

June 30, 1989

**Certified Mail
Return Receipt Requested**

Mr. Leland C. Rouse, Chief
Fuel Cycle Safety Branch
Division of Industrial and
Medical Nuclear Safety, NMSS
U.S. NUCLEAR REGULATORY COMMISSION
Washington, D.C. 20555

RE: License SUB-1010; Docket No. 40-8027
Amendment Application
Revision to Part I, Chapters 2.0 and 5.0

Dear Mr. Rouse:

Prior to the sale of Sequoyah Fuels Corporation (SFC) last year, most of the Sequoyah Facility's environmental analytical work was done by the Kerr-McGee Technical Center. Subsequent to the sale, Kerr-McGee has been phasing out this support. SFC has had to rely increasingly on outside commercial laboratory services. A problem that has arisen in this process is that some of the environmental (particularly radiological) detection limits in SFC's license are much lower than those commercial laboratories normally deal with, even for other NRC licensees. This results in 1) difficulty in finding commercial laboratories that can achieve these detection limits and 2) substantially greater analytical costs in the case of those few laboratories that can achieve them due to the greater sample volumes and longer counting times required.

SFC believes that, in some cases, these detection limits and action levels are unnecessarily restrictive, and proposes to revise Chapter 5.0 (enclosure) to establish more realistic values for certain parameters. The increase of these environmental action levels and detection limits will still provide ample time for an early response for any potential environmental problem and allow adequate time for corrective action to be taken. Specific justification for the proposed changes is provided in the enclosures.

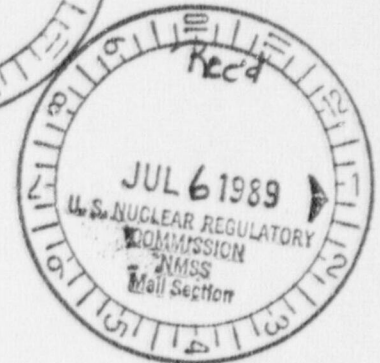
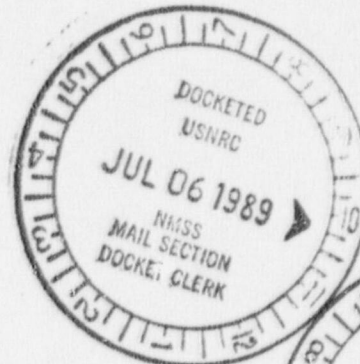
Also enclosed is a revision to Chapter 2.0 to make some administrative changes as explained in the enclosures.

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In accordance with 10 CFR Part 170.31, enclosed is Check No. 044892, dated 06/23/89, in the amount of \$150.00 as SFC's application fee for this amendment request.

Please contact Lee Lacey (918/489-3207) if you have any questions concerning these revisions.

Sincerely,


Scott P. Knight
Vice President
Administration

LRL:vp

Enclosures as stated (6 copies)

cc: R. D. Smith, URFO - Region IV
K. E. Asmussen, General Atomics
NLEC File

BACKGROUND INFORMATION ON CHANGES REQUESTED

Chapter 2

Section 2.1: Delete the requirement for General Atomics Licensing oversight since the licensing function has been fully established at the Sequoyah Facility in Gore. It is anticipated that a working relationship will continue between the SFC and GA licensing groups on appropriate matters.

Section 2.2: Change the requirements for the Supervisors, Waste Treatment and Disposal Operations, to indicate that there are more than one of these supervisors.

Figure 2.1: Add the Waste Treatment and Disposal Operations Department to the organization chart.

Section 2.7.3: Same as Section 2.1.

Section 2.7.5: Changed to eliminate unnecessary verbage and to reflect the change-over to a different computerized maintenance system.

Chapter 5

Table 5-1: Change detection limits and action levels on the following parameters, in water, based on the specified rationale:

Fluoride: 40 CFR 141.11, Sub-Part B establishes the maximum contaminant levels (MCL) for community and non-community water systems (drinking water supplies) as 4.0 mg F/l. Since none of the environmental waters associated with the Sequoyah Facility have a realistic potential for human consumption, either now or in the foreseeable future, the action level should be at least 4.0 mg F/l, with a detection limit at 10% of the action level.

Nitrate: 40 CFR 141.11, Sub-Part B establishes the MCL for nitrate as 10 mg N/l. However, at the discretion of the State, nitrate levels not to exceed 20 mg N/l may be allowed in non-community water systems (drinking water supplies). Since, as mentioned above, there is no realistic potential for human consumption, it is believed that 20 mg N/l is more appropriate for an action level, with a detection limit at 10% of the action level.

Radium 226: 10 CFR 20, Appendix B, Table II indicates that the appropriate action level for Ra-226 should be 30 pCi/l. USNRC Regulatory Guide 4.16 indicates that the appropriate detection limit should be 1.5 pCi/l.

Thorium 230: 10 CFR 20, Appendix B, Table II indicates that the appropriate action level for Th-230 should be 2,000 pCi/l. USNRC Regulatory Guide 4.16 indicates that the appropriate detection limit should be 100 pCi/l.

Table 5-2: The current Table 5-2 in the NRC License has three sample locations for which the sampling requirements are improperly listed. These locations are 2302A, 2302B, and 2303A, which are replacement wells for 2302 and 2303. Notification was sent to the NRC on December 19, 1986, that monitor wells 2301, 2302, and 2303, had been plugged and replaced by monitor wells 2301A, 2301B, 2302A, 2302B, and 2303A. It was further stated that these wells would be put on the same sampling frequency as the wells they replaced.

In 1987, SFC requested that NRC change the sampling frequency of the monitor wells so that the weekly wells would be sampled monthly and analyzed for Uranium and Nitrate; and that the monthly wells be sampled quarterly and analyzed for Uranium, Nitrate, Fluoride, Gross Alpha, Beta, and Ra-226 (Amendment 20). When this submittal was made to the NRC, there were some typographical errors made in the sampling and analyses frequency column.

For the indicated wells, the table currently reads:

Sample No:	Sample Location:	
2302A	MW- 10' SE of MW 2302 (Plugged)	N, F, U, GA, GB, N2 (M)/Ra (Q)
2302B	MW- 7' SE of MW 2302 (Plugged)	N, F, U, GA, GB, N2 (M)/Ra (Q)
2303A	MW- 7' NW of 2303 (Plugged)	N, F, U, GA, GB, Ra, N2 (M)

This amendment changes the table as follows:

Sample No:	Sample Location:	
2302A	MW- 10' SE of MW 2302 (Plugged)	U, N, F, GA, GB, Ra, N2 (Q)
2302B	MW- 7' SE of MW 2302 (Plugged)	U, N, F, GA, GB, Ra, N2 (Q)
2303A	MW- 7' NW of MW 2303 (Plugged)	U, N, F, GA, GB, Ra, N2 (Q)

Radium was never run previously on the monitor wells as a monthly requirement as is listed for 2303A in the current license. Monitor wells 2302 and 2303 were previously sampled on a monthly basis. However, when the transition was made to quarterly, the monthly notation was not removed as it should have been, but was simply carried over.

CHAPTER 2. GENERAL ORGANIZATIONAL AND ADMINISTRATIVE REQUIREMENTS

2.1 Licensee's Policy

The Corporate Manager, Health Physics shall be responsible for establishing corporate radiation health and safety standards and procedures, and coordinating them with managers and executives directly affected. Corporate radiation health and safety standards and procedures shall require the approval of the Corporate Vice President, Human Resources.

The Corporate Manager, Health Physics shall publish and maintain the Corporate Radiation Health and Safety Manual. This manual shall contain corporate radiation health and safety standards and procedures, and radiation exposure limits for all employees and other persons (e.g., visitors, contractors, etc.) potentially subject to such exposure from company operations.

The Corporate Manager, Licensing, Safety and Nuclear Compliance (LS & NC) is functionally responsible for obtaining and maintaining federal and state licenses and permits required for possessing and processing radioactive materials for all operational units of General Atomics with the exception of Sequoyah Fuels Corporation. The Corporate Manager, LS & NC may provide counsel to SFC in matters relating to licensing and permits.

The Vice President, Administration, Sequoyah Fuels Corporation (SFC) shall be primary contact with the Nuclear Regulatory Commission and other federal and state agencies.

All significant actions with regulatory agencies shall be subject to the approval of the Vice President, Administration, or the President, SFC.

The Manager, Health and Safety (RSO) shall be responsible for the facility's radiation health and safety activities which includes:

- Initiating and directing programs to ensure compliance with all applicable provisions of corporate radiation health and safety standards and procedures, federal and state regulations and license conditions,
- Establishing and maintaining systems for recording facility radiation survey and exposure data,

- Coordinating on-site contacts with representatives of federal and state agencies responsible for regulating radioactive materials and advising the Vice President, Administration and the Corporate Manager, License, Safety, and Nuclear Compliance, of the results of the on-site contacts.
- Identifying and proposing new and revised radiation health and safety standards and procedures as needed, and
- Notifying the Corporate Manager, Health Physics of radiation related incidents or emergency situations involving radioactive materials.

The Corporate Manager, Health Physics shall be responsible for ensuring the qualifications of the Radiation Safety Officer to perform these duties and shall assist and advise him on matters involving radiation exposure and related subjects.

The Corporate Manager, Licensing, Safety, and Nuclear Compliance shall review the radiation health and safety practices of Sequoyah Fuels Corporation. This review is to ensure compliance with the current company radiation health and safety standards and procedures, applicable federal and state regulations, and license conditions. The Corporate Manager, Licensing, Safety, and Nuclear Compliance, shall document and submit the results of each review and any recommendations for new or revised standards and procedures to the Vice President, Operations and the Vice President, Administration with copies to the Corporate Manager, Health Physics and the Corporate Vice President, Human Resources. Information copies shall be furnished to other corporate executives as appropriate.

In the event of a radiation-related incident or emergency situation, the Corporate Manager, Health Physics, the Corporate Manager, Industrial Safety, and the Radiation Safety Officer shall conduct or have conducted a thorough investigation and prepare a special incident report which will be distributed to the appropriate individuals.

2.2 Organizational Responsibilities and Authority

The organization for Sequoyah Fuels Corporation and its corporate oversight is described below and depicted in Figure 2-1.

The President, Sequoyah Fuels Corporation shall have overall responsibility for the safe operation of the Sequoyah Facility. Additional responsibility has been assigned to the Vice President, Administration, the Vice President, Operations, the Vice President, Business Development and the Controller for various functions as described in this license. These individuals report directly to the President, Sequoyah Fuels Corporation.

The Manager, Facility Laboratory, who reports to the Vice President, Administration, shall be responsible for the operation of the facility's radiological/non-radiological analytical laboratory. Required analytical and calibration procedures shall be prepared and maintained under his direction.

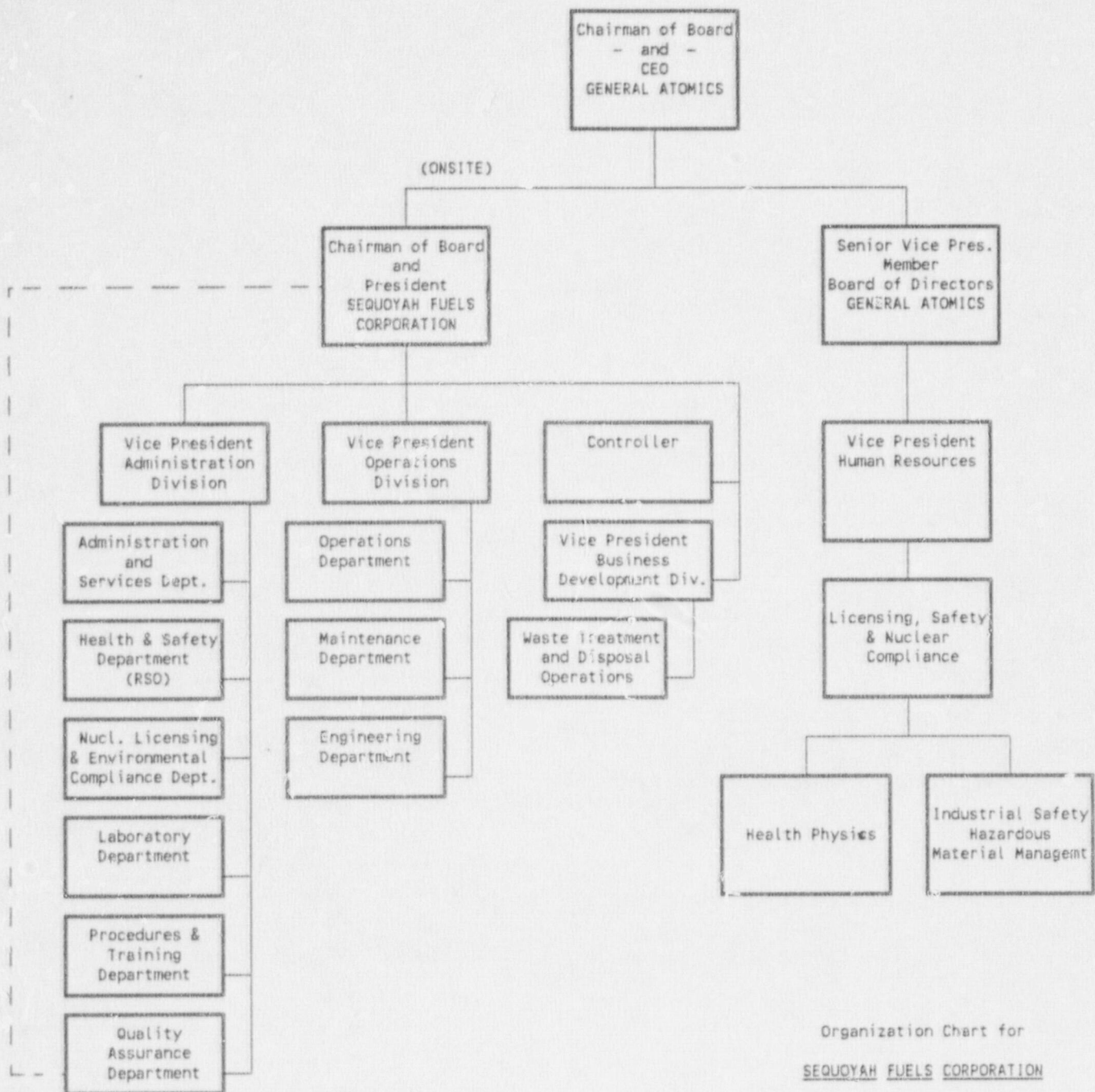
The Manager, Quality Assurance, who reports to the Vice President, Administration, shall be responsible for the development of a Facility Quality Assurance Plan and implementing procedures to assure that all operations and safety related activities are performed in accordance with facility procedures. This shall include pertinent requirements for all activities affecting the safety-related functions of structures, systems and components including assurance that design, procurement, fabrication, handling, shipping, storing, cleaning, erecting, installing, inspecting, testing, operating, maintaining, repairing and modifying requirements are done according to specification or instruction. The program shall provide assurance that indoctrination and training of personnel performing activities affecting quality, as necessary to assure that suitable proficiency is achieved and maintained, is done. Although the individual reports to the Vice President, Administration, he shall have organizational freedom with direct access to the President, Sequoyah Fuels Corporation.

The Vice President, Business Development shall be responsible for the development and implementation of the facility's waste treatment and disposal plan including programs related to decontamination, decommissioning and fertilizer (ammonium nitrate) distribution. He reports to the President, Sequoyah Fuels Corporation.

The Manager, Waste Treatment and Disposal Operations shall be responsible for the execution of the facility's waste treatment and disposal plan including management of the waste management personnel, process and procedure development, and compliance with all applicable federal, state and company rules and regulations. He reports to the Vice President, Business Development.

The Supervisors, Waste Treatment and Disposal Operations shall be responsible for the development of procedures and methods and operation of the facility's program to reduce the volume of solid waste generation requiring commercial disposal including waste collection, sorting, decontamination, waste packaging and shipping. They report to the Manager, Waste Treatment and Disposal Operations.

The Vice President, Operations shall be responsible for all nuclear manufacturing activities. He specifically oversees the operations, modifications, and process and equipment criteria. He shall be responsible for safe and efficient plant operations. He reviews all operating procedures, plant modifications and processes, equipment criteria and other general and administrative matters. He reports to the President, Sequoyah Fuels Corporation.



Organization Chart for
SEQUOYAH FUELS CORPORATION

Figure 2-1

Each employee shall sign a statement indicating receipt of training and committing to following corporate policy and procedures. Supervisory personnel shall ensure that all employees are aware of and understand changes made in procedures affecting the performance of their job functions.

2.7 Conduct of Operations

2.7.1 Operating Procedures

It shall be the responsibility of the Vice President, Operations to see that written operating procedures are established, maintained and adhered to for all operations and safety-related activities involving source or hazardous materials. All operating procedures shall be reviewed by the Vice President, Operations and the Manager, Health and Safety and approved by the Vice President, Administration and appropriate training conducted and documented prior to the implementation of the procedure. Temporary changes shall not be made to operating procedures without review by the procedure's proponent or his designee and written approval of the Vice President, Administration or his designee. All operating procedures shall be reviewed and revised whenever necessary to reflect changes in facility operations, but in no event, less than once every 24 months. The Sequoyah Operating Procedure System shall establish requirements for the development of new operating procedures, revisions to existing operating procedures, the review and approval process, the level of training required, if any, and the degree of documentation necessary to demonstrate that the appropriate facility operating personnel are knowledgeable of new or revised operating procedures.

2.7.2 Document Control

A document control system shall be established and maintained to assure that the procedures in use are the latest revision. A sanction statement regarding the serious nature of failure to follow the procedures shall be included in the Sequoyah Operating Procedures System and emphasized in the employee training program.

2.7.3 Activities Involving Uranium

All Activities involving uranium shall be conducted in accordance with approved radiation health and safety standards. The radiation health and safety standards shall be prepared by the Corporate Manager, Health Physics and shall be reviewed for license compliance by the Manager, Nuclear Licensing and Environmental Compliance, and the Vice President, Administration. The standards shall be reviewed for operability by the Manager, Health and Safety and the Vice President, Operations and approved by the Corporate Vice President, Human Resources. Changes to the health and safety

standards shall follow the same administrative review and approval system as original standards.

2.7.4 Design Control

Process and equipment design, which delineate the process and prescribe critical design parameters, shall be prepared by the Manager, Engineering, reviewed by the Vice President, Operations and the Manager, Operations and the Manager, Health and Safety and shall be approved by the Vice President, Administration. The Manager, Nuclear Licensing and Environmental Compliance shall review major process and equipment changes. Major changes to process operations and to equipment design shall be reviewed for operability and approved by the Vice President, Administration or the President, SFC.

Modifications or changes to process operations or equipment that normally occur during operations shall be prepared by the Manager, Engineering; reviewed by the Vice President, Operations, the Manager, Health and Safety (RSO) and the Manager, Operations; and approved by the Vice President, Administration. All experimental and developmental work to be performed at the Sequoyah Facility shall be approved by the Vice President, Administration prior to its initiation.

2.7.5 Maintenance Work

All maintenance work shall be performed in accordance with the Maintenance Work Order Procedure. Operations department supervisors shall determine if any maintenance work involves a potential release of radioactive material or potential exposure to radioactive material. If a determination is made that the work could involve uncontained uranium, the operation supervisor shall prepare a Hazardous Work Permit in accordance with established procedure.

The maintenance supervisor shall inspect the repaired work and shall sign the work order indicating that the work has been completed and is acceptable. For work that could involve uncontained uranium, the operations supervisor shall inspect the repair work prior to removal of protective devices and closing out the Hazardous Work Permit by signature.

At the completion of major modification work, a Safety Review and Acceptance Team, including the Manager, Health and Safety shall review the completed work in accordance with the established Design Change Authorization Procedure. The Safety Review and Acceptance Team shall document that the work has been completed in an acceptable manner. For work orders involving modifications, covered by the Design Change Authorization Procedure, a copy of the completed work order will be forwarded to the Engineering Department for updating plant drawings.

A maintenance surveillance program shall be established for critical instrumentation, alarms and interlocks. The critical instruments, alarms and interlocks covered in the maintenance surveillance program shall be periodically checked and calibrated commensurate with the safety function but in no case shall the surveillance frequency exceed once every 12 months +/- 2 months.

2.8 Audits and Inspections

The Manager, Health and Safety shall conduct an inspection of all plant activities involving radioactive materials on a monthly basis in accordance with a written procedure. A written report documenting the inspection findings shall be made to the Vice President, Administration with copies to the Vice President, Operations and the Vice President, Business Development.

The Corporate Manager, Licensing, Safety and Nuclear Compliance, shall ensure that quarterly audits are conducted at the Sequoyah Facility to evaluate and verify compliance with applicable federal and state regulations, NRC license conditions, permits, corporate policies and facility procedures in accordance with a written plan. The audits shall apply to major areas such as operations and safety-related activities involving radioactive materials, radiation protection, health physics, industrial safety, environmental control and emergency response programs. The audits shall be conducted by qualified personnel trained in basic radiation protection and knowledgeable about federal and state regulations, corporate policies and facility procedures. At the conclusion of the audit, the auditor shall conduct an exit interview with the Vice President, Administration or his designee and apprise him of any significant findings and the need for any immediate corrective actions. A formal report of findings, observations, and recommendations shall be prepared and submitted by the Corporate Manager, Licensing, Safety and Nuclear Compliance to the Vice President, Administration. Copies of the report shall be furnished to the Corporate Manager, Health Physics, the Manager, Nuclear Licensing and Environmental Compliance, the Vice President, Operations and the President of Sequoyah Fuels Corporation. In responding to the report, the Vice President, Administration shall give the status of corrective action that has been taken and provide a schedule for additional action which will be taken. The auditor shall conduct a follow-up review to ensure corrective action is being taken in a timely manner.

TABLE 5-1

DETECTION LIMITS AND ACTION LEVELS
FOR
ENVIRONMENTAL SAMPLE ANALYSES AT SEQUOYAH FACILITY

Sample Type	Analysis	Detection Limit	Action Level
Air	(1) Gross Alpha	2.5×10^{-13} uCi/ml	2.5×10^{-12} uCi/ml
	(2) Gross Alpha	3.6×10^{-14} uCi/ml	2.5×10^{-12} uCi/ml
	Fluoride	5.0×10^{-4} ug/l	5.0×10^{-3} ug/l
	(3) Uranium	2.7×10^{-16} uCi/ml	1.5×10^{-14} uCi/ml
	(4) Uranium	1.0×10^{-16} uCi/ml	1.5×10^{-14} uCi/ml
(5) Water	Gross Alpha	10 pCi/l	15 pCi/l
	Uranium	20 ug/l	225 ug/l
	Fluoride	0.4 mg/l	4 mg/l
	Nitrate	2 mg/l	20 mg/l
	Radium 226	1.5 pCi/l	30 pCi/l
	Thorium 230	100 pCi/l	2000 pCi/l
(6) Soil	Uranium	4 ug/g	40 ug/g
	Fluoride	35 ug/g	350 ug/g
(6) Vegetation	Uranium	0.25 ug/g	2.5 ug/g (dry weight)
	Fluoride	4 ug/g	40 ug/g

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- (1) Samples E1 thru E4 (Daily analysis)
 (2) Samples 2103, 2105, 2106, 2107, 2108 (Weekly analysis)
 (3) Samples 2103, 2105, 2106, 2107, 2108 (Quarterly composite)
 (4) Sample 2109 (Nearest Resident)
 (5) Environmental water samples
 (6) Semi-annual environmental samples
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Sample No.	Sample Location	Sampling and Analyses Frequency (see notes)
-----WELL WATER (Grab Samples) continued-----		
2301A	MW - 5' SE of MW-2301B	U,N(M)/F,GA,GB,RA,N2(Q)
2301B	MW - 4' SE of MW-2301 (Plugged)	U,N(M)/F,GA,GB,RA,N2(Q)
2302A	MW - 10' SE of MW-2302 (Plugged)	N,F,U,GA,GB,RA,N2(Q)
2302B	MW - 7' SE of MW-2302 (Plugged)	N,F,U,GA,GB,RA,N2(Q)
2303A	MW - 7' NW of 2303 (Plugged)	N,F,U,GA,GB,RA,N2(Q)
2305	MW - East of Raff. Pond #2	U,N(M)/F,GA,GB,RA,N2(Q)
2306	MW - S. of Fluor. Clar. Pond	N,F,U,GA,GB,RA,N2(Q)
2310	MW - North of Raff. Pond #2	N,F,U,GA,GB,RA,N2(Q)
2311	MW - West of Raff. Pond #2	N,F,U,GA,GB,RA,N2(Q)
2312	MW - West of Raff. Pond #2	U,N(M)/F,GA,GB,RA,N2(Q)
2313	MW - West of Raff. Pond #2	N,F,U,GA,GB,RA,N2(Q)
2314	MW - South of Raff. Pond #2	U,N(M)/F,GA,GB,RA,N2(Q)
2315	MW - West of Settling Basin #1	N,F,U,GA,GB,RA,N2(Q)
2316	MW - West of Settling Basin #1	N,F,U,GA,GB,RA,N2(Q)
2317	MW - West of Raff. Pond #2	N,F,U,GA,GB,RA,N2(Q)
2318	MW - West of Raff. Pond #2	U,N(M)/F,GA,GB,RA,N2(Q)
2319	MW - South of Raff. Pond #2	U,N(M)/F,GA,GB,RA,N2(Q)
2322-A	MW - NW Corner Raff. Pond #3	N,F,U,GA,GB,RA,N2(Q)
2325	MW - SW Corner Raff. Pond #2	N,F,U,GA,GB,RA,N2(Q)
2326	MW - SW Corner Raff. Pond #2	N,F,U,GA,GB,RA,N2(Q)
2327	MW - SW Corner Raff. Pond #2	N,F,U,GA,GB,RA,N2(Q)
2328	MW - SW Corner Raff. Pond #2	N,F,U,GA,GB,RA,N2(Q)
2329	MW - SW Corner Raff. Pond #2	N,F,U,GA,GB,RA,N2(Q)
2330	MW - SW Corner Raff. Pond #2	N,F,U,GA,GB,RA,N2(Q)
2338	MW - SW of Raff. Pond #2	U,N(M)/F,GA,GB,RA,N2(Q)
2339	MW - SW of Raff. Pond #2	U,N(M)/F,GA,GB,RA,N2(Q)
2340A	MW - SW Corner of Raff. Pond #3	N,F,U,GA,GB,RA,N2(Q)
2341	MW - West of Raff. Pond #3	N,F,U,GA,GB,RA,N2(Q)
2342	MW - South of Raff. Pond #5	N,F,U,GA,GB,RA,N2(Q)
2343	MW - West of Raff. Pond #5	N,F,U,GA,GB,RA,N2(Q)
2344	MW - SW of Raff. Pond #5	N,F,U,GA,GB,RA,N2(Q)
2345	MW - SW of Pond #5	N,F,U,GA,GB,RA,N2(Q)
2346	MW - SW of Pond #6	N,F,U,GA,GB,RA,N2(Q)
2347	MW - E of Pond #6	N,F,U,GA,GB,RA,N2(Q)
2348	MW - N of Pond #3E	N,F,U,GA,GB,RA,N2(Q)
2349	MW - N of Pond #4	N,F,U,GA,GB,RA,N2(Q)
2350	MW - NE of Pond #4	N,F,U,GA,GB,RA,N2(Q)
2351	MW - Between Ponds 3E and 4	N,F,U,GA,GB,RA,N2(Q)
2352	MW - Between Ponds 3E and 4	N,F,U,GA,GB,RA,N2(Q)
2353	MW - Between Ponds 3E and 3W	N,F,U,GA,GB,RA,N2(Q)
2354	MW - Between Ponds 3E and 3W	N,F,U,GA,GB,RA,N2(Q)
2355	MW - Between Ponds 3W and 5	N,F,U,GA,GB,RA,N2(Q)
2356	MW - Between Ponds 3W and 5	N,F,U,GA,GB,RA,N2(Q)
FTP 2B	MW - South of Pond 3W	N,F,U,GA,GB,RA,N2(Q)
F-1	MW - South of Fluor. Pit #3	N,F,U,GA,GB,RA,N2(Q)
F-2	MW - South of Fluor. Pit #3	N,F,U,GA,GB,RA,N2(Q)
F-3	MW - South of Fluor. Pit #3	N,F,U,GA,GB,RA,N2(Q)
T-1	MW - South of Raff. Pond #2	U,N(M)/F,GA,GB,RA,N2(Q)
T-2	MW - South of Raff. Pond #2	U,N(M)/F,GA,GB,RA,N2(Q)
T-4	MW - South of Raff. Pond #2	U,N(M)/F,GA,GB,RA,N2(Q)
T-5	MW - South of Raff. Pond #2	U,N(M)/F,GA,GB,RA,N2(Q)