

APR 23 1992

License No. SMB-141

Docket No. 040-08980

Heritage Minerals  
ATTN: John F. Lord, P.E.  
Vice President  
P. O. Box 12  
Lakehurst, New Jersey 08773

Dear Mr. Lord:

Subject: Site Decommissioning Management Plan (SDMP)

As you may know, in 1990, the Nuclear Regulatory Commission developed the Site Decommissioning Management Plan (SDMP) to identify and resolve policy and regulatory issues affecting the timely decommissioning of certain sites contaminated with radioactive material. A site is placed on the SDMP list if it meets one of the following criteria: (1) there are problems with the viability of the responsible organization (e.g., inability to pay or unwillingness to perform decommissioning); (2) there are large amounts of contaminated material to dispose of; (3) there is a long-term presence of contaminated, unused buildings; (4) the license was previously terminated, but there is a question as to whether further decontamination may be required; or (5) there is contamination or potential contamination of groundwater from wastes buried onsite. Your site at Manchester Township, New Jersey is listed in the SDMP. While the SDMP has been effective in resolving issues related to site decommissioning, progress on actual site cleanups continues to be slow.

The limited progress to date has prompted the Commission to develop an action plan to accelerate the cleanup of SDMP sites. On April 8, 1992, the NRC released a copy of the action plan in conjunction with a press release. A copy of the press release and action plan are enclosed for your information. The NRC staff has contacted or will contact each licensee or responsible party listed in the SDMP to initiate site-specific steps to implement the applicable parts of the action plan.

You may discuss the applicability of the action plan to your site with John D. Kinneman, Chief of the Site Decommissioning Task Force in Region I, (215) 337-5252.

Sincerely,

Original Signed by

Richard W. Cooper, Director  
Division of Radiation Safety  
and Safeguards

Enclosure: As stated

B-32

bcc:  
Region I Docket Room (w/concurrences)  
J. Austin, NMSS  
J. Kinneman, RI

RI:DRSS  
Roberts  
*mcr*  
4/22/92

RI:DRSS  
*Rob* Kinneman  
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# UNITED STATES NUCLEAR REGULATORY COMMISSION

Office of Public Affairs  
Washington, D.C. 20555

No. 92-52  
Tel. 301-504-2240

FOR IMMEDIATE RELEASE  
(Wednesday, April 8, 1992)

## NRC APPROVES ACTION PLAN TO ASSURE TIMELY CLEANUP OF SITES CONTAMINATED WITH RADIOACTIVE MATERIALS

The Nuclear Regulatory Commission has approved an action plan that will help ensure the timely cleanup of a group of over 40 nuclear materials sites that the Commission has identified as being contaminated with radioactive materials and that warrant special attention by the Commission.

Some of these sites still are subject to the requirements of an active NRC license; for other sites, the NRC license has been terminated; and others never were licensed by the NRC.

All of the sites have buildings, former waste disposal areas, large piles of tailings, groundwater and/or soil contaminated with low levels of uranium or thorium or other radioactive materials and presenting varying degrees of radiological hazard, cleanup complexity and cost.

At some sites, licensees are financially and technically capable of completing cleanup in a reasonable time frame; at others, the licensee or other responsible party is unable or unwilling to perform cleanup. All of the sites are ready for decommissioning and, in some cases, decommissioning activities have been initiated; at others, no decommissioning plans have been prepared and no decommissioning work has been started.

Most of these sites (a list is attached) were identified in 1990 as part of the NRC staff's development of a Site Decommissioning Management Plan (SDMP) to identify and resolve issues associated with the timely cleanup of contaminated sites. The SDMP has been effective in ensuring coordination and resolution of some policy and regulatory issues, but progress on actual cleanup of these sites continues to be slow.

The Action Plan details the NRC's approach to assuring that cleanup of these sites is accelerated and communicates the Commission's general expectation that they be cleaned up in a timely and effective manner. Specifically, the plan:

(1) identifies current criteria to guide cleanup of contaminated soils, structures and equipment and emphasizes the site-specific application of the as low as reasonably achievable (ALARA) principle;

(2) states the NRC's position on the finality of decommissioning decisions;

(3) describes the NRC's general expectation that the cleanup of these sites will be completed within a four-year period after operations cease or three years after the NRC staff issues an initial cleanup order;

(4) identifies currently available guidance on site characterization work in support of decommissioning; and

(5) describes the process for timely cleanup on a site-specific basis.

The Action Plan does not contain enforceable standards and is not intended to create new rights or obligations on third parties. Implementation of the plan may require the establishment of legally-binding requirements by order or license amendment on a case-by-case basis and the plan is not intended to affect the hearing rights associated with such orders or license amendments.

Attachment

EXISTING SITE DECOMMISSIONING MANAGEMENT PLAN (SDMP) SITES

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Advanced Medical Systems	Cleveland, OH
ALCOA	Cleveland, OH
AMAX	Wood City, WV
Aberdeen Proving Ground	Aberdeen, MD
Army Arsenal	Watertown, MA
Babcock and Wilcox	Apollo, PA
Babcock and Wicox	Parks Township, PA
BP Chemicals	Lima, OH
Budd Company	Philadelphia, PA
Cabot Corporation	Boyertown, PA
Cabot Corporation	Reading, PA
Cabot Corporation	Revere, PA
Chemetron Corporation (Bert Ave.)	Cleveland, OH
Chemetron Corporation (Harvard Ave.)	Cleveland, OH
Chevron Corporation	Pawling, NY
Dow Chemical	Midland, MI
Elkem Metals	Marietta, OH
Engelhard	Plainville, MA
Fansteel	Muskogee, OK
General Services Administration	Watertown, Boston, MA
Hartley and Hartley	Bay City, MI
Heritage Minerals	Lakehurst, NJ
Kerr-McGee (Cimmaron)	Crescent, OK
Kerr-McGee	Cushing, OK
Magnesium Elektron	Flemington, NJ
NE Ohio Regional Sewer District	Cuyahoga Heights, OH
Nuclear Metals	Concord, MA
Molycorp	Washington, PA
Molycorp	York, PA
Permagrain	Media, PA
Pesses Chemical	Pulaski, PA
Process Technology	Rockaway, NJ
Remington Arms Company	Independence, MO
RMI Titanium	Ashtabula, OH
Safety Light Corporation	Bloomsburg, PA
Schott Glass	Duryea, PA
Shieldalloy	Cambridge, MA
Shieldalloy	Newfield, NJ
Texas Instruments	Attleboro, MA
United Nuclear Corporation	Wood River Junction, RI
Victoreen	Cleveland, OH
Westinghouse (Waltz Mill)	Madison, PA
West Lake Landfill	St. Louis, MO
Whittaker Metals	Greenville, PA
Wyman-Gordon	North Grafton, MA
3M Company	New Brighton, MN



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

OFFICE OF THE  
SECRETARY

April 3, 1992

MEMORANDUM FOR: James M. Taylor  
Executive Director  
for Operations

FROM: <sup>W. Bate</sup> Samuel J. Chilk, Secretary

SUBJECT: SECY-92-106 - ACTION PLAN TO ENSURE TIMELY  
REMEDICATION OF SITES LISTED IN THE SITE  
DECOMMISSIONING MANAGEMENT PLAN

This is to advise you that the Commission (with the Chairman and Commissioners Rogers, Curtiss and Remick agreeing) has approved the attached Action Plan. Commissioner de Planque approved in part and disapproved in part. She disapproved only Section B on finality, believing that the Commission "...can only commit this current Commission to actions regarding finality and cleanup standards."

The Commission suggests that for materials licensees, publication in the Federal Register and in the NMSS Newsletter would provide sufficient notice to these licensees, and would be more efficient and economical than mailing an Information Notice to all such licensees.

Attachment:  
As Stated

cc: The Chairman  
Commissioner Rogers  
Commissioner Curtiss  
Commissioner Remick  
Commissioner de Planque

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SECY NOTE: This SRM, the subject paper, and the vote sheets of all Commissioners will be made immediately available to the public.

## NRC ACTION PLAN TO ENSURE TIMELY CLEANUP OF SDMP SITES

### I. Introduction and Purpose

Over the past several years, the Nuclear Regulatory Commission (NRC) has identified over 40 nuclear material sites that warrant special attention by the Commission. The sites have buildings, former waste disposal areas, large piles of tailings, groundwater, and soil contaminated with low levels of uranium or thorium (source material) or other radionuclides. Consequently, they present varying degrees of radiological hazard, cleanup complexity, and cost. Some of the sites are still under the control of active NRC licenses, whereas licenses for other sites may have already been terminated or may have never been issued. At some sites, licensees are financially and technically capable of completing cleanup in a reasonable timeframe, whereas at other sites, the licensee or responsible party is unable or unwilling to perform cleanup. In addition, the sites are currently in various stages of decommissioning. At some sites, licensees have initiated decommissioning, whereas at other sites, decommissioning has not yet been planned or initiated.

The NRC believes that the best approach for minimizing the potential for unnecessary radiation exposures and environmental contamination in the future is to ensure that these sites are cleaned up in a timely and effective manner. In 1990, NRC implemented the Site Decommissioning Management Plan (SDMP) to identify and resolve issues associated with the timely cleanup of these sites. The SDMP provides a comprehensive strategy for NRC and licensee activities dealing with the cleanup and closure of contaminated nuclear material facilities over which NRC has jurisdiction. Table 1 lists the sites that are currently included in the SDMP (the SDMP does not include more routine decommissioning cases such as nuclear power reactors). The SDMP has been effective in ensuring coordination and resolution of some of the policy and regulatory issues affecting site decommissioning. Progress on actual site remediation, however, continues to be slow.

The limited progress to date has prompted the Commission to direct the NRC staff to initiate actions to accelerate the cleanup of SDMP sites. The staff has developed this Action Plan to describe NRC's approach for accelerating remediation of sites listed in the SDMP. The objective of this plan is to communicate the Commission's general expectation that sites listed on the SDMP be cleaned up in a timely and effective manner. This plan (1) identifies current criteria to guide cleanup of contaminated soils, structures, and equipment and emphasizes site-specific application of the As Low As Reasonably Achievable (ALARA)

principle; (2) states NRC's position on the finality of decommissioning decisions; (3) describes the NRC's general expectation that SDMP site cleanup will be completed within a 4-year timeframe after operations cease or 3 years after the issuance of an initial cleanup order; (4) identifies currently available guidance on site characterization work in support of decommissioning; and (5) describes the process the staff will use to establish and enforce schedules for timely cleanup on a site-specific basis.

It should be noted that this Action Plan itself does not contain enforceable standards and is not intended to create new rights or obligations on third parties or to preclude litigation of properly framed issues in any pending proceeding. Implementation of this plan may result in the establishment of legally binding requirements by order or license amendment that may be enforced on a site-specific basis. However, nothing in this Action Plan is intended to affect hearing rights associated with such orders or license amendments or the hearing rights of parties to presently pending adjudications and, to the extent that rules promulgated in accord with 5 USC 553 are not applicable, each case will be judged on its own merits.

## II. Action Plan

In accordance with the overall objective of ensuring timely and effective cleanup of SDMP sites, the staff will review site-specific plans and take decommissioning actions consistent with the following elements:

### A. Cleanup Criteria

Pending NRC rulemaking on generic radiological criteria for decommissioning, the NRC will continue to consider existing guidance, criteria and practices such as those listed below in determining whether sites have been sufficiently decontaminated so that they may be released for unrestricted use, pursuant to, or consistent with, the decommissioning rules in 10 CFR 30.36, 40.42, 50.82, 70.38, and 72.54. These cleanup criteria will be applied on a site-specific basis with emphasis on residual contamination levels that are ALARA.

1. Options 1 and 2 of the Branch Technical Position "Disposal or Onsite Storage of Thorium or Uranium Wastes from Past Operations" (46 FR 52061, October 23, 1981).
2. "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," Policy and Guidance Directive FC 83-23, Division of Industrial and Medical Nuclear Safety, August 1987.



3. "Termination of Operating Licenses for Nuclear Reactors," Regulatory Guide 1.86, June 1974, Table 1, for surface contamination of reactor facility structures. Also Cobalt-60, Cesium-137, and Europium-152 that may exist in concrete, components, and structures should be removed such that the indoor exposure rate is less than 5 microroentgen per hour above natural background at 1 meter, with an overall dose objective of 10 millirem per year (cf. Letter to Stanford University from James R. Miller, Chief, Standardization and Special Projects Branch, Division of Licensing, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, April 21, 1982, Docket No. 50-141).

4. The Environmental Protection Agency's (EPA's) "National Primary Drinking Water Standards," 40 CFR Part 141. In accordance with FC 83-23, the maximum contaminant levels for radionuclides in public drinking water as established by the EPA should be used as reference standards for protection of groundwater and surface water resources.

5. The EPA's "Radiation Dose Guidelines for Protection Against Transuranium Elements Present in the Environment as a Result of Unplanned Contamination" (42 FR 60956; November 30, 1977). This document provides guidelines for acceptable levels of transuranium elements in soil.

The criteria of this section will be considered in establishing site-specific ALARA levels for each of the SDMP sites in license amendments and orders.

#### B. Finality

NRC decisions to terminate a license will relieve the licensee from any further obligation to NRC to conduct additional cleanup, as long as the licensee decommissioned the site in full accordance with an approved decommissioning plan. The licensee will demonstrate compliance with the cleanup levels described in the decommissioning plan by a radiologic survey of the site prior to license termination. The NRC usually conducts an independent survey to confirm the accuracy of the licensee's termination survey. Therefore, if a licensee or responsible party cleaned up a site, or was in the process of cleaning up a site, under an NRC-approved decommissioning plan, the NRC will not require the licensee to conduct additional cleanup in response to NRC criteria or standards established after NRC approval of the plan. An exception to this case would be in the event that additional contamination, or noncompliance with the plan, is found indicating a significant threat to public health and safety. Noncompliance would occur when a licensee or responsible party does not comply with an approved decommissioning plan, or provides false information.

NRC will inform EPA about specific decommissioning actions at sites. NRC will also inform State and local agencies that have jurisdiction over aspects concerning decommissioning actions.

### C. Timing

NRC staff will address the timing of SDMP site cleanups on a case-by-case basis, with the expectation that cleanup generally be completed within about 4 years after operations that caused the contamination cease or 3 years after issuance of an initial cleanup order. To achieve this objective, major decommissioning milestones should be established within the following timeframes:

1. As soon as practical, but generally not later than 12 months after notification by NRC that decommissioning is expected to commence, the licensee or responsible party identified by NRC should submit to NRC an adequate site characterization report, if that has not yet been completed. NRC encourages early and substantive coordination and communication between the licensee or responsible party in planning for site characterization, including NRC review of site characterization plans.

2. As soon as practical, but generally not later than 6 months after NRC approval of the site characterization report, the licensee or responsible party should submit to NRC a site decommissioning plan for approval based on the site characterization results. The decommissioning plan should include schedules for completing site decommissioning work in a timely and effective manner, including plans to dispose of contaminated materials either onsite pursuant to 10 CFR 20.302 (or 20.2002 of the revised 10 CFR Part 20), or at a licensed disposal facility offsite.

3. As soon as practical, but generally not later than 18 months after NRC approval of the site decommissioning plan, the licensee or responsible party should complete all decommissioning work and termination surveys, such that sites or facilities can be released for unrestricted use after termination of the license, as appropriate.

In implementing this approach, NRC will establish specific and enforceable milestones for each phase of decommissioning through license amendments or orders. These schedules will provide flexibility to allow a licensee or responsible party to demonstrate good cause for delaying cleanup based on technical and risk reduction considerations, or for reasons beyond their control. NRC recognizes that at sites containing hazardous chemical wastes, schedules will depend, at least in part, on the necessary reviews and approvals by other responsible agencies (e.g., EPA or State agencies).

#### D. Site Characterization

Inadequate site characterization has been one of the technical issues that has delayed timely approval and implementation of site-specific decommissioning actions. Therefore, NRC is developing new guidance on the content of acceptable site characterization programs conducted in support of decommissioning actions. NRC has developed a draft "Guidance Manual for Conducting Radiological Surveys in Support of License Termination" (NUREG/CR-5849) through Oak Ridge Associated Universities. This draft manual, which will be published for interim use and evaluation in April 1992, should be consulted regarding general aspects of site characterization activities. In addition, this draft manual should be used by licensees when conducting radiological surveys in support of license terminations in the interim until the manual is finalized. NRC is developing additional guidance on specific aspects of site characterization, such as hydrogeologic assessment of contaminated sites.

Until specific NRC guidance on site characterization is developed, licensees should continue to review relevant information from existing documents on site characterization such as those identified below. Although NRC recognizes that these documents do not completely address site characterization needs for decommissioning, use of these references, in addition to site-specific consultation with the NRC staff, will help assure that site characterization is appropriately planned and conducted so that final site characterization reports are submitted with minimal deficiencies and in a timely manner. The following documents, available from the Public Document Room, should be reviewed regarding general aspects of site characterization activities:

1. "Survey Procedures Manual for the ORAU Environmental Survey and Site Assessment Program," Oak Ridge Associated Universities, March 1990.
2. "Laboratory Procedures Manual for the Environmental Survey and Site Assessment Program," Revision 5, Oak Ridge Associated Universities, February 1990.
3. "Quality Assurance Manual for the Oak Ridge Associated Universities' Environmental Survey and Site Assessment Program," Revision 3, Oak Ridge Associated Universities, February 1990.
4. "Monitoring for Compliance With Decommissioning Termination Survey Criteria," NUREG/CR-2082, June 1981.

5. "Guidance on the Application of Quality Assurance for Characterizing a Low-Level Radioactive Waste Disposal Site," NUREG-1383, October 1990.

E. Procedures to Compel Timely Cleanup

NRC staff will seek voluntary cooperation by licensees or other responsible parties in establishing and implementing decommissioning plans in accordance with the objectives of this Action Plan. For sites with active NRC licenses, an approved decommissioning plan that includes appropriate schedules and cleanup levels will be incorporated into the license by amendment through normal licensing procedures. For sites with joint licenses (i.e., facilities that possess both a materials and a non-power reactor license), a coordinated approach under both licenses will be taken in establishing appropriate schedules and plans for decommissioning. If a site is not under an active license, the NRC may impose a decommissioning plan by order.

In cases where voluntary cooperation is ineffective in establishing acceptable schedules for completing decommissioning actions, NRC will establish legally binding requirements and take enforcement action, as necessary, to compel timely and effective cleanup of SDMP sites. Demands for Information may be used to establish licensee commitments to perform major decommissioning activities. Enforcement actions may include issuance of Orders, including immediately effective orders, to compel actions by licensees or other responsible parties. If necessary, NRC will issue Orders requiring payment of funds into a decommissioning escrow account when a licensee or responsible party fails to meet an agreed upon schedule and has not already established an adequate decommissioning fund pursuant to, or consistent with, the decommissioning funding rules (10 CFR 30.35, 40.36, 50.82, 70.25, and 72.30). The amount of the escrow account will be based upon and be consistent with the estimated cost required to complete site cleanup. Other enforcement actions may include escalated payment of funds into the escrow account based on a licensee's or responsible party's failure to comply with the Order. Accumulations into that account will be dedicated for use to finance the cleanup of the site. Finally, NRC will consider issuing civil penalties where (1) the licensee or responsible party fails to comply with an order compelling payment into an escrow account; or (2) the licensee or responsible party fails to comply with a requirement or an Order compelling cleanup when there is already sufficient decommissioning funding. Additionally, NRC may seek court injunctions to compel enforcement of these Orders.

Table 1. Existing SDMP Sites

Site Name	Location
Advanced Medical Systems	Cleveland, OH
ALCOA	Cleveland, OH
AMAX	Wood City, WV
Aberdeen Proving Ground	Aberdeen, MD
Army Arsenal	Watertown, MA
Babcock and Wilcox	Apollo, PA
Babcock and Wilcox	Parks Township, PA
BP Chemicals	Lima, OH
Budd Company	Philadelphia, PA
Cabot Corporation	Boyertown, PA
Cabot Corporation	Reading, PA
Cabot Corporation	Revere, PA
Chemetron Corporation (Bert Ave.)	Cleveland, OH
Chemetron Corporation (Harvard Ave.)	Cleveland, OH
Chevron Corporation	Pawling, New York
Dow Chemical	Midland, MI
Elkem Metals	Marietta, OH
Engelhard	Plainville, MA
Fansteel	Muskogee, OK
General Services Administration	Watertown, Boston, MA
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Heritage Minerals	Lakehurst, NJ
Kerr-McGee (Cimmaron)	Crescent, OK
Kerr-McGee	Cushing, OK
Magnesium Elektron	Flemington, NJ
NE Ohio Regional Sewer District	Cuyahoga Heights, OH
Nuclear Metals	Concord, MA
Molycorp	Washington, PA
Molycorp	York, PA
Permagrain	Media, PA
Pesses Chemical	Pulaski, PA
Process Technology	Rockaway, NJ
Remington Arms Company	Independence, MO
RMI Titanium	Ashtabula, OH
Safety Light Corporation	Bloomsburg, PA
Schott Glass	Duryea, PA
Shieldalloy	Cambridge, MA
Shieldalloy	Newfield, NJ
Texas Instruments	Attleboro, MA
United Nuclear Corporation	Wood River Junction, RI
Victoreen	Cleveland, OH
Westinghouse (Waltz Mill)	Madison, PA
West Lake Landfill	St. Louis, MO
Whittaker Metals	Greenville, PA
Wyman-Gordon	North Grafton, MA
3M Company	New Brighton, MN