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Department of Energy

Washington, DC 20545

MAY 29 1987

IA.02-3

Mr. Carl Schafer
Director of Environmental Policy
Office of the Deputy Assistant Secretary
of Defense for Installations
Pentagon
Washington, D.C. 20301

Dear Mr. Schafer:

As you know, the Department of Energy (DOE) is implementing a program to identify sites that may be radiologically contaminated as a result of DOE predecessor operations and to correct any problems associated with this contamination if there is DOE authority to do so. Reviews of historical materials from the Manhattan Engineer District (MED) and Atomic Energy Commission (AEC) era conducted in support of this program have identified a number of active and former Department of Defense (DOD) installations and DOD contractor sites involved in activities related to the MED/AEC operations.

The purpose of this letter is to provide you with information collected to date on DOD sites and advise you of actions taken by DOE concerning these sites (Enclosures 1 and 2). At the request of the Commander, U.S. Army Toxic and Hazardous Materials Agency (DRXTH-AS), Aberdeen Proving Ground, Maryland, DOE provided that Agency similar information that was available at that time. A copy of the letter dated July 23, 1982, is provided for your information (Enclosure 3). The list of sites and summaries of activities contained in Enclosures 1 and 2 update the information provided in the 1982 letter and include additional sites.

Enclosure 1 lists 12 sites for which DOE believes there is sufficient information available to indicate the potential for residual radioactive contamination at the sites and to determine if DOE has authority to take further action. Your attention is specifically directed to the two sites identified in the enclosure that are known to contain measurable quantities of residual radioactive material, for which DOE has no authority to conduct remedial action. The sites are marked by an asterisk.

Information assembled to date on the 22 DOD or former DOD sites identified in Enclosure 2 is limited. The potential for radiological contamination at these sites varies. Those sites believed to have the highest potential are identified with asterisks. DOE has not identified any information on these sites that would provide the Department with the authority for remedial action. As a result, the sites listed are referred to you for consideration under appropriate DOD programs.

As indicated in the July 23, 1982, letter to Col. J. D. Spence (Enclosure 2), the names of several sites are formally restricted data and classified "confidential." These site names were provided to Col. Spence in a subsequent letter and are not included on the enclosed list.

If you have any questions regarding this letter, call me at 353-4716. Questions regarding the list or specific sites should be directed to Mr. Andrew Wallo of my staff at 353-5439.

Sincerely,

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James J. Fiore, Director
Division of Facility and Site
Decommissioning Projects
Office of Nuclear Energy

3 Enclosures

bcc:
Aerospace

NE-20 RF
NE-23 RF
Wallo RF
NEG (4)

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NE-23

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ENCLOSURE 1

DEPARTMENT OF THE DEFENSE INSTALLATIONS/FACILITIES

<u>Installation/Facility</u>	<u>MED/AEC Activity</u>
✓ 1. Alabama Ordnance Works Sylacauga, AL	A heavy water (P9) plant was constructed and operated on this installation from January 1944 to June 1945. No residual radioactive contamination is suspected as a result of this operation.
✓ 2. Morgantown Ordnance Works Morgantown, WV	MED constructed and operated a heavy water plant on this installation from 1943 to 1945. There is no reason to suspect residual radioactive contamination from this operation.
3. Naval Office - University of New Mexico Albuquerque, NM	Apparently a transshipment station for equipment to the Los Alamos site. No record has been found that would indicate involvement of radioactive material at this site.
✓ 4. Naval Ordnance Laboratory White Oak Silver Spring, MD	Identified on 1955 Accountability Station Lists. This site is currently operating under NRC license.
✓ 5. Navy Yard Mare Island, CA	Identified in MED historical records as a transshipment point for material destined for Tinian. Also served as a manufacturing facility for special tools and equipment required at the Hanford Works. Other Navy Yards along the west coast apparently performed similar manufacturing tasks. However there is no record of involvement with radioactive material.

ENCLOSURE 1 (Cont'd)

DEPARTMENT OF THE DEFENSE INSTALLATIONS/FACILITIES

- | <u>Installation/Facility</u> | <u>MED/AEC Activity</u> |
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| 6. Niagara Falls Storage Site
(Former Lake Ontario Ordnance Works)
Lewiston, NY | A portion of this former ordnance works was acquired by the AEC and used for storage of residues and scrap and later the site of a boron-10 plant. Remedial action conducted under the Department of Energy Formerly Utilized Sites Remedial Action Program is essentially complete. The site is being maintained under the DOE Surplus Facilities Management Program. |
| ✓ 7. Raritan Arsenal (*)
Edison, NJ | Radiation levels above natural background were found in several buildings during a recent investigation requested by the EPA. However, no evidence of involvement with MED/AEC radioactive materials at this site has been found. |
| ✓ 8. Seneca Army Depot
Romulus, NY | Ammunition igloos (magazines) on the installation were used during the 1940's to store high grade uranium ore. Radioactive contamination was cleaned up by the Department of the Army. |
| ✓ 9. Wabash River Ordnance Works
Newport, IN | MED constructed a heavy water plant on this installation on approximately 100 acres initially identified as Plant No. 3. This plant was also known as the Newport Chemical Plant and later the Dana Plant. In 1963, the U.S. Army CBR Agency was the accountable agency for the property. |

ENCLOSURE 1 (Cont'd)

DEPARTMENT OF THE DEFENSE INSTALLATIONS/FACILITIES

<u>Installation/Facility</u>	<u>MED/AEC Activity</u>
✓ 10. Watertown Arsenal (*) Watertown, MA	MED and AEC operations involving radioactive material were conducted on this installation from 1946 until 1953. The Army also conducted work involving depleted uranium and thorium under AEC contract. Records indicate that a commercial firm, Manufacturing Laboratories, Inc., located at 272 Northhampton St. in Boston did work with uranium metal for or in conjunction with the work done at Watertown Arsenal for a period of approximately one year (1953). The Arsenal apparently ceased these operations in 1967. Responsibility for properties known to be radioactively contaminated was transferred to the Army Materials Research Agency, along with the AEC Source Material License SUB-238. A portion of the Arsenal property that was transferred to GSA control was sold. DOE surveys of the site indicate radiation levels above current guidelines. These properties remain under control of the Army and the GSA. The primary contamination on the GSA property appears to be related to Army work. There is no evidence to provide DOE authority under FUSRAP for additional action at this site.
✓ 11. Wright Air Development Center Wright-Patterson Air Force Base, OH	Copies of AEC Source Material Licenses and correspondence related thereto indicate that the Center's Power Plant Laboratory participated in a joint USAF-AEC ANP Program from 1955 through 1957. A kilocurie gamma facility was constructed and operated on the installation. The Center operated under several AEC Source Material Licenses during the period.

ENCLOSURE 1 (Cont'd)

DEPARTMENT OF THE DEFENSE INSTALLATIONS/FACILITIES

<u>Installation/Facility</u>	<u>MED/AEC Activity</u>
12. Weldon Spring Site (U.S. Army Chemical Plant) St. Charles County, MO	In 1956, 219 acres of the former Weldon Spring Ordnance Works was acquired by the AEC for use as a uranium feed material processing center. The facility was closed in 1966. About 169 acres, including the Chemical Plant process building and support facilities, were returned to the Army in 1967. Portions of the plant site are contaminated with uranium and thorium residues. Remedial action at this site will be conducted by the Department of Energy under the Surplus Facilities Management Program. A memorandum of understanding has been signed by DOE and DA to provide for joint funding of the chemical plant remediation. Radiological contamination on vicinity properties is also being addressed by DOE. However, chemical contamination on the neighboring U.S. Army Reserve property is under the jurisdiction of the Department of Army.

ENCLOSURE 2

DEPARTMENT OF THE DEFENSE INSTALLATIONS/FACILITIES

<u>Installation/Facility</u>	<u>MED/AEC Activity</u>
✓ 1. Air Force Plant #36 (*) Evendale, OH	The AEC occupied Buildings C and D and certain other smaller auxiliary structures at the plant from 1961 through June 30, 1970 under use permit from the Air Force. The use permit was allowed to expire and custody of the facility was returned to the Air Force. As of January 1981, 1/4 of the plant was still contaminated, primarily in the areas identified above. The contaminated area of the plant was being maintained by G.E. under contract to the Air Force. Current status of this portion of the plant is unknown. However, there are indications that radiological characterization work sponsored by the Nuclear Regulatory Commission is either in process or is planned for the near future.
✓ 2. Burlington Ordnance Plant (Formerly the Iowa Ordnance Works) Burlington, IA	The site was cleared by ERDA for unrestricted use and transferred to the Department of the Army. Historically, this installation has been involved in weapons assembly. Details of AEC or ERDA operations are unknown.
3. Curtis Wright (Metals Processing Division) Buffalo, NY	Performed casting, forging and extrusion operations funded by the U.S. Air Force heavy press program. Also performed extrusion work for the contractor operator (National Lead Company of Ohio) of the AEC Feed Material Production Center (FMPC).
✓ 4. Frankford Arsenal Pitman-Dunn Laboratories Philadelphia, Pa	Conducted research involving the use of uranium tetrachloride. Activities at the Arsenal may have also involved the handling of substantial quantities of uranium metal.

ENCLOSURE 2 (Cont'd)

DEPARTMENT OF THE DEFENSE INSTALLATIONS/FACILITIES

<u>Installation/Facility</u>	<u>MED/AEC Activity</u>
✓ 5. Granite City Army Depot (*) Granite City, IL	Records indicate that approximately 3,400 tons (28,000 drums) of rare earths and thorium residues owned by the GSA were stored on this installation. These drums, reported being in poor condition when removed in 1964, may have leaked and contaminated the storage area.
✓ 6. Marion Ordnance Works Marion, OH	An AEC Health & Safety Laboratory survey indicates meta-scopes were stored at this installation. No evidence of AEC operations involvement has been found.
✓ 7. Naval Ammunition Depot Red Bank, NJ	Collection point for unserviceable contaminated drums and scrap (radioactive) for sea disposal - late 1940's and early 1950's. Correspondence identifies the site location as Earle, NJ.
✓ 8. Naval Boiler and Turbine Lab. Philadelphia Navy Yard Philadelphia, PA	Abelson's S-50 thermal diffusion pilot plant was built and operated on this facility beginning in the summer of 1944. Large quantities of uranium hexafluoride were processed on this site in 1945.
✓ 9. Naval Gun Factory and Bureau of Ordnance Washington, DC	Designed guns and nuclear projectiles. Radioactive material involvement in the operations is unknown.
✓ 10. Naval Ordnance Plant Centerline, MI	Believed to have assembled bomb components.
✓ 11. Naval Proving Ground Dahlgren, VA	Identified on 1954 Accountable Station Lists.

ENCLOSURE 2 (Cont'd)

DEPARTMENT OF THE DEFENSE INSTALLATIONS/FACILITIES

<u>Installation/Facility</u>	<u>MED/AEC Activity</u>
✓ 12. Naval Research Laboratory (Former Anacostia Naval Air Station) Washington, DC	Conducted research and development activities on thermal diffusion. A pilot plant (S-50 Plant) was built at the former Anacostia Naval Air Station to separate uranium isotopes by liquid thermal diffusion.
✓ 13. Nellis Air Force Base (*) Las Vegas, NV	A letter dated 26 Aug 1969 from the Commanding Officer, Lake Mead Base, to the Commander Field Command, Sandia Base indicates a wet and a dry waste disposal area for radioactive materials on the installation. The site was visited by personnel from the Department of Energy Nevada Operations Office in September 1983. Specifics of quantity and concentrations of radionuclides present are unknown.
✓ 14. Norfolk Naval Station Norfolk, VA	A demonstration - uranium turning fire and related firefighting techniques - was conducted on this installation on 11 July 1956. Specific location and results of decontamination of demonstration site unknown.
✓ 15. Pennsylvania Ordnance Works (*) Williamsport, PA	Approximately 100,000 pounds of Uranium metal turnings were stored by the MED in at least 4 of the ammunition igloos (magazines) on the installation during 1943 and 1944. At that time the magazines were numbered 112, 120, 137 and 146.
✓ 16. Picatinny Arsenal Dover, NJ	AEC health & safety inspection reports indicate that operations involving the machining of uranium metal were conducted on this installation.

ENCLOSURE 2 (Cont'd)

DEPARTMENT OF THE DEFENSE INSTALLATIONS/FACILITIES

<u>Installation/Facility</u>	<u>MED/AEC Activity</u>
17. Reactor Site - Fort Belvoir Fort Belvoir, VA	AEC Health & Safety Laboratory conducted inspections of the site. No evidence of AEC involvement with the reactor, except for health and safety inspections, has been found.
✓ 18. Rock Island Arsenal Rock Island, IL	Contract work for the Los Alamos Scientific Laboratory (LASL) was done on the installation. However, there is no indication that radioactive materials were involved.
✓ 19. Twin Cities Ammunition Plant New Brighton, MN	Operations at the site were licensed (10 CFR Part 70) by the NRC. The NRC license docket does not contain sufficient information to determine if the site was decontaminated to current standards.
✓ 20. U.S. Naval Radiological Defense Laboratory Health Physics Division San Francisco, CA	Identified on 1955 Accountability Station Lists. This activity was involved in the decontamination of ships.
✓ 21. U.S. Naval Supply Depot (*) Building 546 Scotia, NY	This facility served as a storage and transshipment point for feed materials between the Hanford site and commercial metal fabricators in the northeastern states. Large quantities of uranium and thorium metal were handled at this facility.
22. Westinghouse Naval Ordnance Plant Detroit, MI,	Performed contract work for the AEC Albuquerque Operations Office. No record has been found that would indicate involvement with radioactive materials.

NOTE: (*) - Information assembled to date indicates significant potential for residual radioactive contamination. Priority consideration is recommended.