

NEW YORK STATE  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
6 NYCRR PART 373 PERMIT  
FACT SHEET  
for the  
US DEPARTMENT OF ENERGY  
ENVIRONMENTAL MANAGEMENT  
SEPARATIONS PROCESS RESEARCH UNIT  
NISKAYUNA, NEW YORK  
SCHENECTADY COUNTY  
USEPA ID No.: NYR000096859  
July 21, 2008

This fact sheet has been developed for the New York State Department of Environmental Conservation's (Department) draft 6 NYCRR Part 373 Corrective Action Permit which the Department intends to issue to the U.S. Department of Energy Environmental Management (DOE-EM) as the owner and Washington Group International (WGI) and Accelerated Remediation Corporation (aRc) as operators of the Separations Process Research Unit facility located at 2425 River Road, Niskayuna, New York 12309. This fact sheet was prepared in accordance with the requirements of 6 NYCRR Part 373-1.4(f).

A. PURPOSE OF THE PERMITTING PROCESS

The purpose of the permitting process is to allow the Department, interested citizens and other governmental agencies the opportunity to evaluate the ability of the Permittee to comply with the applicable requirements promulgated under the Environmental Conservation Law (ECL). The Department is required to prepare a draft permit which sets forth all the applicable requirements and corrective action activities the Permittee must comply with during the ten year duration of the permit. The public is given forty-five (45) days to review the application and comment on the draft permit conditions prior to NYSDEC taking any final permitting action.

B. PROCEDURE FOR REACHING A FINAL DECISION

Article 27 of the ECL and 6 NYCRR Part 621 require that the public be given a minimum of forty-five (45) days to comment on the permit application and the prepared draft permit. The comment period will begin on July 23, 2008 and will end on September 8, 2008. Any person interested in commenting on this draft permit must do so within this forty-five (45) day comment period.

All persons wishing to comment on any of the permit conditions should submit the comments in writing to Mr. James Eldred, Environmental Analyst, NYSDEC Region 4, 1130 North Westcott Road, Schenectady, New York 12306. Comments should include all reasonably available references, factual grounds and supporting material.

The Department will consider all written comments received during the public comment period, oral or written statements received during any legislative public hearing, and requirements of the hazardous waste regulations including 6NYCRR Part 370, Part 371, Part 372, Subpart 373-1, Subpart 373-2, and the Department's permitting policies, in making a final permit decision.

When the Department makes a final permit decision to either issue or deny this permit, notice will be given to the applicant and each person who has submitted written comments or requested notice of the final decision. If the decision is to issue a final permit, this notice will include a summary of responses to comments, identifying



the permit conditions in the final permit which are different from those in the draft permit and the reasons for the changes. The final permit becomes effective immediately on the date of issuance, unless a later date is specified.

### C. FACILITY DESCRIPTION

The US DOE Environmental Management (DOE-EM) Separations Process Research Unit (SPRU) facility is located at 2425 River Road in the Town of Niskayuna within the US DOE Naval Reactor Laboratory Field Office (DOE-NRLFO) Knolls Atomic Power Laboratory (KAPL) Knolls facility. This permit encompasses the corrective action for Solid Waste Management Units (SWMUs) and an Area of Concern (AOC) associated with operation of the Separations Process Research Unit (SPRU) facilities. This permit will transfer RCRA Corrective Action (CA) obligations for the SPRU-related SWMUs and AOCs, currently permitted under the DOE-NRLFO KAPL Knolls Part 373 Hazardous Waste Management Permit (Permit No. 4-4224-00024/00001), to DOE-EM. This transfer will result in a shift of technical and administrative responsibility for the SPRU SWMUs/AOCs and associated work activities within the Department of Energy. A subsequent permit modification is also being made to denote the change in CA obligations for these units within the current KAPL Knolls facility permit. Hazardous wastes generated during the corrective action process may be stored on site for less than 90 days before they are shipped to a proper disposal facility. No hazardous waste is disposed of at the facility.

The permittee is authorized to conduct corrective action in accordance with the conditions of this permit. All regulatory requirements previously under the DOE-NRLFO KAPL Part 373 Hazardous Waste Permit (NYSDEC Permit #4-4224-00024/00001) related to the SPRU SWMUs/AOCs referred to in this Permit are now primarily the responsibility of DOE-EM. DOE-NRLFO will retain liability in the event of default by DOE-EM and will be responsible under the DOE-NRLFO permit to satisfy all DOE-EM and DOE-NRLFO permit requirements at the time DOE-EM defaults. The Department will inform DOE-NRLFO in writing of the default and their obligations to continue the corrective action activities previously required by DOE-EM.

General Waste Category	Hazardous Waste Code	Typical Process/Source Generating Waste
Wastes Remediation	D008, D009, D029, D039, D040, D043	Remediation process

### D. CORRECTIVE ACTION PROGRAM AT THE FACILITY

Corrective Action implementation is authorized by 6 NYCRR 373-2.6 which requires that a hazardous waste management permit address corrective action as necessary to protect human health and the environment for all releases of hazardous waste or hazardous constituents from any Solid Waste Management Units (SWMUs) at the facility, regardless of when waste was placed in the unit.

The corrective action process includes: (a) the RCRA Facility Assessment (RFA); (b) the RCRA Facility Investigation (RFI); and (c) Corrective Measures (CM). The RFA is a three phase process that includes: a Preliminary Review (PR); a Visual Site Inspection (VSI); and a Sampling Visit (SV). The PR is a review of all available information on the individual Solid Waste Management Units (SWMUs) and Areas of Concern (AOC(s)). During the PR, and in subsequent phases of the RFA, all of the media (i.e., soil, groundwater, surface water/sediment, air and subsurface gas) that could potentially be impacted by release(s) of hazardous waste, including hazardous constituents, are evaluated. Based on this evaluation, the SWMUs/AOCs will be characterized as to release potentials.



Following the PR, a VSI is conducted during which all of the SWMU(s)/AOC(s) either previously or newly discovered are observed. While performing this reconnaissance, any signs of spills or leakage, stained soil, stressed vegetation, unit deterioration, or any other conditions that may be indicative of a release are assessed. By means of these observations and the findings of the PR, the Commissioner may require the facility to conduct a Sampling Visit (SV) at the unit(s)/area(s) where the release(s) would be suspected. The SV can involve any or all of the previously described media at any given SWMU and/or AOC. For those units/areas where releases are clearly demonstrated in the PR and/or VSI, the SV can be avoided leaving the unit(s)/area(s) to be addressed in the RFI. The RFA includes preparing the RFA report. This report includes the findings of the various RFA activities and recommendations for further action at those units and areas with demonstrated releases of hazardous wastes, including hazardous constituents.

If the RFA concludes that there is a need for further investigative work, the Permittee shall be required to pursue phase two of corrective action, a RFI. The purpose of the RFI is to determine the nature, extent, direction and rate of migration of hazardous wastes, including hazardous constituents, in soils, groundwater, surface water/sediment, subsurface gas and/or air. From these multimedia analyses, the types and concentrations of contaminants present, the boundaries of any contamination (e.g., plumes), and the rate and direction of contaminant movement should be determined in each of the impacted media. Sufficient data shall be generated during the RFI to allow proper assessment of corrective measure alternatives. This may require bench and/or pilot studies to be implemented as part of the RFI. Once all analyses are reviewed, a RFI report is prepared that provides a summation of the data and recommendations for any needed corrective measures.

In addition to these steps, corrective action can also be undertaken anywhere in this process through Interim Corrective Measures (ICMs). The DOE SPRU project has completed RFA and RFI studies, and is implementing corrective action through ICMs. In addition, the SPRU project is removing radioactively contaminated soils via DOE's authority under CERCLA for non-time-critical removal actions. A single, coordinated soil removal effort is being undertaken to jointly address the RCRA chemical contamination and the radioactive contamination.

Under the CA process, DOE-EM is required to notify the Department of and perform the required assessment for any newly-discovered SWMUs/AOCs within the footprint of the SPRU SWMUs/AOCs as defined in the DOE-EM Permit. Any change to this footprint must be placed in the operating record. If DOE-EM determines, based on their assessment, that the newly-discovered SWMU/AOC is not SPRU related and the Department concurs, DOE-NRLFO will be notified in writing by the Department of their obligations regarding the DOE-EM newly-discovered SWMU/AOC. Conversely, if DOE-NRLFO determines that any newly-discovered SWMU/AOC they have assessed is SPRU related then DOE-EM will be notified in writing by the Department of their obligations for the DOE-NRLFO newly-discovered SWMU/AOC.

The culmination of the Corrective Action Program is Corrective Measures (CM). The initial stage of the corrective measures phase is the preparation of a Corrective Measures Study (CMS). A CMS may be required if concentrations of hazardous constituents in an aquifer, in surface water/sediment, in soils, or in air exceed their corresponding action levels. Such a study may also be required if individual concentrations of hazardous constituents are at or below their action levels, but they still may pose a threat to human health or the environment due to site-specific exposure conditions. The CMS will address alternative corrective measure strategies that are technologically feasible and reliable, and which effectively mitigate and minimize damage, and provides adequate protection of human health and the environment. The Permittee will develop the site-specific CMS using target clean-up levels chosen by the Commissioner to be protective of human health and the environment. Where available, they may be promulgated standards. Where promulgated standards are not available, the Commissioner may use health-based levels, based on Risk-Specific Dose (RSD) for



carcinogens and Reference Doses (RFD) for systemic toxicants, or concentration levels protective of the environment, that have undergone scientific review. The CMS report should discuss the alternative corrective measure strategies studied, addressing technical, institutional, public health, and environmental issues, and develop the conceptual engineering for the alternative action proposed by the facility. The CMS may not require extensive evaluation of a number of remedial alternatives where a solution is straight forward or only few solutions exist. Such situations could require the Permittee to submit a highly focused CMS.

Following completion of the CMS, the Commissioner will select the corrective measure(s) from the corrective measure alternatives evaluated in the CMS. The Commissioner will then initiate a permit modification for the selected corrective measure(s).

Permit modification of the approved corrective measure(s) will initiate the final stage of corrective measures, Corrective Measures Implementation (CMI). The CMI will address the final design, construction, operation, maintenance, and monitoring of the corrective measure or measures selected.

From review of RCRA Facility Assessment - Preliminary Review (RFA-PR) and a Visual Site Inspection (VSI) dated July 20, 1998 for the KAPL Knolls facility and KAPL Knolls RCRA Permit #4-4224-00024/00001, the following information has been obtained:

1. A total of fifteen Solid Waste Management Units (SWMUs) and three Areas of Concern (AOCs) have been identified at the DOE/EM SPRU facility;
2. Six SWMUs and three AOCs require further investigation to determine whether or not they are or have in the past released hazardous waste or hazardous constituents;
3. It has been determined that nine SWMUs required no further action based on the KAPL Knolls RCRA Permit #4-4224-00024/00001.

The Permittee has completed investigation activities including a RCRA Facility Assessment and a RCRA Facility Investigation for groundwater, and has recommended a presumptive remedy for soil removal under CERCLA for a non-time-critical removal action. Conditions have been included in the draft 6 NYCRR Part 373 Permit to require the Permittee to submit an Interim Corrective Measures Workplan to address RCRA contamination. This workplan will include a confirmatory sampling and analysis approach to ensure that the existing chemical contamination is removed to meet NYSDEC requirements.

#### E. PERMIT ORGANIZATION

This draft Permit is divided into parts as outlined below:

- Module I – Regulatory Provisions - Covers the conditions found in 6 NYCRR Subpart 373-1 and required to be in all permits and
- Module II - Corrective Action Requirements for Solid Waste Management Units and Areas of Concern - Covers all applicable conditions for continuing releases at permitted facilities found in 6 NYCRR 373.

#### F. BASIS FOR PERMIT CONDITIONS

The draft permit conditions are based on the requirements of 6 NYCRR Part 370 (Hazardous Waste Management System: General), Part 371 (Identification and Listing of Hazardous Wastes), Part 372 (Hazardous

Waste Manifest System and Related Standards for Generator's; Transporters and Facilities), Subpart 373-1 (Hazardous Waste Treatment Storage and Disposal Facility Permitting Requirements), Subpart 373-2 (Final Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities), Subpart 374-1 (Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Facilities) and Part 376 (Land Disposal Restrictions).

All decisions regarding the draft permit were based on the Part 373 Permit Application submitted by the Department of Energy Environmental Management, Separations Process Research Unit and received by the Department on October 6, 2004 and most recently revised on April 7, 2008. It is the Department's tentative determination that the application is consistent with 6 NYCRR Parts 370-372, Subparts 373-1, 373-2 and 374-1 and Part 376. Pursuant to Part 617 of the New York State regulations for Article 8, SEQRA (State Environmental Quality Review Act), NYSDEC has determined that the proposed action, described above, is a Type II action, not subject to review under SEQRA.

#### G. LEGAL REFERENCE FOR THIS PROPOSAL

Permitting and corrective actions requirements for facilities that have engage(d) in the treatment, storage or disposal of hazardous waste are promulgated under the New York State Environmental Conservation Law (pursuant to Article 19, Title 3; Article 23, Title 23; and Article 27, Titles 7 and 9).

#### H. ADDITIONAL INFORMATION

The public can contact the following Department representatives with any questions on the draft permit: NYSDEC Region 4, 1130 North Westcott Road, Schenectady, New York 12306-2014 (Contact Persons: James Eldred, Environmental Analyst [(518) 357-2445] or Margaret Rogers, Division of Solid and Hazardous Materials [(518) 357-2045]) and NYSDEC Central Office, 625 Broadway, Albany, NY 12233-7258 (Contact Person: Lynn M. Winterberger, P.E. [(518) 402-8594]).