3 contains the action plan for this task.

ON-GOING ACTIONS

Audit/Assessment of Radiation Protection Program

In light of changing operational issues, pending licensing activity, and the desire to "streamline" compliance efforts, AMS intends to perform a series of audits of its radiation protection program in order to compare AMS's performance to that required and/or recommended by existing license/permit provisions, U. S. Nuclear Regulatory Commission regulations, and standard industry practices (e.g., USNRC Regulatory Guides, ANSI, ASME and ASTM Standards, ICRP Publications, NCRP Publications). The audits will be performed by AMS personnel and consultants to AMS. They will involve initial review of applicable operating procedures, quality assurance procedures, and other pertinent documentation related to a particular performance issue. The initial document review is performed in order to identify possible areas of failure or liability, and to derive an efficient schedule for on-site assessments. While on site, AMS compliance with existing procedures will be determined and areas of inefficiency or poor function, as compared to industry standards and practices, will be identified.

The following programmatic issues will be audited on a planned and periodic basis: Organization and Administration; Facilities and Equipment; Training in Radiation Protection; Radiation Exposure Control; ALARA Program; Contamination Control; Instrumentation and Surveillance; Posting and Labeling; Receipt and Control of Radioactive Material; Packaging and Transportation of Radioactive Materials; Control of Radioactive Waste; Radiation Protection Records; Documentation; Emergency Response and Notifications; and Quality Assurance in Radiological Protection. While the results of the audits are intended to be used for demonstrating compliance and/or to guide future program modifications or improvements, any findings of significant regulatory non-compliance or conditions of imminent hazard will be immediately reported to and addressed by the RSO.

Upgrade of Standard Operating Procedures

In response to audit findings, and in light of changing operational demands and licensing activities, the current collection of standard operating procedures (ISPs) will be reviewed for continued applicability. Wherever possible, multiple procedures that address a single topic will be combined, out-dated procedures will be revised, and obsolete procedures will be deleted. Consistency between procedures will be confirmed and compliance with the requirements of the AMS Radiation Protection Program Plan will be assured.

Housekeeping Improvements

Currently, there are only three permanent employees at the London Road facility. Therefore, only a small fraction of the available space is used for routine operations, office areas and storage. However, AMS has instituted improvements in housekeeping in the useable areas of the facility. Additional improvements will be implemented on an on-going basis.

Community Relations

In the past, issues or activities at AMS that required state, federal and local approvals were hampered due to lack of knowledge of AMS operations and/or an understanding of the fundamental principles of radiation and radioactivity on the part of decision-makers. In an effort to streamline future decision-making, AMS intends to mount a community relations program to acquaint various officials and members of the print and broadcast media with the AMS function, its capabilities, and its short-, intermediate-, and long-range plans. This will be accomplished through briefings, tours, and development/publication of hand-out materials and brochures.

Reconnection of Sewer System to London Road Interceptor

Currently, the London Road facility does not have a direct connection to the regional sewer system. There are no sanitary discharges from the building, the roof drains discharge onto the ground surface, and all groundwater is pumped from a manhole on the property into a storage tank.⁵ For operational reasons, and because current discharge paths do not comply with local building codes, AMS continues to pursue re-connection of all drainage paths to the London Road Interceptor through legal channels.

⁵ Once the tank is full, the water is sampled and discharged.

TABLES

TABLE 1 - RADIOACTIVE MATERIALS INVENTORY

Item	Form	Material Description	Estimated Activity (Ci)
Licensed Material	Solid	Bulk Metal	11748
Licensed Material	Solid	Sealed Sources	49133
Packaged waste	Solid	Materials contained in high-level waste storage, LSA boxes and drums in the basement of the facility.	29
Packaged waste	Solid	Solid waste generated during the water treatment project.	0.4
Unpackaged waste	Solid/sludge	Materials contained in WHUT Room	53
Surface radioactivity	Solid	Uncharacterized surface activity in the restricted areas of the facility	11
TOTALS			60974.4

TABLE 2 - ACTION PLAN SUMMARY

High Priority Activity	Intermediate Priority Activity	Lower Priority Activity
Finalize the Remediation Report for the water treatment and sewer remediation project	Recover the capabilities of the Hot Cell.	Remove the plug in the Hot Cell and extract the remaining sources
Finalize site emergency plan.	Reduce the inventory of sealed sources and bulk cobalt.	Decontaminate the Hot Cell.
Finalize decommissioning funding plan.	Implement training requirements of the approved site emergency plan (e.g., train first responders and perform emergency exercise and critique)	Complete the physical inventory of sources.
Finalize license renewal activities.		Ship out remaining sources
		Address solid waste issues.
		Pursue disposition of treated water that currently exists in the collapsible storage tanks.

TABLE 3 - ACTION PLAN FOR EACH TASK⁶

Primary Action Item	Sub-Item	Scheduled Start Date	Scheduled End Date	Current Status
Complete Remediation Report	Determine remedial alternative for the WHUT Room	8/29/95	10/3/95	Evaporation, solidification, or a combination thereof have been identified as the preferred alternatives.
	Determine storage methodology for contaminated solids	8/29/95	10/3/95	Sorting and transfer to a storage location within the building, and construction of an above-ground storage container for unsorted materials have been identified as the preferred alternatives.
	Stabilize liquids that currently exist in the WHUT Room	10/3/95	12/8/95	Open
	Implement storage option for contaminated solids	10/3/95	12/8/95	Open
	Finalize and submit remediation report	8/1/95	TBD	Open
License Renewal Application	Submit revised application	9/11/95	10/31/95	Open
Emergency Plan	Submit revised Emergency Plan to the USNRC	8/15/95	9/30/95	Closed. Plan mailed to USNRC and first responders on 9/26/95.
Decommissioning Funding Plan	Submit Conceptual Decommissioning Plan	9/8/95	10/23/95	Open
	Submit Decommissioning Funding Plan	10/23/95	TBD	Open
	Scheduled review of Conceptual Decommissioning Plan and Decommissioning Funding Plan for continued applicability	TBD	TBD	Open
Recover Hot Cell Capabilities	Determine Hot Cell requirements for inventory reduction.	8/29/95	10/27/95	Open
	Specify Hot Cell recovery actions	TBD	TBD	Open
	Implement recovery actions	TBD	TBD	Open
Return NPI Sources	Evaluate residual radioactivity on NPI Sources	9/11/95	9/15/95	Complete. Residual radioactivity determined to be only slightly above release criterion (i.e., 0.005 μ Ci)
	Determine decontamination methodology	9/25/95	11/24/95	Open
	Decontaminate and leak test sources	11/27/95	TBD	Open
	Package and ship sources	TBD	TBD	Open

⁶ As actions are completed and as the scope/approach of specific activities (subitems) become solidified, the individual action plans will be expanded and specific dates will be entered in the implementation schedules. Changes will be noted in future revisions of this Plan.

Primary Action Item	Sub-Item	Scheduled Start Date	Scheduled End Date	Current Status
Identify a Market for Remaining Bulk Cobalt	Identify domestic market possibilities	8/1/95	TBD	Open
	Identify foreign market possibilities	TBD	TBD	Open
	Determine permitting requirements	TBD	TBD	Open
	Complete contracts with purchasers	TBD	TBD	Open
	Package and ship sources	TBD	TBD	Open
Train First Responders in Emergency Plan Provisions	Receive USNRC approval of the Emergency Plan	9/30/95	TBD	Open
	Schedule initial first responder training session	TBD	TBD	Open
	Complete training and documentation	TBD	TBD	Open
	Obtain updated letters of agreement, as necessary	TBD	TBD	Open
	Schedule refresher training	TBD	TBD	Open
Implement an Emergency Exercise and Critique	Schedule emergency exercise	TBD	TBD	Open
	Prepare scenario	TBD	TBD	Partially complete
	Contract outside observer	TBD	TBD	List of qualified personnel complete.
	Initiate emergency exercise	TBD	TBD	Open
	Generate critique report	TBD	TBD	Open
	Modify Emergency Plan in light of critique findings	TBD	TBD	Open
Remove Plug in Hot Cell	Determine methodology for plug removal	7/1/95	8/1/95	Complete.
	Generate specifications plan for plug removal	7/1/95	8/1/95	Complete.
	Issue Request for Quotation for plug removal	7/1/95	8/1/95	Complete.
	Review bids and issue contract for services	7/1/95	8/1/95	Complete
	Prepare work plan and Radiation Work Permit	TBD	TBD	Open
	Mobilize personnel and equipment	TBD	TBD	Open
	Train personnel in provisions of work plan	TBD	TBD	Open
	Perform dress rehearsals	TBD	TBD	Open
	Remove plug	TBD	TBD	Open

Primary Action Item	Sub-Item	Scheduled Start Date	Scheduled End Date	Current Status
Decontaminate the Hot Cell	Specify Hot Cell decontamination methodology and clean-up criteria	TBD	TBD	Open
	Generate work plan for decontamination activities	TBD	TBD	Open
	Contract decontamination services, as necessary	TBD	TBD	Open
	Mobilize equipment and personnel	TBD	TBD	Open
	Complete decontamination	TBD	TBD	Open
Complete/Confirm Inventory and Transfer/Ship Remaining Sources	Confirm physical inventory of remaining sealed sources	TBD	TBD	Open
	Evaluate residual radioactivity on remaining sources	TBD	TBD	Open
	Decontaminate and leak test sources	TBD	TBD	Open
	Obtain shipping cask	TBD	TBD	Open
	Package and ship sources	TBD	TBD	Open
Disposition of Solid Waste at the Facility	Evaluate disposition options in light of Conceptual Decommissioning Plan	TBD	TBD	Open
	Select the preferred option based upon an ALARA analysis.	TBD	TBD	Open
	Characterize the materials.	TBD	TBD	Open
	Implement the preferred option	TBD	TBD	Open
Disposition of Treated Water in Collapsible Storage Tanks	Identify disposition options.	8/1/95	TBD	Open
	Prepare necessary permits and licenses	TBD	TBD	Open
	Implement preferred disposition option.	TBD	TBD	Open



Ohio State Emergency Response Commission

Emergency Planning and Community Right-to-Know
P.O. Box 183669, 1800 WaterMark Drive
Columbus, Ohio 43216-3669

Post-it® Fax Note	7671	Date 10/11	# of pages 4
To: Mike Weber	From: Ken Schultz		
Co./Dept.	Co.		
Phone #	Phone #		
Fax #	Fax #		

OH-EC Governor

October 11, 1995

Henry E. Billingsley, Esq.
Arter & Hadden
1100 Huntington Building
925 Euclid Avenue
Cleveland, Ohio 44113-1475

Dwight A. Miller, Esq.
Stavole & Miller
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Cleveland, Ohio 44113

Dear Messrs. Billingsley and Miller:

At today's SERC meeting, Resolution 95-214 was approved by more than 60% of its voting members. (A copy of this Resolution is attached.) Within a few days a copy of the Order authorized by this Resolution will be provided. However, I am forwarding an unsigned copy to you at this time because a reporter for the Columbus Dispatch was present at this meeting. I anticipate that the paper is planning to report on the SERC action. The reporter also asked for a copy of your August 2 letter and our response of October 6, 1995.

Sincerely,

Kenneth A. Schultz, Manager
Chemical Emergency Preparedness & Prevention

KAS/lf

cc: Jane Harf, Chair
Jackie Mallett, AGO
Jack Bossert, Ohio EMA
Mike Weber, NRC
Carol Porter, PIC

E/98



"Working to improve statewide preparedness and response to chemical emergencies and to improve public awareness of potential chemical hazards."

Ohio State Emergency Response Commission

Emergency Planning and Community Right-to-Know
P.O. Box 163669, 1800 WaterMark Drive
Columbus, Ohio 43216-3669

George V. Voinovich
Governor

State Emergency Response Commission Resolution 95-214

Authorization to issue an order designating Advanced Medical Systems, Incorporated as an additional facility, requiring participation in the Cuyahoga County Local Emergency Planning Committee emergency planning process under Sections 3750.04 and 3750.05 of the Ohio Revised Code.

Whereas, Section 3750.05(a) states that the State Emergency Response Commission (Commission) upon the written request of a Local Emergency Planning Committee (LEPC) may issue an Order in accordance with Section 3750.18 of the Ohio Revised Code designating an additional facility subject to Sections 3750.04 and 3750.05 of the Ohio Revised Code (ORC). In accordance with Section 3750.05(A) the Commission mailed a written notice of its intent to issue such an Order to the owners or operators of Advanced Medical Systems, Incorporated; and publicly noticed its intent to issue an Order in the Cleveland Plain Dealer, a local newspaper on July 1, 1995, so that the public could submit written comments to the Commission during the forty-five day comment period; and

Whereas, on February 7, 1995, the Cuyahoga County Local Emergency Planning Committee submitted a copy of their Resolution No. Sara 941114-08 as a written request to make Advanced Medical Systems, Incorporated, 1020 London Road, Cleveland, Ohio, (AMS) an additional facility subject to the requirements of Section 3750.04 and 3750.05; and

Whereas, the Commission is to determine from the request that due to:

- (1) The size of the facility, or
- (2) the nature of its operations, or
- (3) its proximity to a residential area or an area where significant numbers of people work or congregate,

participation in the emergency planning process under Sections 3750.04 and 3750.05 by Advanced Medical Systems, Incorporated, is necessary or appropriate to protect the public health or safety or the environment.

Therefore, let it be known, that upon consideration of the factors set forth in Section 3750.05(A), the Commission finds that participation by Advanced Medical Systems, Incorporated, in the Cuyahoga County LEPC Emergency Planning Process under

Resolution 95-214

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Sections 3750.04 and 3750.05 is necessary or appropriate to protect the public health or safety or environment for the following reasons:

- (1) Advanced Medical Systems, Incorporated is licensed for the storage of 290,000 curies of sealed cobalt 60 at the facility according to the U.S. Nuclear Regulatory Commission license issued to it, submitted as Attachment G on April 3, 1995 by the Cuyahoga County LEPC. According to Attachment F of the same submittal, 529.4 curies of non sealed cobalt 60 was present in the Waste Hold Up Tank Room in 1988. Based on the 5.272 year half life of cobalt 60, approximately 230 curies of non sealed cobalt 60 remain. In addition, according to the presentations of the Nuclear Regulatory Commission, to the Commission's Executive Committee on March 27, 1995, and to the Commission on April 12, 1995, and in a letter dated April 12, 1995, from an attorney representing Advanced Medical Systems, Incorporated, to the Commission Chair, an additional 29 curies of non sealed cobalt 60 is present in the dry waste storage room basement area of Advanced Medical Systems, Incorporated; and
- (2) In the course of its operations, Advanced Medical Systems, Incorporated, manufactured sealed cobalt 60 sources. Wastes generated by the manufacturing and handling of these sources are being stored at this facility in quantities as stated in Paragraph (1) above. The facility was permitted by the Nuclear Regulatory Commission to discharge waste water containing radioactivity to the sanitary sewer system. The Northeast Ohio Regional Sewer District placed a plug into the lateral sewer connection connecting Advanced Medical Systems, Incorporated, to the sanitary sewer to stop this discharge. Approximately 30 inches of water accumulated in the facility's basement. Contamination levels of up to 170,000 picocuries per liter have been measured in the water found in the basement as stated in Attachments F, J, and L of the Cuyahoga County LEPC request to designate AMS as an additional facility; and
- (3) The facility is located within seventy five feet of a residential area, over 5,967 people reside within a one half mile radius, seven facilities possessing extremely hazardous substances are located within this area, and two schools with an enrollment of 587 are within this area. This information was provided in Attachment E of the April 3, 1995, supplemental submission provided by the Cuyahoga County LEPC Secretary; and

Resolution 95-214

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Therefore, the criteria set forth in 3750.05(ORC) have been met; and

Furthermore, issuance of an order granting the Cuyahoga County Local Emergency Planning Committee's request to designate Advanced Medical Services, Incorporated, as an additional facility under Section 3750.05 is necessary or appropriate to protect the public health or safety or the environment; and

Furthermore, let it be known by the approval of sixty percent or more of the Commission's presently appointed voting members, that the Commission hereby authorizes the issuance of Order 95-97 in accordance with Section 3750.18 of the Revised Code requiring Advanced Medical Systems, Incorporated, to participate in the Cuyahoga County LEPC's planning process pursuant to Sections 3750.04 and 3750.05 and rules adopted thereunder; and

Furthermore, Order 95-97 shall remain effective until such time as the amount of non sealed cobalt 60 within Advanced Medical Systems, Incorporated's possession is less than 10 curies; and

Furthermore, the Commission authorizes the Commission's Chair to mail a copy of this Order to the owners or operators of Advanced Medical Services, Incorporated, by certified mail, return receipt requested, and to notify the public by publication of a notice in the Plain Dealer, a newspaper of general circulation in Cuyahoga County, of the Commission's approval of the LEPC's request and issuance an Order 95-97.

Record of Motion:

_____	For
_____	Against
_____	Abstain

I hereby certify this Resolution was approved by sixty percent of the voting members of the State Emergency Response Commission Members at the meeting on this 11th Day of October, 1995.

Jane Harf, Chair
State Emergency Response Commission