Summary of Express Terms

6 NYCRR Part 384, Criteria for Decommissioning of Radioactive Material Licensed Sites

The New York State Department of Environmental Conservation (DEC) is proposing to add Criteria for Decommissioning of Radioactive Material Licensed Sites to the New York Codes, Rules and Regulations. The express terms for this rulemaking will be included by adding a new Part 384 to Title 6, Criteria for Decommissioning of Radioactive Material Licensed Sites and are summarized below.

Section 384.1 includes the purpose of the regulations which is to establish criteria for the decommissioning of radioactive material licensed sites.

Section 384.2 includes the applicability and exemptions of the proposed regulations.

Section 384.3 includes definitions as specified in 6 NYCRR Part 380-2.1 for the terms " as low as reasonably achievable (ALARA)," "background radiation," "Radiation," "Radioactive Material," "Radioactivity," "Release," "Survey," and "Total effective dose equivalent (TEDE)". It also includes definitions specific to this Part for the terms "Action level," "Critical group," "Decommission," "Derived concentration guideline level (DCGL)," "Distinguishable from background," "Durable institutional control," "Engineering control," "Final radiation status survey," "Institutional control," "Radioactive material license," "Licensed decontamination & decommissioning (D&D) contractor," "Licensee," "New York State Department of Health (NYSDOH)," " New York City Department of Health and Mental Hygiene (NYC DOHMH)," "Residual radioactivity," "Restricted use," "Site," "Site release," and "Unrestricted use".

Section 384.4 includes criteria which must be met for DEC to make a determination that a site is acceptable for unrestricted use, including that the remaining residual radioactivity will not exceed 25 millirems per year or 250 microsieverts per year, the residual reactivity will be reduced to levels that are as low as reasonably achievable, and no more than 4 millirems of the total annual dose may come from groundwater or surface water sources.

Section 384.5 includes criteria for restricted use. This section sets standards and protocols where the unrestricted use criteria have been determined to be infeasible, including provisions for institutional controls, engineering controls, financial assurance, and public notification.

Section 384.6 includes the requirements for a decommissioning plan. These requirements include use of a licensed D&D contractor, submittal of the decommissioning plan to DEC for approval, components of the decommissioning plan such as schedule, facility conditions, description of planned decommissioning activities, description of methods, description of planned final radiation status survey, protection of the public and environment during decommissioning, cost estimate, minimization of impacts, and decommissioning criteria in the form of DCGLs.

Section 384.7 includes requirements for public notice and comment upon completion of a decommissioning plan which include: 1) a notice by DEC to the municipality in which the site is located; 2) publication of a notice by DEC in the environmental notice bulletin; 3) publication of notice by the licensee in a newspaper of general circulation in the community where the site is located; and 4) other notices which may be required by DEC.

Section 384.8 includes the requirements of DEC to provide to the licensee its decision approving or disapproving of the decommissioning plan, and to issue a responsiveness summary to comments received.

Section 384.9 includes requirements for a Final Decommissioning Report, including but not limited to a description of activities, a survey of site boundaries, documentation showing proper disposal of waste, results of final radiation surveys, demonstration that restricted or unrestricted criteria have been met as approved in the decommissioning plan, demonstration of any required institutional or engineering controls, and demonstration of any required financial assurance and required certifications by a licensed D&D contractor.

Section 384.10 includes the requirement for DEC to issue an approval letter to the licensee of a site upon approval of the final decommission report, and the required contents of such approval letter. This section also includes the requirement of DEC to publish a notice of the availability of the final decommission report, as well as a provision regarding DEC's ability to modify or revoke approval based on certain findings.

Section 384.11 includes the requirements for a variance application for Part 384.

Section 384.12 includes a severability clause for Part 384.

Section 384.13 includes materials incorporated by reference.

6 NYCRR Part 384, Criteria for Decommissioning of Radioactive Material Licensed Sites

Express Terms

6 NYCRR Part 384 Criteria for Decommissioning of Radioactive Material Licensed Sites is being added as follows:

Part 384: Criteria for Decommissioning of Radioactive Material Licensed Sites

(Statutory authority: Environmental Conservation Law §§ 1-0101(1), 3-0301(1), (1)(a), (1)(i), (1)(w), (2)(a), and (2)(m), 19-0301, and 71-3601)

Section 384.1 Purpose

The purpose of this Part is to establish criteria for the decommissioning of radioactive material licensed sites.

Section 384.2 Applicability and Exemptions

(a) Applicability. Except as provided in subdivision (b) of this section, this regulation applies to any site currently or previously regulated under the licensing authority of the New York State Department of Health or New York City Department of Health and Mental Hygiene that is undergoing decommissioning.

(b) Exemptions. This Part does not apply to the following:

(1) any sites that have been decommissioned prior to the effective date of this Part in accordance with criteria previously approved by the department;

(2) any sites for which, prior to the effective date of this Part, the licensee submitted and received written department approval of a decommissioning plan or criteria; and

(3) residual radioactive material in soils, groundwater, and other media outside of disposal cells at low-level radioactive waste disposal facilities permitted under 6 NYCRR Parts 382 and 383.

(c) Other provisions. For purposes of this Part, the units of radioactivity in 6 NYCRR 380-2.2 and units of radiation dose in 6 NYCRR 380-2.3 are applicable.

Section 384.3 Definitions

(a) Unless otherwise specified, the definitions in 6 NYCRR 380-2.1 shall apply to the following terms:

(1) ALARA (as low as reasonably achievable);

(2) background radiation;

(3) department;

(4) disposal;

(5) dose;

(6) exposure;

(7) individual;

(8) monitoring;

(9) NYCRR;

(10) person;

(11) radiation;

(12) radioactive material;

(13) radioactivity;

(14) release;

(15) survey; and

(16) total effective dose equivalent (TEDE).

(b) For purposes of this Part, the following definitions also apply:

(1) 'Action level' means the numerical value that, if present, requires a licensee to choose one of the alternative

actions for the disposition of materials and equipment including an alternative that requires no action. This value may be a regulatory threshold standard (e.g., Maximum Contaminant Level for drinking water), a dose- or risk-based concentration level (e.g., derived concentration guideline level), or a reference-based standard.

(2) 'Critical group' means the group of individuals reasonably expected to receive the greatest exposure to residual radioactivity for any applicable set of circumstances.

(3) 'Decommissioning' means the removal of a facility or site safely from service and the reduction of residual radioactivity to a level that permits:

(i) release of the property associated with the facility or site for unrestricted use, as provided for in section 384.4 of this Part, and termination of any license applicable to that facility; or

(ii) release of the property associated with the facility or site under restricted use, as provided for in section 384.5 of this Part, and termination of any license applicable to that facility.

(4) 'Derived concentration guideline level' or 'DCGL' means the calculated concentration for each radionuclide impacting a site that would meet the unrestricted use criteria as provided for in section 384.4 of this Part.

(5) 'Distinguishable from background' means that the detectable concentration of a radionuclide is statistically different from the background concentration of that radionuclide in the vicinity of the site, or, in the case of structures, in similar materials using adequate measurement technology, survey, and statistical techniques.

(6) 'Durable institutional control' means any institutional control which is legally enforceable and is readily verifiable by the department. Legally enforceable and readily verifiable means that the department has a mechanism to consistently determine that the institutional control remains in effect.

(7) 'Engineering control' means any physical barrier or method employed to actively or passively contain, stabilize, or monitor contamination, restrict the movement of contamination to ensure the long-term effectiveness of a remedial program or eliminate potential exposure pathways to contamination. Engineering controls include, but are not limited to, pavement, caps, covers, subsurface barriers, vapor barriers, slurry walls,

building ventilation systems, fences, access controls, provision of alternative water supplies via connection to an existing public water supply, adding treatment technologies to such water supplies, and installing filtration devices on private water supplies.

(8) 'Final radiation status survey' means measurements and sampling to describe the radiological conditions of a site, following completion of any decontamination activities in preparation for site release.

(9) 'Institutional control' means any non-physical means of enforcing a restriction on the use of real property that limits human or environmental exposure, restricts the use of groundwater, provides notice to potential owners, operators, or members of the public, or prevents actions that would interfere with the effectiveness of a remedial program or with the effectiveness and/or integrity of operation, maintenance, or monitoring activities at or pertaining to a site.

(10) 'Radioactive material license' or 'license' means a license issued by the New York State Department of Health under 10 NYCRR Part 16 or New York City Department of Health and Mental Hygiene under New York City Health Code Article 175.

(11) 'Licensed decontamination & decommissioning (D&D) contractor' means a person who possesses a radioactive material license that authorizes them to perform decontamination and decommissioning of radiologically contaminated sites. A licensed D&D contractor must possess a license issued by the New York State Department of Health. A person licensed by the US Nuclear Regulatory Commission (NRC), or another state may work under reciprocity with the New York State Department of Health.

(12) 'Licensee' means the holder of a radioactive material license.

(13) 'NYSDOH' means the New York State Department of Health.

(14) 'NYC DOHMH' means the New York City Department of Health and Mental Hygiene.

(15) 'Residual radioactivity' (excluding background radiation) means radioactivity in structures, materials, soils, groundwater, and other media at a site resulting from activities under the licensee's control. Residual

radioactivity includes radioactivity from all licensed and unlicensed radioactive sources and material used by a licensee. Such term also includes radioactive materials remaining at a site as a result of routine, unintentional, or accidental releases of radioactive material at the site or previous burials at the site, even if those burials were made in accordance with the provisions of 10 CFR part 20, 6 NYCRR Part 380, 10 NYCRR Part 16, or 12 NYCRR Part 38.

(16) 'Restricted use' means a use with imposed restrictions, such as those set forth in an environmental easement or other land use control which, as part of the remedy selected for the site, requires institutional controls or engineering controls to manage exposure to contamination remaining and restricts the future use at a site.

(17) 'Site' means any real property consisting of a parcel, adjacent properties or parcels, or portions of properties or parcels currently or previously regulated by the licensing authority of the New York State Department of Health or New York City Department of Health and Mental Hygiene that has been impacted by radioactive contamination, the presence of which requires decommissioning under this Part.

(18) 'Site release' means the completion of the decommissioning process at which point the department has determined the site meets the cleanup criteria as described in sections 384.4 or 384.5 of this Part.

(19) 'Unrestricted use' means a use without imposed restrictions, such as those set forth in an environmental easement or other land use control and may be used for any purpose without limits or controls with respect to the presence of residual radioactivity.

Section 384.4 Criteria for Unrestricted Use

(a) The department may determine that a site is acceptable for unrestricted use if all the following conditions are met:

(1) the remaining residual radioactivity that is distinguishable from background radiation will not result in a

total effective dose equivalent (TEDE) to the average member of the critical group that will exceed 25 millirems (mrem) per year or 250 microsieverts (μSv) per year;

(2) the residual radioactivity has been reduced to levels that are as low as reasonably achievable (ALARA) that account for any detrimental impacts reasonably expected to result from decontamination and waste disposal; and

(3) no more than 4 mrem (40 μSv) of the total annual dose comes from groundwater or surface water sources of drinking water. The fact that groundwater or surface water is not currently used as a source of drinking water is not a justification for excluding the drinking water pathway as a source of radiation dose.

(b) For a site subject to radiological regulation by both the department and either NYSDOH or NYC DOHMH, a single site unrestricted release limit of 25 mrem per year applies.

Section 384.5 Criteria for Restricted Use

The department may determine that a site is acceptable for restricted use if all the following conditions are met:

(a) the licensee demonstrates that further reductions in residual radioactivity necessary to meet the requirements for unrestricted use in section 384.4 of this Part:

(1) would result in net public or environmental harm; or

(2) are not reasonably achievable because residual levels associated with restricted conditions are at ALARA levels that account for any detrimental impacts reasonably expected to result from decontamination and waste disposal; and

(b) the licensee demonstrates that one or more durable institutional controls to be implemented at the site provide reasonable assurance that the remaining residual radioactivity distinguishable from background will not result in a TEDE that exceeds the limits established in paragraphs 384.4(a)(1) and 384.4(a)(3) of this Part. To demonstrate compliance with this requirement, the licensee must not rely on durable institutional controls for more than 100 years; and

(c) the licensee has provided financial assurance acceptable to the department sufficient to enable an independent third party, including a governmental custodian of a site, to assume and carry out responsibilities for any necessary control, operation, and maintenance of the site. Financial assurance mechanisms acceptable to the department include:

(1) a trust as described in section 383-6.5(m)(1) of this Title;

(2) a surety bond as described in section 383-6.5(m)(2) of this Title;

(3) a letter of credit as described in section 383-6.5(m)(3) of this Title;

(4) a liability insurance policy as described in section 383-6.5(m)(4) of this Title;

(5) a guarantee as described in section 383-6.5(m)(5) of this Title;

(6) in the case of decommissioning conducted by the State of New York, any government agency of the State of New York or any political subdivision thereof, a statement of intent containing a cost estimate for decommissioning and indicating that funds for decommissioning will be obtained when necessary; and

(7) in the case of an assumption of custody and ownership of the site by any government agency of the State of New York, any arrangement deemed acceptable by such government agency; and

(d) in addition to the financial assurance required by subdivision (c) of this section, the licensee has provided financial assurance acceptable to the department sufficient to enable an independent third-party, including a governmental custodian of the site, to carry out periodic rechecks of the site at least every five years to assure that the durable institutional controls remain in place as necessary to meet the criteria of subdivision (b) of this section. Financial assurance mechanisms acceptable to the department include those mechanisms described in subdivision (c) of this section; and

(e) the amounts of financial assurance required under subdivisions (c) and (d) of this section may need to be revised based upon a revised cost estimate acceptable to the department. Cost estimates must be revised at least every three (3) years; and

(f) the licensee has documented in the decommissioning plan:

(1) that the public notification and comment requirements of section 384.7 of this Part have been met; and

(2) how the concerns of individuals and institutions in the community who may be affected by the decommissioning have been analyzed and incorporated, as appropriate, in such plan; and

(g) the licensee demonstrates that residual radioactivity at the site has been reduced so that, if the durable institutional controls were no longer in effect, there is reasonable assurance that the remaining residual radioactivity that is distinguishable from background will be at ALARA levels and will not result in a TEDE to the average member of the critical group that exceeds 100 mrem (1000 μSv) per year from all plausible pathways, including from groundwater or surface water sources of drinking water; and

(h) only under circumstances where the licensee's decommissioning efforts comply with subdivision (a) of this section and the licensee has committed to the implementation of durable institutional controls but is still unable to meet the criteria in subdivision (f) of this section, may the use of engineering controls be considered as a means of complying with those criteria. The licensee proposing the use of engineering controls must be able to demonstrate that:

(1) further reductions in contamination levels would result in a net negative environmental impact;

(2) the criteria established in sections 384.4 (a) (1) and 384.4(a)(3) of this Part cannot be met without the use of engineering controls;

(3) the proposed engineering controls will be sufficient to last for the time needed to ensure compliance with criteria in this section; and

(4) the engineering controls will not be relied upon for a period exceeding the 100-year time limit established in subdivision (b) of this section.

Section 384.6 Decommissioning Plan

(a) Prior to the development of a decommissioning plan, the licensee must retain the services of a licensed decontamination & decommissioning (D&D) contractor.

(b) Prior to commencing decommission, the licensee must submit a decommissioning plan to the department for approval.

(c) The decommissioning plan must include:

(1) a designated representative for the decommissioning and their contact information including email address and phone number;

(2) a schedule for performing the decommissioning activities;

(3) a description of the conditions of the site sufficient to allow for evaluation of the acceptability of the plan including, but not limited to, the pre-decommissioning radiological site characterization;

(4) a description of planned decommissioning activities;

(5) a description of methods used to ensure protection of the public and the environment against radiation hazards during decommissioning;

(6) a description of the planned final radiation status survey;

(7) an updated detailed cost estimate for decommissioning, comparison of that estimate with existing funds set aside for decommissioning, and a plan for assuring the availability of adequate funds for completion of decommissioning;

(8) a demonstration that environmental impacts of decommissioning will be minimized to the extent practicable; and

(9) the decommissioning criteria for the site, developed in accordance with the following:

(i) Unless the department approves an alternative method, the decommissioning criteria must be in the form of a Derived concentration guideline level (DCGL) for each radionuclide present in the soil, groundwater, or surface water, or an action level for materials, other than radionuclides that solely contribute to background radiation.

(ii) Exposure pathway modeling must be performed to calculate a radionuclide-specific predicted concentration of specific radionuclides that could result in a TEDE equal to the site release criteria. Upon approval by the department, the resulting concentration will be the DCGL for the decommission. However, this does not remove the requirement to reduce concentrations to levels that are ALARA below the DCGL.

(iii) Separate DCGLs for subsurface soils will only be considered for a site released for restricted use.

(iv) At a site contaminated with more than one radionuclide, development and application of the decommissioning criteria must consider the potential radiation dose from the combination of all the residual radioactive material.

(d) For a site undergoing decommissioning pursuant to the termination of a radioactive material license, the decommissioning plan submitted to the department may be incorporated into the decommissioning plan submitted to NYSDOH and NYC DOHMH.

Section 384.7 Public Notice and Comment

(a) Immediately upon determining that a decommissioning plan is complete the department will do the following:

(1) provide notice to the chief executive officer of each municipality in which any part of the site is to be located, and to any person who has previously expressed in writing an interest in receiving such notification; and

(2) publish a notice of complete decommissioning plan in the Environmental Notice Bulletin no more than ten (10) calendar days after the date of notice to the licensee.

(b) The notice will contain the following information:

(1) the licensee's name;

(2) a brief description of the decommissioning plan and the location of the site;

(3) the name and telephone number of the department representative and, where applicable, of any lead agency representative to contact for further information;

(4) the status of environmental reviews conducted under the State Environmental Quality Review Act, including identification of lead agency, positive or negative determination of significance, and whether the action is Type I, unlisted, or Type II as defined in Part 617 or 618 of this Title;

(5) the deadline for submission of written comments on the plan, which is not less than 45 days after the date of publication; and

(6) a statement that the department is seeking comment from individuals and institutions in the community in which the site is located which includes, but is not limited to, the following:

(i) whether the provisions for durable institutional controls proposed by the licensee:

(a) will meet the criteria of section 384.5(b) of this Part;

*(b)*will be enforceable; and

(c) will not impose an undue burden on the community or other affected persons; and

(ii) whether the licensee has provided financial assurance sufficient to meet the criteria of section 384.5(c) of this Part, and, if so, whether the additional criteria of section 384.5(d) of this Part are met.

(c) The licensee must publish notice of a complete decommissioning plan in a newspaper of general circulation in the community in which the site is located.

(d) The department may provide or require the licensee to provide other reasonable public notice of a complete decommissioning plan. Such notice may include, but is not limited to, the distribution or posting of information about the decommissioning plan in the area in which the site is to be located, the holding of any public information meetings, translation of notices for non-English speaking communities, and the establishment of one or more document repositories in the area in which the site is to be located.

(e) The department must also provide notice of the complete decommissioning plan required under this section to, or in accordance with, the following:

(1) any government agency of the State of New York or any local government thereof which may be affected by the decommissioning;

(2) any Indian Nation that may be affected by the decommissioning;

(3) the United States Environmental Protection Agency; and

(4) any person on a mailing list, developed by the department, of persons interested in such projects. The department must publish a notice in the Environmental Notice Bulletin of the opportunity to be on the list.

Section 384.8 Department Action on the Decommissioning Plan

(a) The department must provide to the licensee its decision approving in whole or part, or disapproving, the decommissioning plan.

(b) The department must prepare a responsiveness summary to comments on the decommissioning plan that are received during the public comment period. The responsiveness summary must identify any conditions in the approved decommissioning plan that are different from the conditions in the draft decommissioning plan submitted by the licensee and the reasons for the changes.

(c) The department's approval of the decommissioning plan is contingent on finding that there is reasonable assurance the following conditions will be met:

(1) the decommissioning will be completed as soon as practicable; and

(2) the health and safety of the public and the environment will be adequately protected.

(d) Upon approval of the decommissioning plan, the licensee must notify the department at least 15 days in advance of, and representatives of the department must be allowed to attend, any field activities to be conducted under the approved plan, any progress or status meetings, and any inspections.

(e) The decision of the department to disapprove the decommissioning plan is a final agency action. Such final agency action may be reviewed pursuant to New York Civil Practice Law and Rules (CPLR) Article 78.

Section 384.9 Final Decommissioning Report

(a) Upon completion of the decommissioning activities outlined in the approved decommissioning plan, the licensee must submit a final decommissioning report to the department for approval.

(b) The final decommissioning report must include the following:

(1) a description of the activities completed pursuant to the approved decommissioning plan;

(2) site boundaries as defined by survey plat, metes and bounds description, or as otherwise approved by the department;

(3) documentation that all radioactive waste generated during the decommissioning has been disposed of in accordance with Part 380 of this Title and, as applicable, the transportation requirements of Part 381 of this Title;

(4) the results of any final radiation status surveys performed, including radiation levels, analytical results, and the locations of where those readings or samples were taken;

(5) documentation that the survey instruments used were those identified in the approved decommissioning plan;

(6) documentation that the survey instruments used were properly calibrated and tested;

(7) analyses demonstrating that the criteria in sections 384.4 or 384.5 of this Part, as applicable, have been met;

(8) a description of any durable institutional controls that will be used;

(9) documentation demonstrating that the durable institutional controls have been put in place;

(10) a description of the procedures that will be used to maintain, monitor, and enforce the durable institutional

controls;

(11) documentation that any financial assurance mechanisms required in accordance with section 384.5of this Part have been implemented;

(12) a list of the locations where the final decommissioning report will be made available to the public for review as required in section 384.10(b) of this Part; and

(13) a certification by a licensed D&D contractor that:

(i) such party is, and at all pertinent times hereinafter mentioned was, a currently licensed D&D contractor;

(ii) such party is the individual who had primary direct responsibility for the implementation of the approved decommissioning plan;

(iii) all the requirements of paragraph(1) through paragraph (12) of this subdivision have been met; and

(iv) uses certification language provided or approved by the department.

Section 384.10 Department Approval of Final Decommission Report

(a) Contents of Approval Letter. Upon approval of the final decommissioning report, the department must issue an approval letter to the licensee of the site. The approval letter must include the following:

(1) an acknowledgment that the requirements of the approved decommissioning plan were satisfied, or in the case of a restricted use site, are expected to be satisfied in accordance with any timeframes contained in the approved decommissioning plan;

(2) a prohibition against the use of the site in a manner inconsistent with any land use limitation indicated, without additional appropriate decommissioning; and

(3) in the case of a restricted use site, a notification that failure to manage the controls or complete site monitoring and maintenance activities in compliance with the terms of the letter and any land use limitation for the site may result in revocation of the department's approval.

(b) Publication of the approved final decommissioning report.

(1) The department will publish notice of the availability of the final decommissioning report in the Environmental Notice Bulletin.

(2) The notice will indicate where the final decommissioning report is available for public review.

(3) The licensee must make the approved final decommissioning report available to the public on a publicly available website, in a library within the affected community, or by other method(s) as approved by the department.

(c) Modification or revocation of the department's approval of the final decommissioning report.

(1) The department's approval may be modified or revoked upon the department's finding that:

(i) there was a misrepresentation of a material fact tending to demonstrate that the applicable cleanup levels were reached; or

(ii) there is good cause to believe the final decommissioning of the site is not sufficient to adequately protect human health or the environment.

(2) In the case of restricted use sites, the department's approval may be modified or revoked upon the department's finding that:

(i) the licensee has failed to manage any engineering and durable institutional controls or monitoring requirements in full compliance with the terms of the approval letter, as set forth in paragraph 384.10(a)(3) of this section;

(ii) there has been a significant change to the use on the site compared to the site model used to calculate the residual dose or doses as appropriate needed to meet the release criteria; or

(iii) the terms and conditions of the environmental easement, if any, have been violated.

(3) If the department seeks to modify or revoke its approval, it must provide written notice to the licensee that specifies the basis for the department's action.

(d) Transfer of Responsibility.

(1) Responsibility for complying with the terms of the decommissioning plan and approval letter, including any financial assurance requirements, may be transferred to successors and assigns of the licensee upon written notice to the department within 30 days of the transfer.

(2) Upon filing of the written notice with the department, the approval letter shall be deemed issued to the successor or assign.

(3) Any person to whom an approval letter is transferred must comply with the terms of the approval letter, must continue the operation and maintenance of any required engineering controls, and must comply with all required durable institutional controls, in accordance with the approved final decommission report.

Section 384.11 Variances

(a) Unless otherwise precluded by law, the department may, upon its own initiative or upon written application from any licensee who is subject to this Part, grant a variance from one or more specific provisions of this Part, except for the requirements of section 384.4, and section 384.5(b) of this Part. An application for a variance must:

(1) be submitted to the department in writing;

(2) identify the specific provisions of this Part from which a variance is sought; and

(3) demonstrate the following:

(i) compliance with the identified provisions would, on the basis of conditions unique to the licensee's particular situation, impose an unreasonable economic, technological, or safety burden on the licensee or the public;

(ii) the requested variance will have no significant adverse impact on the public health and safety or the environment; and

(iii) the requested variance will be consistent with the provisions of the Environmental Conservation Law and will meet all other provisions of this Part.

(b) In granting a variance pursuant to this section, the department may impose specific conditions reasonably necessary to ensure that the granting of such variance will cause no significant adverse impact on the public health and safety or the environment.

Section 384.12 Severability

If any provision in this Part or its application or circumstances is held invalid, the remainder of this Part and the application of those provisions to persons or circumstances, other than those to which it is held invalid, will not be affected thereby.

Section 384.13 Materials incorporated by reference

The following materials have been incorporated by reference in this Part and are on file with the New York State Department of State. These references are available for inspection and copying at the Division of Materials Management in the department's offices, 625 Broadway, Albany, NY 12233-7250.

(a) Code of Federal Regulations (CFR). Any volume of the CFR can be obtained by writing to the Superintendent of Documents, Attn: New Orders, P.O. Box 371954, Pittsburgh, PA 15250-7954. Copies of CFR sections are also available from GovInfo at https://www.govinfo.gov/app/collection/cfr for the date noted in the cited reference. GovInfo is a service of the United States Government Publishing Office (GPO), which is a federal agency in the legislative branch. Additional information can be accessed about it at: https://www.govinfo.gov/about. The following CFR section is referenced in this Part:

(1) 10 CFR part 20 (Title 10, Volume 1, Parts 1-50, January 1, 2023) pages 341-449.

SUMMARY OF REGULATORY IMPACT STATEMENT

6 NYCRR Part 384, Criteria for Decommissioning of Radioactive Material Licensed Sites

The New York State Department of Environmental Conservation (DEC) is proposing to adopt 6 NYCRR Part 384 to establish criteria for the decommissioning of radioactive material licensed sites.

DEC's statutory authority to adopt Part 384 is found in Environmental Conservation Law sections 3-0301(l)(i), 3-0301(2)(a) and (m), 17-0101, 17-0301, 17-0303, 19-0301, 27-0501, 27-0703, 27-1313, 27-1315, and 71-3601.

The Atomic Energy Act of 1954 (AEA) created the federal program for controlling the use of most radioactive materials and for limiting public exposure to radiation resulting from that use. In 1960, the AEA was amended to allow states to enter into agreements with the Federal Nuclear Regulatory Commission (NRC) whereby the NRC relinquishes its authority to license most uses of radioactive materials to the state. Before an agreement can be signed, the state must certify that it has a program for the control of radiation hazards adequate to protect public health and safety. In 1962, New York State became an Agreement State. The NRC periodically reviews the radiation control programs of Agreement States to determine whether the programs continue to be adequate to protect the public and whether the state regulations are compatible with the standards set by the NRC. The NRC conducted its most recent review of the New York State program in July 2022, and found the program was incompatible with NRC requirements in part due to the lack of adopting certain portions of federal rules. This proposed rulemaking will ensure that state regulations are compatible with federal regulations

In 1997, the NRC adopted a new subpart, Subpart E, in 10 CFR 20 (referred to as the "License Termination Rule") that set criteria for decommissioning of facilities and sites contaminated with radioactive material. DEC proposes to adopt a new regulation, 6 NYCRR Part 384, to set criteria for decommissioning of radioactive material licensed sites which are at least as stringent as the License Termination Rule. The criteria would be defined in terms of the maximum allowed radiation dose for a member of the public due to residual concentrations of radioactive material in soil and groundwater following decommissioning.

The proposed rule would also require that post-decommissioning concentrations of radioactive material be reduced to levels that are as low as reasonably achievable (ALARA). In effect, all decommissions would be required to meet criteria, or such lower radiation levels as are reasonably achievable, whichever results in lower residual levels. The proposed rule also addresses land use restrictions and the conditions under which they can be relied upon; requires financial assurance for maintaining institutional controls at sites where land use must be restricted; and sets limits on the use of different decommissioning standards for surface and subsurface soils.

This proposed rule is needed to protect the public and the environment from exposure to radiation due to radioactive contamination. In addition, it is needed to fulfill New York's obligations as an Agreement State and maintain continued compatibility with the NRC regulations.

The primary benefit of adopting Part 384 is that it will provide a consistent, legally enforceable set of criteria for decommissioning of radioactive material licensed sites. Currently, DEC only has a policy DER-38, Cleanup Guidelines for Soils Contaminated with Radioactive Materials, April 30, 2013, that addresses the remediation of soils contaminated with radioactive materials. This proposed rulemaking will establish regulatory criteria for the decommissioning of radioactive material licensed sites. Additionally, because current criteria are only in the form of guidance, they are not considered as Applicable, Relevant, and Appropriate Requirements (ARAR) at federal sites; therefore, federal agencies are not obligated to take them into account. With decommissioning criteria established in regulation, DEC will be in a better position to advocate for thorough decommissioning of sites consistent with State standards by the federal government.

A second benefit of adopting proposed Part 384 is that it will help fulfill the State's commitments under its agreement with the NRC. The NRC required Agreement States to adopt regulations compatible with the License Termination Rule by 2000. Thus, DEC needs to adopt the proposed regulations to maintain New York’s status as an Agreement State. Maintaining Agreement State status provides the benefit of State control over the use of most radioactive material in the State. If DEC does not adopt the proposed regulations, the State could lose its authority to regulate the use and possession of most radioactive material in the State and the NRC would assume such regulatory authority.

There are approximately thirty (30) facilities that are regulated by DEC under 6 NYCRR Part 380 (Prevention and Control of Environmental Pollution by Radioactive Materials) that could, at some point, fall under the regulatory jurisdiction of Part 384 during facility decommissioning activities. In addition, there are approximately eighty (80) New York State Department of Health (NYSDOH) licensees and twenty-seven (27) New York City Department of Health and Mental Hygiene (NYC DHMH) licensees that may have to comply with these regulations during decommissioning. The proposed Part 384 requirements would apply to any site where decommissioning is being conducted under the oversight of DEC. Part 384 would apply to a site regardless of whether it is regulated under the licensing authority of NYSDOH or NYC DHMH.

During the promulgation of its regulations regarding Radiological Criteria for License Termination, the NRC prepared a Generic Environmental Impact Statement (GEIS). The GEIS summarized expected costs for licensees, associated with cleaning, removal, and disposal of contaminated concrete and soil, and the performance of radiological surveys needed to demonstrate that the target residual criterion has been achieved.

Costs to individual licensees can vary greatly depending on the type of facility. Expected costs for most licensees are expected to be modest. In the GEIS, small facilities which required minimal soil removal were estimated to cost less than $100,000 (1997 dollars) while a larger facility with greater amounts of soil removal required may cost tens of millions of dollars or more. This estimate is given in 1997 dollars due to the fact that this is when the GEIS for the federal rule was completed. It is not reasonable to assume that current estimates follow general inflation rates since the greatest costs for this work, namely transportation and disposal, have risen at a higher rate than inflation during that time. In New York, most licensed facilities are small and little to no soil removal would be anticipated; however, it is possible that a small number of facilities may incur costs closer to the upper end of the cost range.

This rule will not regulate federal cleanups taking place at CERCLA or FUSRAP sites within the State but will be considered an ARAR which will have to be addressed during the remediation of these sites. There are currently five active FUSRAP sites in the State, two in the New York City area and three in the Buffalo area.

For entities responsible for decommissioning sites, there will be little or no increase in costs. DEC proposes to adopt a dose limit that is comparable to the dose guideline in DER-38. In addition, both the dose guideline in DER-38 and the dose limit in the proposed rule require that residual radioactive material following decommissioning be considered ALARA, so actual cleanup levels and costs are not likely to change. There may be an increase in costs to the federal government because if the rule is followed at FUSRAP sites, it may eliminate the federal government's current practice of using higher, less protective cleanup standards in soils below the top six inches.

Costs to DEC include the expending of resources and staff time to implement this rule, to draft guidelines and explanatory documents that will be distributed to regulated entities, and training DEC staff in the implementation of the new regulations. This will require at least two years of DEC staff effort. After the initial preparation and training period, the routine implementation of Part 384 will not be significantly greater than the time currently spent implementing DEC's DER-38.

In addition to the cost to DEC, DOH will expend some staff time becoming familiar with DEC's regulations. This may require one or two weeks of staff time for that agency.

Local municipalities will have no costs due to this rule unless they are undertaking the decommissioning.

Two agencies other than DEC have the authority to license the possession and use of radioactive materials - NYSDOH and NYC DHMH. It is only when that material is disposed of or released to the environment that it comes under the jurisdiction of DEC. Thus, there is no overlap between the regulatory programs of the licensing agencies and that of DEC.

DEC has worked closely with NYSDOH and NYC DHMH to coordinate the provisions in our regulations. Both agencies will include in their versions of the License Termination Rule a provision that before a license will be terminated under their regulations, the licensees must obtain from DEC written confirmation that either Part 384 does not apply, or that they have complied with Part 384. Thus, a license will not be terminated until the licensee has decommissioned to meet the criteria in Part 384.

Both NYSDOH and NYC DHMH must adopt a rule compatible with the NRC's License Termination Rule, which would apply to the interior of buildings. This will not create any additional regulatory burdens for the parties subject to those regulations.

DEC, NYSDOH and NYC DHMH must each promulgate regulations that are adequate to protect the public health and safety and are compatible with 10 CFR Part 20. The potential for duplication is thus reduced because all the regulations must be consistent with those of the NRC.

Because Part 384 must be compatible with the NRC regulations at 10 CFR Part 20, many sections in proposed Part 384 are identical, or very similar, to the federal rules. However, Part 384 would not apply to the same entities and activities that NRC regulations apply to so there is no duplication of effort with respect to federal regulations. Under the Agreement State program, the NRC relinquishes to the State its authority to regulate those radioactive materials covered by the Agreement.

The groundwater provision in proposed Part 384 is not in the License Termination Rule but is consistent with United States Environmental Protection Agency's (EPA) and NYSDOH requirements. The limit of radiation dose from the groundwater pathway to no more than 4 mrem/yr (40 µSv/yr), is consistent with the EPA federal drinking water standard and the DOH's drinking water standard (10 NYCRR 5-1.52, Table 7). The 1997 GEIS stated that EPA indicated that a separate groundwater standard is appropriate to protect groundwater.

A no action alternative was considered but rejected for reasons described in the RIS. This proposed rule exceeds the federal standards established in the NRC's License Termination Rule in that it includes a separate dose limit for the groundwater pathway. EPA recommended that the NRC adopt a 4 mrem/yr dose limit for the drinking water pathway, but the NRC declined to do so. DEC has chosen to adopt the 4 mrem/yr for sites released for unrestricted use. NYSDOH has adopted the 4 mrem/yr dose limit for drinking water in its regulations.

These regulations will become effective 30 days after publication of the Notice of Adoption in the State Register and will be applicable to regulated facilities except those that have performed decommissioning prior to the effective date of these regulations or those entities that have received written approval of their decommissioning plan or criteria from DEC prior to the effective date.

DEC will conduct an initial review of the rule within 3 years as required by SAPA §207.

REGULATORY IMPACT STATEMENT

6 NYCRR Part 384 Criteria for Decommissioning of Radioactive Material Licensed Sites

INTRODUCTION

The New York State Department of Environmental Conservation (DEC) proposes to adopt Part 384, "Criteria for Decommissioning of Radioactive Material Licensed Sites," of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR). The proposed regulations establish criteria for the decommissioning of radioactive material licensed sites.

DEC's statutory authority to adopt regulations for the management of radioactive material is outlined in Section 1 below. Section 2 summarizes relevant legislative objectives, and Section 3 discusses the needs and benefits of the proposed regulations. An assessment of the potential costs associated with the proposed regulations is found in Section 4. Mandates on local government are described in Section 5, while Sections 6 through 8 address the paperwork requirements, whether the regulations duplicate other federal and State programs, and alternatives to the proposed rules. Finally, Sections 9 and 10 describe the applicability of any federal programs to the activities covered by the proposed regulations and the compliance schedule of the proposed rules for the regulated community.

1. STATUTORY AUTHORITY

DEC's statutory authority to adopt rules and regulations is found at ECL Articles 1 and 3, which establish the environmental policy of the State and endow DEC and the Commissioner with broad powers with respect to the discharge of pollutants into the environment.

DEC’s statutory authority to regulate the disposal and release of radioactive material to the environment is found in Environmental Conservation Law (ECL) sections 3-0301(l)(i), 3-0301(2)(a) and (m), 17-0101, 17-0301, 17-0303, 19-0301, 27-0501, 27-0703, 27-1313, 27-1315, and 71-3601. The relevant statutory provisions are summarized below. In addition, DEC is undertaking this rulemaking to maintain consistency with the State of New York's 1962 agreement with the United States Nuclear Regulatory Commission (NRC).

ECL section 1-0101(1) declares it is the policy of New York State (the State) to conserve, improve and protect its natural resources and environment and to prevent, abate, and control water, land and air pollution, in order to enhance the health, safety and welfare of the people of the State and their overall economic and social well-being.

ECL section 1-0303(19) defines pollution as the presence in the environment of conditions and or contaminants in quantities of characteristics which are or may be injurious to human, plant or animal life, or to property or which unreasonably interfere with the comfortable enjoyment of life and property throughout such areas of the state as shall be affected thereby.

ECL section 3-0301(1)(i) authorizes DEC to provide for the prevention and abatement of all water, land and air pollution including, but not limited to, that related to hazardous substances, particulates, gases, dust, vapors, noise, radiation, odor, nutrients, and heated liquids.

ECL section 3-0301(2)(m) authorizes DEC to adopt regulations as may be necessary to carry out the environmental policy of the State set forth in section 1-0101.

ECL section 3-0301(1)(w) authorizes DEC to cooperate with the executive authorities of the United States in furtherance of the policy of the State set forth in section 1-0101.

ECL section 17-0101 declares that the State public policy is “to maintain reasonable standards of purity of the waters of the state consistent with public health and public enjoyment thereof.”

ECL section 17-0301(4) directs DEC to adopt standards of quality and purity for the various classes of waters of the State necessary for the public use or benefit contemplated by the classifications.

ECL section 17-0303(3) authorizes DEC to adopt any rules as may be necessary or proper to carry into effect certain titles including title 5 - the prohibition against water pollution. A pollutant is defined to include radioactive materials (see ECL section 17-0105(17)). This statutory definition establishes DEC’s authority to regulate radioactive material directly under State law and as contemplated by the State's 1962 agreement with the NRC.

ECL section 19-0103 declares that the State public policy is “to maintain a reasonable degree of purity of the air resources of the state, which shall be consistent with the public health and welfare and the public enjoyment thereof.”

ECL section 19-0301(1)(a) authorizes DEC to adopt regulations for preventing, controlling, or prohibiting air pollution. Radioactive material is an air contaminant under the ECL (see ECL section 19-0107). Radioactive material that has been discarded is considered a solid waste as it is not excluded from the definition of solid waste in ECL section 27-0501.

ECL section 27-0703(2)(a) authorizes DEC to adopt regulations governing the operation of solid waste management facilities and such regulation shall be directed at the prevention or reduction of water pollution and air pollution and other conditions inimical to the public health, safety, and welfare. As previously mentioned, radioactive material qualifies as a water and air pollutant.

ECL section 27-1315(1) authorizes the Commissioner to adopt any regulations as may be necessary and appropriate to carry out the purposes of title 13 which includes the assignment to DEC of responsibility for inactive hazardous waste disposal site remedial programs at section 27-1313.

ECL section 71-3601 declares that it is the State public policy that when residual contamination is left at levels that have been determined to be safe for a specific use, but not all uses, it is necessary to provide for an effective and enforceable means of ensuring the performance of maintenance, monitoring or operation requirements, and of ensuring the potential restriction of future uses of the land. This section declares that it is in the public interest to create environmental easements necessary for the protection of human health and the environment.

2. LEGISLATIVE OBJECTIVES

The overall environmental policy and legislative goals of the State is to conserve, improve, and protect the State's natural resources and prevent water, land, and air pollution to enhance the health, safety, and welfare of the people. The proposed rule would contribute to meeting this policy and legislative goals by ensuring that radioactive material licensed sites are properly decommissioned. The addition of Part 384 is also required to ensure that New York's regulations are compatible with NRC regulations as detailed in Section 3 below.

3. NEEDS AND BENEFITS

New York State Agreement State Program

The Atomic Energy Act of 1954 (42 U.S.C. sec. 2011 et seq.) (AEA) created the federal program for controlling the use of most radioactive materials and for limiting public exposure to radiation resulting from that use. In general, the AEA required that entities that possess, use, store, or transfer radioactive material produced or used in a nuclear reactor do so in accordance with a license issued by the Atomic Energy Commission (AEC), the predecessor agency of the NRC. In 1960, the AEA was amended to allow states to enter into agreements with the NRC whereby the NRC relinquishes its authority to license most uses of radioactive material to the state (see 42 U.S.C. sec. 2021). States that enter into such agreements are referred to as Agreement States.

Before an agreement can be signed, the state must certify that it has a program for the control of radiation hazards adequate to protect public health and safety (see 42 U.S.C. sec. 2021(d)(1)). The NRC then must review the state's proposed program and find that it is compatible with the federal program and is adequate to protect public health and safety (see 42 U.S.C. sec. 2021(d)(2)). The NRC is authorized and directed to cooperate with the states in the formulation of standards for protection against hazards of radiation to assure that state and Commission programs for protection against hazards of radiation will be coordinated and compatible. (42 USC 2021(g)).

The NRC periodically reviews the radiation control programs of Agreement States to determine whether the programs continue to be adequate to protect the public and whether the state regulations are compatible with the standards set by the NRC (see 42 U.S.C. sec. 2021(j)(1)). The NRC may terminate or suspend the agreement and reassert federal licensing and regulatory authority if a program fails to meet the NRC requirements (see 42 U.S.C. sec. 2021(j)). An Agreement State may also withdraw from the program and, therefore, no longer license most uses of radioactive material in that state (see 42 U.S.C. sec. 2021(j)). The NRC conducted its most recent review of the New York State program in July 2022. One of the preliminary findings of the review was that New York's program was incompatible with NRC requirements in part due to the fact that New York's regulations did not include certain portions of the federal rules. This proposed rulemaking would adopt those portions.

New York State became the fourth Agreement State in the country on October 15, 1962. There are currently 39 Agreement States and 2 other states with intent of becoming Agreement States with the NRC. The State's agreement is implemented by the New York State Department of Health (NYSDOH), the New York City Department of Health and Mental Hygiene (NYC DHMH), and DEC. Prior to July 2006, the New York State Department of Labor (NYSDOL) was also a part of the state's program, but on July 1, 2006, NYSDOL's Radiological Health Unit was transferred to the NYSDOH.

NYSDOH and NYC DHMH issue radioactive materials licenses to entities, to authorize the use and possession of radioactive material. DEC regulates the environmental impacts of radioactive materials. In 1997, the NRC adopted a new subpart, Subpart E, in 10 CFR 20 that set standards for the decontamination and decommissioning of facilities and sites contaminated with radioactive material. These 1997 revisions to Subpart E of 10 CFR 20 are referred to as the License Termination Rule.

DEC proposes to adopt a new regulation, 6 NYCRR Part 384, to set criteria for decommissioning of radioactive material licensed sites which are at least as stringent as the License Termination Rule. The criteria would be defined in terms of the maximum allowed radiation dose to a member of the public due to residual concentrations of radioactive material in soil and groundwater following decommissioning. In addition to this proposal under DEC's regulations, NYSDOH and NYC DHMH must each promulgate regulations that are adequate to protect the public health and safety and compatible with 10 CFR Part 20 and either have already done so in the case of NYC DHMH or are proposing such regulations in the case of NYSDOH.

During the decommissioning of the site, the dose limits are implemented using derived concentration guideline levels (DCGLs) for each radioactive contaminant. DCGLs are defined and their use is described in the 'Multi-Agency Radiation Survey and Site Investigation Manual', joint federal guidance first issued in 1997 by EPA, the NRC, the Department of Energy (DOE), and the Department of Defense (DOD). The DCGL is the concentration of a particular radionuclide that can be left in the soil without resulting in radiation doses that exceed the dose limit. DCGLs are expressed in terms of picocuries (of radionuclide) per gram of soil. DCGLs are site-specific and are to be derived for each decommissioning by the licensee.

The regulation would also require that post-decommissioning concentrations of radioactive material be reduced to levels that are as low as reasonably achievable (ALARA). In effect, all decommissions would be required to meet criteria, or such lower radiation levels as are reasonably achievable, whichever results in lower residual levels. The proposed rule also addresses land use restrictions and the conditions under which the restrictions can be relied upon. Financial assurance will be required for maintaining institutional controls at sites where land use must be restricted. The rule will also set limits on the use of different decommissioning standards for surface and subsurface soils.

This proposed rule is needed to protect the public and environment from exposure to radiation due to radioactive contamination. In addition, it is needed to fulfill the State's obligations as an Agreement State and maintain continued compatibility with the NRC regulations. As one of the three agencies in New York State that implement the State's agreement with the NRC, DEC must adopt rules compatible with the License Termination Rule or use some other legally enforceable mechanism to meet the essential objectives of the NRC's regulation. DEC has decided to undertake this rulemaking.

The NRC provides Agreement States three years from the effective date of the federal regulations to adopt compatible state regulations. The NRC adopted the License Termination Rule in 1997. DEC issued guidance implementing the substantive requirements of this rule in the 1990s. The use of guidance was approved by the NRC as an interim measure while the final regulations were developed, however, the adoption of Part 384 is necessary to meet DEC's obligations under the Agreement State program.

The primary benefit of adopting Part 384 is that it will provide a consistent, legally enforceable set of criteria for decommissioning of radioactive material licensed sites. Currently, DEC only has Cleanup Guidelines for Soils Contaminated with Radioactive Materials (DER-38) (formerly DSHM-RAD-05-01, originally called TAGM 4003), a program policy issued on April 30, 2013. This proposed rulemaking will establish regulatory criteria for the decommissioning of radioactive material licensed sites. Additionally, because current criteria are only in the form of guidance, they are not considered as Applicable, Relevant, and Appropriate Requirements (ARAR) at federal sites; therefore, federal agencies are not obligated to take them into account. With decommissioning criteria established in regulation, DEC will be in a better position to advocate for thorough decommissioning of sites consistent with state standards by the federal government.

A second benefit of adopting proposed Part 384 is that it will help fulfill the State's commitments under its agreement with the NRC. The NRC required Agreement States to adopt regulations compatible with the License Termination Rule by 2000. Thus, DEC needs to adopt the proposed regulations to maintain its status as an Agreement State. Maintaining Agreement State status provides the benefit of State control over the use of most radioactive material in the State. If DEC does not adopt the proposed regulations, the State could lose its authority to regulate the use and possession of most radioactive material in the State and the NRC would assume such regulatory authority.

Proposed Part 384 complies with the NRC's 1997 revisions made to 10 CFR Part 20 and maintains compatibility with the NRC Agreement State Program. Part 384 is based on the Generic Environmental Impact Statement (GEIS) published by the NRC in July 1997, entitled "Generic Environmental Impact Statement in Support of Rulemaking on Radiological Criteria for License Termination of NRC-License Nuclear Facilities (NUREG-1496)."[1] The GEIS was prepared for the revisions being made to 10 CFR Part 20 to establish

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[1] The Generic Environmental Impact Statement published by the NRC in July 1997, entitled "Generic Environmental Impact Statement in Support of Rulemaking on Radiological Criteria for License Termination of NRC-License Nuclear Facilities (NUREG-1496) can be found at https://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1496/index.html

radiological criteria for site decommissioning, and follows criteria established by the International Commission on Radiation Protection (ICRP) and the National Council on Radiation Protection and Measurements (NCRP), in documents ICRP 60 and NCRP No. 116, for the basis of establishing public dose limits. The GEIS includes: (1) a listing of regulatory alternatives for establishing radiological criteria for decommissioning; (2) for each alternative, a detailed analysis and comparison of incremental impacts, both radiological and nonradiological, to workers, members of the public, and the environment, and costs; and (3) based on the analysis of impacts and costs, conclusions on radiological criteria for decommissioning. The radiological impacts on human health and safety include radiation exposure resulting from occupancy of site buildings and residence on site lands following decommissioning and license termination, and radiation exposure during decommissioning and waste transport for disposal. Nonradiological impacts on humans include those resulting from conventional workplace accidents and from traffic accidents during transport of decommissioning wastes for disposal.

An overview of each section of proposed Part 384 is as follows:

Section 384.1 sets forth the purpose of Part 384 which is, as mentioned, to establish criteria for the decommissioning of radioactive material licensed sites.

Section 384.2 indicates which sites are subject to or exempt from Part 384. Part 384 applies to any site currently or previously regulated under the licensing authority of NYSDOH or NYC DHMH that is undergoing decommissioning.

The proposed regulations will not apply to any site regulated by the NRC, the DOE, or the DOD. However, the rule would be considered an ARAR for federal Superfund sites contaminated with radioactive material, and for those sites being remediated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) by federal agencies. The latter include the Federal Formerly Utilized Sites Remedial Action Program (FUSRAP), the Defense Environmental Restoration Program, the Formerly Utilized Defense Sites Program, and DOE sites.

Section 384.3 lists the specific definitions from Part 380 that are applicable in Part 384. Section 384.3 also establishes additional definitions specifically applicable to Part 384. Some of these definitions, including engineering control, institutional control, restricted use, and unrestricted use, are similar to those definitions applicable to DEC's other regulatory programs. Other definitions, including critical group, decommission, distinguishable from background, and residual radioactivity, are taken from the NRC's regulations. Lastly, some definitions, including action level, derived concentration guideline level, durable institutional control, and licensed decontamination and decommissioning contractor, are derived from common terminology used by professionals engaged in the radiation protection industry.

Section 384.4 establishes the criteria for determining that a site is acceptable for unrestricted use. The radiation dose limit would be 25 millirems per year (mrem/yr), which is set in the NRC's regulations mentioned above (25 mrem/yr is 250 microsieverts (μSv) in international units). This limit applies to radiation doses from all exposure pathways combined. The NRC concluded that the public dose limit should be set at 25 mrem/yr to provide a sufficient margin for protection of public health and safety.

In addition, the rule would also limit the radiation dose from the groundwater pathway to no more than 4 mrem/yr (40 μSv/yr), which is consistent with the United States Environmental Protection Agency's (EPA) federal drinking water standard and the NYSDOH's drinking water standard (10 NYCRR 5-1.52, Table 7). The 1997 GEIS stated that EPA indicated that a separate groundwater standard is appropriate to protect groundwater. DEC has determined that a separate groundwater and surface water standard is necessary to adequately protect the health and safety of the citizens of the State. Class GA represents all fresh groundwater in the State (see 6 NYCRR 701.15) and Class GSA represents saline groundwater (see 6 NYCRR 701.16. Class GSB is reserved for very saline groundwater, however there are no GSB waters in the State (see 6 NYCRR 701.18)). Therefore, the 4 mrem/yr standard must be in place to protect waters with GA and GSA classifications. 6 NYCRR 703.5 outlines groundwater quality standards for gross alpha radiation (excluding that from radon and uranium), gross beta radiation (excluding that from strontium-90 and alpha emitters), radium-226, radium-226 + radium-228, and uranyl ions. While these limits are adequate to protect the public, DEC would like to have additional standards in place that do not exclude specific radionuclides, and which will cover all radioactive contaminates at a site. For these reasons, the separate water standard is included in this proposed regulation.

Section 384.5 establishes the criteria for determining that a site is acceptable for restricted use. In rare cases, it may not be feasible to clean up a site to meet the standards defined by the unrestricted release criteria in section 384.4. For example, it may require extreme measures or could cause significant environmental impacts. In such a situation, the proposed regulation would allow a site to be considered for the release of the site under restricted conditions where institutional controls would be in place to limit the dose rate received by any individual to 25 mrem/yr total effective dose equivalent (TEDE). An institutional control could be something as simple as fencing and warning signs, or soil caps made of concrete, asphalt, or clay. At sites where institutional controls (such as land use restrictions, limits on site access, etc.) are necessary to comply with the 25 mrem/yr dose limit, the regulation would require - in the event of a complete failure of the institutional controls - the radiation dose to a member of the public not to exceed 100 mrem/yr. The proposed institutional control dose limits are the same as found in the License Termination Rule. Financial assurance will be required for maintaining institutional controls at sites where land use must be restricted.

Section 384.6 sets forth the requirements of the decommissioning plan that the licensee must submit to DEC for approval. Those requirements include a description of the schedule for performing the decommissioning activities; conditions of the site; the planned decommissioning activities; the methods used to ensure protection of the public and the environment against radiation hazards during decommissioning; the planned final radiation status survey; the cost estimate for decommissioning; environmental impacts that have been minimized to the extent practicable, and the decommissioning criteria.

Section 384.7 sets forth the public notice and comment period requirements. Under section 384.7, DEC will provide notice of a complete decommissioning plan to the public through publication in the Environmental Notice Bulletin (ENB), local newspapers, and other ways as necessary. The notice must include a description of the decommissioning plan, description of the site, and the status of the environmental reviews. The notice must indicate that DEC is seeking advice on whether the durable institutional controls and financial assurance proposed by the licensee are adequate. The public will be given at least 45 days from the date that the notice is published in the ENB to submit comments.

Section 384.8 sets forth the standards for DEC approval of decommissioning plans. DEC must issue a decision to the licensee whether the decommissioning plan is approved or disapproved. DEC must also issue a responsiveness summary of the comments received and identify any conditions in the approved decommissioning plan that differ from those in the draft decommissioning plan submitted by the licensee. Section 384.8 also requires that the licensee provide 15 days advance notice to and allow the attendance of DEC to any field activities, progress meetings, and inspections.

Section 384.9 sets forth the requirements for the final decommission report that the licensee must submit to DEC for approval upon completion of the decommissioning activities set forth in the approved decommissioning plan. Those requirements include descriptions of the activities completed, site boundaries, the disposal of radioactive waste, the final radiation status survey results, the survey instruments utilized, durable institutional controls, where the report will be available for inspection, and financial assurance mechanisms. The final decommission report must also include a certification by a licensed decontamination and decommissioning contractor.

Section 384.10 sets forth the standards for DEC approval of the final decommission report. DEC will issue a letter indicating whether the licensee has met the requirements of the approved decommissioning plan, any prohibitions regarding future use of the site, and any requirements imposed upon the management, monitoring, and maintenance of the site. DEC will publish notice of the availability of the final decommission report in the ENB. Sections 384.10 also sets forth the basis upon which DEC would modify or revoke its approval of the final decommission report.

Section 384.11 sets forth the standards for DEC to issue a variance from the Part 384 regulatory requirements on its own initiative or upon written application from any licensee who is subject to Part 384. The language of section 384.11 mirrors that used in 6 NYCRR section 380-3.5.

4. COSTS

Costs to Regulated Facilities

There are approximately thirty (30) facilities that are regulated by DEC under 6 NYCRR Part 380 (Prevention and Control of Environmental Pollution by Radioactive Materials) that could, at some point, fall under the regulatory jurisdiction of Part 384 during facility decommissioning activities. In addition, there are approximately eighty (80) NYSDOH licensees and twenty-seven (27) NYC DHMH licensees that may have to comply with these regulations during decommissioning. The proposed Part 384 requirements would apply to any site where decommissioning is being conducted under the oversight of DEC. Under normal operating conditions, licensed facilities are not expected to release radiation to the environment in a manner that will require its decommissioning under Part 384. Only facilities which operated prior to current licensing requirements or possibly facilities which had a major disruption to normal operations resulting in non-compliance with licensing regulations are likely to be subject to this regulation. Part 384 would apply to a site regardless of whether it is regulated under the licensing authority of NYSDOH or NYC DHMH.

During the promulgation of its regulation regarding Radiological Criteria for License Termination, the NRC prepared a GEIS. The GEIS summarized expected costs for licensees, associated with cleaning, removal, and disposal of contaminated concrete and soil, and the performance of radiological surveys needed to demonstrate that the target residual criterion has been achieved.

Costs to individual licensees can vary greatly depending on the type of facility. Expected costs for most licensees are expected to be modest. In the GEIS, small facilities which required minimal soil removal were estimated to cost less than $100,000 (1997 dollars) while a larger facility with greater amounts of soil removal required may cost tens of millions of dollars or more. This estimate is given in 1997 dollars due to the fact that this is when the GEIS for the federal rule was completed. It is not reasonable to assume that current estimates follow general inflation rates since the greatest costs for this work, namely transportation and disposal, have risen at a higher rate than inflation during that time. In New York, most licensed facilities are small and little to no soil removal would be anticipated; however, it is possible that a small number of facilities may incur costs closer to the upper end of the cost range.

This rule will not regulate federal cleanups taking place at CERCLA or FUSRAP sites within the State but will be considered an ARAR which will have to be addressed during site remediation. There are currently five active FUSRAP sites in the State, two in the New York City area and three in the Buffalo area.

For those entities responsible for decommissioning sites, there will be little or no increase in costs. DEC proposes to adopt a dose limit that is comparable to the dose guideline in DER-38. In addition, both the dose guideline in DER-38 and the dose limit in the proposed rule require that residual radioactive material following decommissioning be considered ALARA, so actual cleanup levels and costs are not likely to change. There may be an increase in costs to the federal government because if the rule is followed at FUSRAP sites, it may eliminate the federal government's current practice of using higher, less protective cleanup standards in soils below the top six inches. Since the federal government follows CERCLA process during the remediation of

FUSRAP sites, they are required to consider promulgated state standards as appropriate and relevant applicable requirements (ARARs). Existing guidance does not rise to the level of an ARAR, however once this regulation is in place, the CERCLA process must include it in their decision making. This rule may be more restrictive than federal protocols for risk-based analysis.

Local municipalities will have no costs due to this rule unless they are undertaking the decommissioning. To the extent that any State agencies have responsibility to decommission a site, they would incur the same costs as other regulated facilities.

Costs to DEC

DEC will expend resources and staff time preparing to implement this rule. DEC staff must write guidelines and explanatory documents that will be distributed to regulated entities. DEC staff must be trained in the implementation of the new regulations. This will require at least two years of DEC staff effort.

After the initial preparation and training period, the routine implementation of Part 384 will not be significantly greater than the time currently spent implementing DEC's DER-38.

Costs to State Government as a Whole

In addition to the cost to DEC, NYSDOH and NYC DHMH will expend some staff time becoming familiar with DEC's regulations. This may require one or two weeks of staff time for these agencies.

5. LOCAL GOVERNMENT MANDATES

There are no mandates placed upon local governments because of this proposed rulemaking. The proposed revision does not place any requirements directly on local governments unless local governments own or are responsible for decommissioning of radioactive material licensed sites. In that case, the cost to the local government would be the same as that to other regulated entities, described in Section 4, however no local governments are expected to be subject to this rule.

NYC DHMH will probably expend one or two staff weeks becoming familiar with Part 384.

6. PAPERWORK

The paperwork requirements of Part 384 are similar to the requirements DEC has in other remedial programs. Section 384.6 requires the licensee to prepare a decommissioning plan which will include site characterization data. Section 384.9 requires the licensee to submit a final decommission report to DEC for approval upon completion of the decommissioning activities set forth in the approved decommissioning plan. As part of the final decommission report, the licensee will also be required to submit to DEC proof of the durable institutional controls and financial assurance that have been implemented.

7. DUPLICATION

Other State Regulations

As described in Section 1.1, the New York State Agreement State program is divided among three agencies (NYSDOH, NYC DHMH, and DEC). The two agencies other than DEC have the authority to license the possession and use of radioactive materials. It is only when that material is disposed of or released to the environment that it comes under the jurisdiction of DEC. Thus, there is no overlap between the regulatory programs of the licensing agencies and that of DEC.

DEC has worked closely with NYSDOH and NYC DHMH to coordinate the provisions in the Part 380 series regulations. Both agencies will include in their versions of the License Termination Rule a provision that before a license will be terminated under their regulations, the licensees must obtain from DEC either confirmation that Part 384 does not apply, or that they have complied with Part 384. Thus, a license will not be terminated until the licensee has decommissioned to meet the criteria in Part 384.

Both NYSDOH and NYC DHMH must adopt a rule compatible with the NRC's License Termination Rule, which would apply to the interior of buildings. This will not create any additional regulatory burdens for the entities subject to those regulations.

It must be emphasized that DEC, NYSDOH and NYC DHMH must each promulgate regulations that are adequate to protect the public health and safety and compatible with 10 CFR Part 20. The potential for duplication is thus reduced because all the regulations must be consistent with those of the NRC.

Federal Regulations

Because Part 384 must be compatible with the NRC regulations at 10 CFR part 20, many sections in proposed Part 384 are identical, or very similar, to the federal rules. However, Part 384 would not apply to the same entities and activities that NRC regulations apply to so there is no duplication of effort with respect to federal regulations. Under the Agreement State program, the NRC relinquishes to the State its authority to regulate those radioactive materials covered by the Agreement.

The groundwater provision in proposed Part 384 is not in the License Termination Rule but is consistent with the EPA and NYSDOH requirements.

8. ALTERNATIVES

The no-action alternative is not consistent with the State's agreement with the NRC. As an Agreement State, the State has committed to implementing a radiation control program that is compatible with that of the NRC. The NRC has announced that Agreement States must adopt regulations compatible with the License Termination Rule. If DEC does not adopt compatible regulations, the NRC can suspend the agreement with the State and assert its own regulatory authority. Were that to take place, all NRC regulations would then be in effect in the State, including the License Termination Rule.

The alternatives available to DEC for proposed Part 384 are limited by DEC's role as an Agreement State agency. As explained in Section 1, an Agreement State's regulations must be compatible with NRC's regulations. The NRC ensures compatibility by classifying its program elements, including regulations, into four compatibility categories: A, B, C, and D. Category A program elements and regulations are those in which Agreement State regulations should be essentially identical to those of the NRC to provide uniformity in the regulation of agreement material on a nationwide basis. Proposed Part 384 includes the basic radiation protection standards and scientific terms and definitions that NRC deems necessary to the understanding of radiation protection concepts. Category B program elements and regulations are those in which Agreement State regulations should be essentially identical to those of the NRC and apply to activities that have direct and significant trans-boundary implications. Category C program elements and regulations need to be adopted by Agreement States to include essential objectives of the corresponding NRC regulations to avoid conflict or other disagreements that would jeopardize an orderly pattern in the regulation of agreement material on a nationwide basis. Category D program elements and regulations are not required by the NRC for purposes of compatibility. There are other provisions which the states cannot adopt because they are the sole responsibility of the NRC pursuant to the AEA or provisions of Title 10 CFR regulations. There are also program elements identified by the NRC as Health and Safety provisions, which the states do not need to adopt verbatim but should consider them and adopt the essential objectives of these program elements to maintain an adequate program.

The NRC has identified the compatibility category that applies to each section of its regulations. DEC staff used those categories as a guide in drafting Part 384. The provisions in the License Termination Rule that are considered categories A and B must be adopted by Agreement States and must be essentially identical to the federal rule. Therefore, DEC was precluded from considering alternatives to them. There were only four definitions from the License Termination Rule that DEC had to adopt in the proposed rule to comply with the NRC's Agreement State program. Those definitions were: background radiation, critical group, distinguishable from background, and residual radioactivity.

The NRC has assigned compatibility category C to the dose limit in the License Termination Rule. This means that DEC must adopt “the essential objectives” of the dose limit, *i.e.*, our limit must be at least as stringent as the NRC’s limit and may be more stringent (lower dose limit). Thus, DEC could adopt a lower dose limit – for example, the 10 mrem/yr now in DER-38. The other Agreement State agencies, NYSDOH and NYC DHMH, indicated to DEC that they intend to follow the NRC dose limits, 25 mrem/yr. To maintain consistency among all State agencies, DEC is proposing to adopt the NRC’s dose limit of 25 mrem/yr.

Adopting a higher limit than the NRC’s limit would make DEC’s rules incompatible with the NRC’s rules and would, therefore, be a violation of the State’s agreement with the NRC, which could result in the NRC reclaiming its authority and enforcing its regulations in the State. On a technical basis, the NRC’s dose limit is conservative and reasonable. DEC does not recommend adopting a higher, less stringent limit than 25 mrem/yr.

The dose limit in the proposed rule would be slightly higher than DEC’s current dose guideline in DER-38, which is 10 mrem/yr. However, both 10 and 25 mrem/yr are very low doses. The 10 mrem/yr limit was selected in 1990 in the development of the soil guidelines, because it was perceived as a very conservative value that would not require extensive technical documentation to support. Support for the NRC’s 25 mrem/yr dose limit has been thoroughly documented, including in the federal GEIS (NUREG-1496, Vol 1-3), and has been found protective of public health and safety.

The NYC DHMH adopted the 25 mrem/yr criteria by incorporation by reference in section 175.102 of the New York City Health Code. Additionally, section 175.103(f) contains the NYC DHMH license termination requirements. Section 175.103(f)(1)(iii)(B) states that NYC DHMH can terminate a specific license when DEC determines that premises have been decontaminated to such levels so that the TEDE from residual radioactivity distinguishable from background radiation to an average member of the public will not exceed 25 mrem (250 mSv)/yr.

9. FEDERAL STANDARDS

This proposed rule exceeds the federal standards established in the NRC's License Termination Rule in that it includes a separate dose limit for the groundwater pathway. EPA recommended that the NRC adopt a 4 mrem/yr dose limit for the drinking water pathway, but the NRC declined to do so. DEC is proposing to adopt the 4 mrem/yr for sites released for unrestricted use. NYSDOH has adopted the 4 mrem/yr dose limit for drinking water in its regulations (1 NYCRR 5-1.52, Table 7).

10. COMPLIANCE SCHEDULE

These regulations will become effective 30 days after publication of the Notice of Adoption in the State Register and will be applicable to regulated facilities except those that have performed decommissioning prior to the effective date of these regulations or those entities that have received written approval of their decommissioning plan or criteria from DEC prior to the effective date.

RURAL AREA FLEXIBILITY ANALYSIS

6 NYCRR Part 384 Criteria for Decommissioning of Radioactive Material Licensed Sites

1. TYPES AND ESTIMATED NUMBERS OF RURAL AREAS AFFECTED

For purposes of this Rural Area Flexibility Analysis (RAFA), "rural area" means those portions of New York State (State) so defined by Executive Law section 481(7) pursuant to SAPA section 102(10). Under Executive Law section 481(7), rural areas are defined as "counties within the state having less than two hundred thousand population, and the municipalities, individuals, institutions, communities, programs and such other entities or resources as are found therein. In counties of two hundred thousand or greater population, 'rural areas' means towns with population densities of one hundred fifty persons or less per square mile, and the villages, individuals, institutions, communities, programs and such other entities or resources as are found therein." There are 44 counties in the State that have populations of less than 200,000 people and 71 towns in non-rural counties where the population densities are less than 150 people per square mile. This rule would apply statewide, including all rural areas of the State.

2. REPORTING, RECORDKEEPING AND OTHER COMPLIANCE REQUIREMENTS; AND PROFESSIONAL SERVICES

The regulated facility must ensure that decommissioning is in accordance with the standards and criteria set forth in the regulation. There are no application forms associated with this proposed rule. This rule will require the regulated party to prepare a site decommissioning plan which will include site characterization data. The regulated facility may also be required to submit to the Department of Environmental Conservation (DEC) proof of financial assurance which is acceptable to DEC and meets the requirements of Part 384. The regulated party must also provide DEC with copies of all documents associated with its public participation process including copies of its summary of the results of all public participation efforts.

Any regulated facility whose site must meet the cleanup criteria established in these regulations will likely have to secure the services of professional engineers, health physics experts, and other professionals familiar with site decommissioning. The regulated facility may have to secure the services of consultants to prepare the site decommissioning plan and a public participation program.

3. COSTS

For those facilities responsible for decommissioning sites (including local municipalities), there will be little or no increase in costs. DEC is proposing to adopt a dose limit that is comparable to the dose guideline in DER – 38, Cleanup Criteria for Soils Contaminated with Radioactive Materials, April 30, 2013. In addition, both the dose guideline and the proposed rule require that residual radioactive materials following cleanup be considered as low as reasonably achievable (ALARA), so actual cleanup levels and costs are not likely to change.

4. MINIMIZING ADVERSE IMPACT

These regulations are not expected to generate any adverse impact to any of the regulated entities they may apply to. As stated previously, there will be little or no increase in costs for those entities responsible for decommissioning and required paperwork preparation will be minimal. Since it is expected that the large majority of regulated facilities will comply with their existing permits or licenses and will not contaminate the environment, these regulations will only apply to those that contaminate their facilities and sites. Any minor impacts resulting from the implementation of these regulations will affect both urban and rural areas equally.

5. RURAL AREA PARTICIPATION

Once 6 NYCRR Part 384 has been proposed for public comment, DEC plans to hold public meetings to provide information about the proposed rulemaking and address questions and concerns. Subsequently, required public hearings will be held prior to the end of the public comment period. Information about the rule making will also be posted on DEC's website and in the Environmental Notice Bulletin, which is published weekly on Wednesdays.

6. INITIAL REVIEW OF THE RULE, PURSUANT TO SAPA §207

DEC will conduct an initial review of the rule within three years as required by SAPA § 207.

REGULATORY FLEXIBILITY ANALYSIS

FOR SMALL BUSINESSES AND LOCAL GOVERNMENTS

6 NYCRR Part 384 Criteria for Decommissioning of Radioactive Material Licensed Sites

1. EFFECT OF RULE

There are approximately thirty (30) facilities that are permitted by New York State Department of Environmental Conservation (DEC) under 6 NYCRR Part 380 (Prevention and Control of Environmental Pollution by Radioactive Materials) that could at some point, fall under the regulatory jurisdiction of 6 NYCRR Part 384 (Part 384) during facility decommissioning activities. In addition, there are approximately eighty (80) New York State Department of Health (NYSDOH) licensees and twenty-seven (27) New York City Department of Health and Mental Hygiene (NYCDHMH) licensees that may have to comply with these regulations during decommissioning. The Part 384 requirements will apply to any licensee or permittee undergoing decommissioning that has contaminated the environment at their facility.

The proposed regulation does not place any requirements directly on local governments, unless local governments own or are responsible for decommissioning of sites contaminated with radioactive materials. In that case they will also have to comply with these regulations There are no, known facilities expected to be subject to this rule which are the responsibility of local governments or small businesses..

It should be noted, however, that DEC does not expect that many of these facilities will need to comply with these requirements since it is anticipated that the majority of these facilities will be following all of the requirements of their respective permits or licenses and will not contaminate the environment at their facility. Regular inspections performed by NYSDOH and DEC ensure that no major, widespread building and environmental contamination occurs.

It is not anticipated that many of the parties described above would meet the definition of small business with fewer than 100 employees. Entities with 6 NYCRR Part 380 permits are not known to meet the definition of a small business. These facilities are primarily owned by large corporate entities such as hospitals, universities, and health care organizations with multiple offices. Similarly, the permittees who conduct manufacturing do not meet the definition of a small business. This is also expected to be the case for facilities with radioactive materials licenses that do not require Part 380 permits.

2. COMPLIANCE REQUIREMENTS

Regulated entities must ensure that facility decommissioning is in accordance with the standards and criteria set forth in the regulation. There are no application forms associated with this proposed rule. This rule will require any regulated entity to prepare a site decommissioning plan which will include site characterization data. A regulated facility may also be required to submit to DEC proof of financial assurance which is acceptable to DEC and meets the requirements of Part 384. A regulated facility must also provide DEC with copies of all documents associated with its public participation process including copies of its summary of the results of all public participation events.

3. PROFESSIONAL SERVICES

Any regulated entity whose site must meet the cleanup criteria established in these regulations will likely have to secure the services of professional engineers, health physics experts, and other professionals familiar with site remediation. The regulated entity may have to secure the services of consultants to prepare the site decommissioning plan and a public participation program.

4. COMPLIANCE COSTS

As described in Section 1, there are no known entities which meet the definition of small business or local governments which would be subject to this rule. In the rare instance where facility operators responsible for decommissioning are small businesses or local governments, there will be little or no increase in costs. DEC would be adopting a dose limit that is comparable to the dose guideline in DER-38. In addition, both the dose guideline and the proposed rule require that residual radioactive materials following decommissioning be considered as low as reasonably achievable (ALARA), so actual decommissioning criteria and costs are not likely to change.

5. ECONOMIC AND TECHNOLOGICAL FEASIBILITY

Implementation of these regulations will be economically and technologically feasible for small businesses and local governments. The technology for site decommissioning already exists and has been proven to be feasible. The proposed regulations are designed to be performance-based rather than prescriptive which will allow for new emerging technologies (which may be more efficient and less expensive) to be utilized to accomplish the cleanup goals.

6. MINIMIZING ADVERSE IMPACT

These regulations are not expected to generate any adverse impact to the regulated parties they may apply to. As stated previously, there will be little or no increase in costs for those entities responsible for decommissioning and required paperwork preparation will be minimal. Since it is expected that most regulated entities will comply with their existing permits or licenses and will not contaminate the environment, these regulations will only apply to those parties that contaminate their facilities and sites.

7. SMALL BUSINESS AND LOCAL GOVERNMENT PARTICIPATION

As an effort of preliminary public outreach, on October 19, 2022, a public stakeholder information regarding the amendments being considered was conducted virtually. Public comment was solicited to obtain input prior to the development of the express terms. Since there are no known entities considered to be small businesses or local governments which will be directly subject to this rule, outreach was made to the public at large rather than specific to these entities.

Once Part 384 has been proposed for public comment, DEC plans to hold public meetings to provide information about the proposed rulemaking and address questions/concerns. Subsequently, required public hearings will be held prior to the end of the public comment period. Information about the rule making would also be posted on DEC’s website and in the Environmental Notice Bulletin, which is published weekly on Wednesdays.

8. CURE PERIOD OR OTHER OPPORTUNITY FOR AMELIORATIVE ACTION

No cure period or other opportunity for ameliorative action is needed since the rule making does not impose any penalties on the regulated community.

9. INITIAL REVIEW OF THE RULE, PURSUANT TO SAPA §207 AS AMENDED BY L. 2012, ch. 462

DEC will conduct an initial review of the rule within three years as required by SAPA § 207.

JOB IMPACT STATEMENT

6 NYCRR Part 384 Criteria for Decommissioning of Radioactive Material Licensed Sites

The New York State Department of Environmental Conservation (DEC) is proposing to adopt 6 NYCRR Part 384 Criteria for Decommissioning of Radioactive Material Licensed Sites to establish criteria for the decommissioning of radioactive material licensed sites.

1. NATURE OF IMPACT

This rulemaking is not expected to have any adverse impact on jobs or employment opportunities in the State. The rulemaking will more likely have a positive impact by creating jobs in localities where sites are being decommissioned.

2. CATEGORIES AND NUMBERS OF JOBS OR EMPLOYMENT OPPORTUNITIES AFFECTED

Compliance with this rulemaking will create job opportunities in professional fields such as engineering, health physics, consultant services and public participation. These professions are integral to the execution of remediation. For example, engineers and health physics consultants design the remediation plans.

Compliance will also create employment opportunities including but not limited to, truck drivers, heavy equipment operators, and laborers. Equipment operators excavate the contamination, and truck drivers deliver the materials to the disposal facility.

It is expected that many of these jobs will be filled by local workers which will in turn stimulate business with local firms near the sites being remediated.

3. REGIONS OF ADVERSE IMPACT

It is not expected that compliance with this rulemaking will have any adverse impact on jobs in any area of the State.

4. MINIMIZING ADVERSE IMPACT

It is not expected that compliance with this rulemaking will have any adverse impact on jobs in any area of the State.

5. SELF-EMPLOYMENT OPPORTUNITIES

Compliance with this rulemaking by site owners will not have any negative effect on self-employment opportunities.

6. INITIAL REVIEW OF THE RULE, PURSUANT TO SAPA §207 AS AMENDED BY L. 2012, CH. 462

DEC will conduct an initial review of the rule within three years as required by SAPA § 207.

Summary of Assessment of Public Comment

6 NYCRR Part 384 Criteria for Decommissioning of Radioactive Materials Licensed Sites

The New York State Department of Environmental Conservation (department) prepared an Assessment of Public Comment (APC) to address comments received on the proposed 6 NYCRR Part 384 Criteria for Decommissioning of Radioactive Materials Licensed Sites. The APC addresses all substantive comments received, written and oral statements, as well as comments received after the comment period ended, with the exception of editorial comments. The comments have been organized based on their subject matter and all commenters were given a unique number associated with their comments. After review of the comments the department determined that substantive changes to the proposed Part 384 regulations were not necessary. This is a summary of the complete assessment of public comment.

Administrative and Procedural Comments

Comments in this section addressed public participation, the comment period length, and the application of Commissioner's Policy 29 (CP-29). CP-29, Environmental Justice and Permitting applies to the permit review process and the department's application of SEQRA. It does not apply to rulemakings. The department fielded comments from the public for the 60-day period following proper noticing to the State Register, the Environmental Bulletin Notice, and on the department's website. Two public comment hearings were held in September 2024 as well. The department did not decide to extend the public comment period; however, the department did consider comments received after the deadline and those are included in the APC.

Some comments were regarding regulations in 6 NYCRR Part 381, these comments are outside the scope of this rulemaking and were not addressed in the APC. One commenter found transcriptional errors in the express terms. The department analyzed the express terms and found additional transcription errors and corrected the error the commenter found and the additional errors.

One commenter stated the proposal failed to justify how the rulemaking did not need to undergo SEQRA review. This rulemaking did undergo SEQRA review and resulted in a negative declaration.

Protection of Human Health

Some commenters had concerns that the Nuclear Regulatory Commission's (NRC) License Termination Rule (LTR) protects the average member of the critical group rather than the most vulnerable, suggesting that the State should not average the level of protection across the critical group because it could allow for some individuals to be exposed to higher levels of radiation than other individuals. The commenters suggest that faulty assumptions can underestimate true health risks and that the 1,000-year term that the rule focuses on after decommissioning is not adequate for all radionuclides and progeny. They also oppose exemptions for unrestricted release (25 mrem/year), including trade-off allowed with other deaths associated with the cleanup and transportation; alternative criteria allowed; and the site allowed to be divided up, with different portions treated differently. RESRAD-ONSITE is a common program used to calculate dose for remedial projects. This program uses the average member of the critical group in its calculations, and there are no known programs that can develop criteria for more vulnerable members of the population. The 1,000-year time-period is near the maximum chronological integral for which RESRAD will calculate doses. Doses for certain concentration values (pCi/g) are calculated at 1, 3, 10, 30, 100, 300, 1,000, and 10,000 years; most peak doses occur at or near the 1,000-year mark. Discussions for isotope related doses should be site specific. The express terms do not consider exemptions or trade-offs in lieu of the 25 mrem/yr limit for unrestricted release. Following Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), a licensee's property can be divided up into portions based on the level of impact from radioactive materials after historical investigation and characterization surveys and sampling have occurred.

Cancer Risk

Commenters state that the NRC LTR is not sufficiently protective of health, stating a 1 in 500 cancer risk is unprotective and conflicts with U.S. Environmental Protection Agency (EPA) and New York State standards for Superfund, Brownfield toxic waste contamination, and air permits for toxic releases at 1 in 1 million cancer risk. Commenters suggest that the 25 mrem/yr standard will cause a risk of 1 in 500 exposed individuals to get cancer. The department uses the EPA site-specific remediation levels for carcinogens at 10^{-4} to 10^{-6}. The NRC LTR has 25 mrem/yr as a cleanup level effective dose equivalent (EDE) this is equivalent to approximately 5 x 10^{-4} lifetime cancer risk as the baseline standard, allowing up to 100 mrem/yr EDE, which is approximately 2 x 10^{-3} lifetime risk. The 1 in 500 number the commenters cite would be equivalent to a 0.2% increase in cancer. Average cancer incidence from all causes is about 43%. A 0.2% increase would not statistically be detected.

Some commenters point out that the EPA has encouraged Agreement States to set stricter standards than the NRC to be more protective. The department has incorporated the groundwater and surface water limitation the EPA recommends into the proposed regulations.

One commenter stated that the proposed regulations are adopting a new number and new unit of measure - 25 mrem/yr - believing this will allow more radioactivity per mrem and more mrems. The proposed regulations do not adopt a new measure or number. Any changes to Dose Conversion Factors (DCFs) would be incorporated into RESRAD-ONSITE to provide the most accurate and conservative dose projections and would not allow more radioactivity per unit of dose.

Some commenters stated the EPA guidance "Establishment of Cleanup Levels for CERCLA Sites with Radioactive Contamination" suggests CERCLA site cleanups should achieve risk levels of 10^{-4} to 10^{-6} for carcinogenic materials for the maximumly exposed individual. Additional comments state that the NRC treats radioactive waste as a "privileged pollutant" that is not subject to the same standards as other toxic chemicals, adding that the State should not treat radiation this way. The department notes both comments.

Indian Point

Some commenters have concerns that the proposed regulations would have an impact on the Indian Point Energy Center decommissioning process. These comments are outside of the scope of this regulation as the NRC regulates the decommissioning of nuclear power plants, including Indian Point. This regulation would only apply to facilities that hold a New York State Department of Health (NYSDOH) or New York City Department of Health and Mental Hygiene (NYCDOHMH) radioactive materials license and are undergoing decommissioning.

Groundwater or Surface Water Sources of Drinking Water

One commenter suggested that the Maximum Contaminant Levels (MCLs) for Ra-226, Ra-228, and uranium would not generally be considered protective under the proposed rule and that 4 mrem/yr is not compatible with federal and State drinking water MCLs established under 40 CFR 141.66 and 10 NYCRR 5-1.52. Further, the commenter states that a specific groundwater limit is incompatible with 10 CFR 20.1402. Other commenters suggested that separate groundwater protections be included in the proposed regulations as required in ECL 17-0301 and as recommended by the EPA. The department has determined that a separate standard for a groundwater and surface water pathway is necessary to adequately protect the health and safety of the citizens of the state. 6 NYCRR 701.15, 701.16, and 701.18 define groundwater classes as GA, GSA, and GSB for fresh groundwater, saline groundwater, and very saline groundwater, the 4 mrem/yr standard must be in place to protect these waters. Additionally, 6 NYCRR 703.5 outlines groundwater quality standards for gross alpha radiation (excluding radon and uranium), gross beta radiation (excluding strontium-90 and alpha emitters), radium-226, radium-226 + radium-228, and uranyl ions. While these are protective of the public, the department determined it was necessary to have standards that did not exclude any specific radionuclides and will cover all contaminants at a site.

Western New York Nuclear Service Center

Commenters had concerns regarding the West Valley Development Project (WVDP) at the Western New York Nuclear Service Center (WNYNSC), seeking clarity on how or if the proposed regulations would impact the end-state of the State Licensed Disposal Area (SDA) at WNYNSC. The closure of the SDA will be completed utilizing the closure criteria in Parts 382 and 383. In addition, the ongoing development of a Supplemental Environmental Impact Statement (SEIS) between the U.S. Department of Energy (USDOE) and the New York State Energy Research and Development Authority (NYSERDA) will evaluate closure alternatives. If the WNYNSC is not closed in compliance with the NRC LTR alternative for unrestricted release, then the long-term potential dose attributable from the SDA must not exceed the requirements of the proposed Part 384 of 25 mrem/yr.

One commenter had questions on how the proposed Part 384 would work in concert with NYSDOH regulations at 10 NYCRR 16.113. Remedial actions performed pursuant to these proposed regulations will not be commenced until after decommissioning is performed under 10 NYCRR Part 16. Peak dose calculations are done on a site-specific basis. The commenter also requested the regulation clarify whether the SDA's radioactive waste is considered "residual radioactivity." During the decommissioning process at a site, any residual radioactivity will be identified and investigated further. Modeling will be done to determine the dose to the maximally exposed individuals under future use scenarios that will be determined on site-specific criteria. Should this dose exceed 25 mrem/yr, then the residual radioactivity will be remediated to achieve that level. This regulation would contemplate the termination of a license at an active facility.

The facility would also be required to meet the license termination regulations of the licensing agency. This rule will apply to soils and groundwater.

The commenter was seeking clarification on how alternative guidelines besides the Derived Concentration Guideline Level (DCGL) would be determined to provide the desired levels of protection and how TEDE is calculated for restricted and unrestricted use, as well as what time period will be used to calculate peak annual dose, post decommissioning and license termination. Health physics professionals analyze soils with activity per unit mass and DCGLs are based on this analysis. If other methods of analysis are available to prove the ability to meet the 25 mrem/year standard of the regulation, this will need to be discussed at the time of development of decommissioning plans for site closure. TEDE dose for both restricted or unrestricted use are calculated using proven modeling software such as RESRAD-ONSITE with isotopic dependent peak dose being discussed at the time of modeling development.

Assessment of Public Comment

on the

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

6 NYCRR Part 384 Criteria for Decommissioning of Radioactive Material Licensed Sites

Comments Received from July 17, 2024, through September 24, 2024

The New York State Department of Environmental Conservation (department) prepared this Assessment of Public Comment (APC) to address the comments received on proposed 6 NYCRR Part 384 Criteria for Decommissioning of Radioactive Material Licensed Sites regulations. This rulemaking establishes criteria for the decommissioning of radioactive material licensed sites, which was required to be adopted to be compatible with the federal regulations under the State's agreement with the federal government. Notice of the proposed rulemaking appeared in the July 17, 2024, State Register, as well as in the department's Environmental Notice Bulletin. Public comments were received from July 17, 2024, through September 24, 2024, and a virtual public hearing was held on September 17, 2024. This APC responds to all substantive comments received during the public comment period, including written comments and oral statements made during the public hearings, along with some public comments received after the comment period closed. Comments received were compiled and reviewed, and responses categorized based on content. All commenters were assigned an individual commenter number. A table listing all commenters is included at the end of this document. After careful consideration and evaluation of the public comments received on the proposed Part 384 regulations, the department determined that substantive changes to the proposed regulations were not necessary.

<u>Administrative and Procedural Comments</u>

Comment #1: Some commenters requested an extension of the comment period.

Commenters 1, 2, 4-6, 8-14,16,18-22, 24, 26, 30, 31

Response to Comment #1: The public was provided the 60-day comment period prescribed by the State Administrative Procedure Act (SAPA) on these proposed regulations that were properly noticed in the State Register, Environmental Bulletin Notice, and on the department's website. The department also held two public comment hearings in September 2024, with notice being provided to stakeholders via email, the Environmental Notice Bulletin, and notice posted on the department's website. While the department chose not to extend the comment period, it did consider comments received after the end of the public comment period and have included responses to those comments here.

Comment #2: Some commenters were commenting on the regulations found at 6 NYCRR Part 381.

Commenters 1, 5, 9, 18, 21, 27, 35-90

Response to Comment #2: These comments are outside the scope of this rulemaking.

Comment #3: The commenter stated the proposed rule fails to justify how the rulemaking does not need to undergo review under the State Environmental Quality Review Act (SEQRA).

Commenter 28

Response to Comment #3: The proposed rulemaking did undergo review under SEQRA which resulted in a negative declaration.

Comment #4: The commenter pointed out a typographical error in the regulations, namely that 25 millirem (mrem) and 0.25 microsievert (μSv) are not equivalent.

Commenter 28

Response to Comment #4: The department thanks the commenter for alerting it of this transcription error. The correct equivalent is 25 mrem to 250 μSv. This has been corrected in the Express Terms and supporting documents. Additional transcription errors were found by the department as follows: Section 384.4(a)(3) misstated 4 mrem as equivalent to 0.04 μSv (the correct equivalent is 4 mrem to 40 μSv) and Section 384.5(g) misstated 100 mrem as equivalent to 1 μSv (the correct equivalent is 100 mrem to 1,000 μSv).

Comment #5: Commenters had concerns over stakeholder outreach conducted by the department and inquired about how stakeholders will be notified by the department when actions on decommissioning sites will be taken. Commenters also suggest the rulemaking process should be restarted and Commissioner's Policy 29 (CP-29) regarding an enhanced public participation plan for disadvantaged communities be implemented.

Commenters: 5, 32, 34

Response to Comment #5: The department held two public stakeholder meetings in October 2022, which included notice to stakeholders via email, publishing in the Environmental Notice Bulletin, and noticing on the department's website. The department believes it provided sufficient public notice of the proposed rulemaking, including public outreach prior to the publication of the proposed rule, notice of the published proposed rulemaking on the department's website, Environmental Notice Bulletin, State Register, and a 60-day public comment period and two public comment hearings. Section 384.7 of the proposed regulations, Public Notice and Comment, establishes the public notification requirements when the department receives a decommissioning plan, including a public comment period. CP-29, Environmental Justice and Permitting, applies to the environmental permit review process for specific types of permits and the department's application of SEQRA to that process. CP-29 does not apply to rulemakings.

Protection of Human Health

Comment #6: Commenters had concerns that the Nuclear Regulatory Commission's (NRC) License Termination Rule (LTR) protects the average member of the critical group rather than protecting the most vulnerable and suggested the State should not average the protection because it allows for some individuals to get higher exposure than other individuals. The commenters suggest that faulty assumptions can undermine dose calculations and exposure assessments, which results in underestimates of the true health risks. These commenters also stated that the rule focuses on 1,000 years after decommissioning, which they do not believe to be adequate for all radionuclides and progeny. The commenters oppose exemptions allowed for unrestricted release (25 mrem), including trade-offs allowed with other deaths associated with cleanup and transportation; alternative criteria allowed; and the site allowed to be divided up, with different portions treated differently.

Commenters 1, 27, 35-90

Response to Comment #6: One of the standard means used to perform dose based remedial calculations for sites contaminated with residual radioactive materials is the utilization of RESRAD-ONSITE, a computer program that performs remedial calculations based on the dose to the average member of the critical group. There are no known modeling programs to develop remedial criteria for more vulnerable members of the population. The 1,000-year time-period is near the maximum chronological integral which RESRAD will calculate peak doses for all pathways, regardless of half-life. Doses for particular activity/concentration values (pCi/g) are calculated at years 1, 3, 10, 30, 100, 300, 1,000 and 10,000. Regardless of the half-life, most peak doses occur prior to, or near the year 1,000, therefore discussions related to isotope specific peak doses should be site specific. The express terms do not contemplate exemptions or trade-offs in lieu of the 25 mrem per year (mrem/yr) limit for unrestricted release. Pursuant to the guidance document Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), a licensee's property can be divided up into different portions, with each portion being treated differently, depending on whether particular areas were impacted by radioactive materials or not after historical site investigations and characterization surveys and sampling have been performed.

Cancer Risk

Comment #7: The commenters state that the NRC LTR is not protective of human health in that they believe a 1 in 500 cancer risk is unprotective and conflicts with US Environmental Protection Agency (EPA) and New York State standards, which they believe are based on a 1 in 1 million cancer risk for Superfund and Brownfield toxic waste contamination and for air permits for toxic releases. Commenters state that the target risk of residual contamination at a site, according to the ECL, should not exceed a cancer risk of one in one million for carcinogenic end points and hazard index of one for non-cancer end points. Commenters suggest the 25 mrem/yr standard will cause a risk of 1 in 500 exposed individuals to get cancer.

Commenters 1, 3-11,14,15,17-19, 21-23, 26-28, 30-33, 35-90

Response to Comment #7: The calculation of a 1 in 500 risk is inaccurate. The EPA generally sets site-specific remediation levels for carcinogens at a level that represents an excess upper-bound lifetime cancer risk to an individual of between 10^{-4} to 10^{-6}. The NRC LTR sets an allowable cleanup level of 25 mrem/yr effective dose equivalent (EDE) (equivalent to approximately 5×10^{-4} lifetime cancer risk) as the primary standard with exemptions allowing cleanup levels of up to 100 mrem/yr EDE (equivalent to approximately 2×10^{-3} lifetime risk). A 1 in 500 cancer incidence estimate is equivalent to a 0.2% increase in cancer. Average cancer incidence from all causes of cancer is about 43%. A 0.2% increase would not be statistically detected.

Comment #8: Commenters state that EPA has strongly encouraged NRC Agreement States to set stricter standards than the NRC to be more protective and have suggested that other states have done so.

Commenters: 1, 5, 27, 33

Response to Comment #8: The EPA has encouraged Agreement States to expand their standards to address groundwater and surface water media, which the department has incorporated into these proposed regulations.

Comment #9: One commenter was concerned that the proposed regulations are adopting a new number, 25 mrem/yr, as well as adopting a new unit of measure. The commenter believes this will result in allowing for more radioactivity per millirem and more millirems.

Commenter: 33

Response to Comment #9: These regulations do not adopt a new unit of measure or a new number. Any changes to Dose Conversion Factors (DCFs) which would be incorporated into the newest version of RESRAD-ONSITE would provide the most accurate calculated dose (in mrem/yr) per unit of radioactivity, per isotope and would only provide for more conservative estimates of radiation dose and would not allow more radioactivity per unit of dose.

Comment #10: Commenters stated that EPA issued guidance in 1997 entitled "Establishment of Cleanup Levels for CERCLA Sites with Radioactive Contamination" that suggested CERCLA site cleanups generally should achieve a level of risk within the 10^{-4} to 10^{-6} carcinogenic risk range based on maximum exposure for an individual.

Commenters: 1, 27, 35-90

Response to Comment #10: This comment is noted.

<u>Privileged Pollutant</u>

Comment #11: The commenters state that NRC's standard treats radioactive waste as a "privileged pollutant" that is not subject to the same rigorous standards as other toxic chemicals. Commenters believe the State should not treat radiation as a "privileged pollutant."

Commenters 1, 5-6, 9, 14, 18, 21-22, 26-27, 35-90

Response to Comment #11: This comment is noted.

Indian Point

Comment #12: Some commenters are concerned these regulations will affect the decommissioning of Indian Point and the release of water from the Indian Point Energy Center during the decommissioning process.

Commenters 1, 4-7, 9, 16, 18-20, 27, 30, 31, 35-90

Response to Comment #12: These comments are outside the scope of this regulation. The NRC regulates the decommissioning of nuclear power plants, including Indian Point. Nuclear power plants are not subject to this regulation. This regulation is applicable to the decommissioning of facilities operating under radioactive materials licenses issued from either the New York State Department of Health (NYSDOH), or New York City Department of Health and Mental Hygiene.

Groundwater or Surface Water Sources of Drinking Water

Comment #13: One commenter suggested that Maximum Contaminant Levels (MCLs) for Ra-226, Ra-228, and uranium would generally not be considered protective under the proposed rule and that 4 mrem/yr is not compatible with federal and state drinking water MCLs established in 40 CFR 141.66 and 10 NYCRR 5-1.52. The commenter further stated that limiting annual groundwater dose to a specific value is inconsistent with 10 CFR 20.1402. Commenters suggested separate groundwater protections be included in these proposed regulations as required in ECL 17-0301 and recommended by the EPA.

Commenters: 1, 5, 27, 29, 35-90

Response to Comment #13: The department has determined that a separate groundwater and surface water standard is necessary to adequately protect the health and safety of the citizens of the state. Class GA represents all fresh groundwater in the State (see 6 NYCRR 701.15) and Class GSA represents saline groundwater (see 6 NYCRR 701.16). Class GSB is reserved for very saline groundwater; however, there are no GSB waters in the State (see 6 NYCRR 701.18). Therefore, the 4 mrem/yr standard must be in place to protect waters with GA and GSA classifications. 6 NYCRR 703.5 outlines groundwater quality standards for gross alpha radiation (excluding that from radon and uranium), gross beta radiation (excluding that from strontium-90 and alpha emitters), radium-226, radium-226 + radium-228, and uranyl ions. While these limits are adequate to protect the public, the department determined it was appropriate to have additional standards in place that do not exclude specific radionuclides, and which will cover all radioactive contaminants at a site. For these reasons, the separate water standard is included in this proposed regulation.

<u>Western New York Nuclear Service Center</u>

Comment #14: Commenters had concerns with how the proposed regulation relates to the West Valley Development Project (WVDP) at Western New York Nuclear Service Center (WNYNSC). Specifically, they seek clarity on whether the regulations will be applicable to identifying and achieving the end-state for the State-Licensed Disposal Area (SDA) at the WNYNSC or if current department guidance is sufficient in light of the fact that West Valley SDA is a radioactive waste disposal facility that is presently regulated under both a NYSDEC Part 380 permit and an NYSDOH Radioactive Materials License. The commenter also suggests language be added to the proposed regulations to clarify how disposal cells (such as the West Valley SDA trenches) are to be considered under the proposed regulations. Specifically, if the disposal cells themselves are not exempt, the commenter suggests that the proposed regulation be amended to explain how the disposal cells are to be addressed under the proposed regulation.

Commenters: 1, 25, 27-28, 35-90

Response to Comment #14: The closure for the 6 NYCRR Part 380 Permit presently held by the New York State Energy Research and Development Authority (NYSERDA) for the SDA will be completed utilizing permit closure criteria, inclusive of Parts 382.12, 382.14, and several sections of Part 383-3.4, respectively. In addition, the ongoing Supplemental Environmental Impact Statement (SEIS) process, presently being developed jointly by the U.S. Department of Energy (USDOE) and NYSERDA, will utilize performance assessment requirements to evaluate closure alternatives. Should the entirety of the WNYNSC not be closed in compliance with an NRC LTR alternative that is intended for unrestricted release, then the long-term potential dose attributable to the SDA must not exceed the requirements of the proposed Part 384 regulations, (namely 384.4, including 384.4(a)(1), e.g., a total effective dose equivalent (TEDE) not to exceed 25 mrem/yr).

Comment #15: The Commenter requests the proposed regulation be revised to clarify the differences between certain provisions of the proposed rule and the NYSDOH rule (10 NYCRR 16.113) or to clarify the manner in which the proposed regulations will work in concert with the NYSDOH license termination regulations regardless of the differences. The Commenter states specifically, proposed Part 384.5 contains provisions for restricted use criteria, but NYSDOH regulations do not provide for restricted use. The commenter states that NYSDOH regulations stipulate calculations for TEDE should be made for first 1000 years post-decommissioning, whereas DEC's proposed regulations do not contain such language.

Commenter: 25

Response to Comment #15: Remedial actions performed pursuant to these proposed regulations will not be commenced until after decommissioning is performed under 10 NYCRR Part 16. Peak dose calculations will be determined on a site-specific basis at the time of decommissioning.

Comment #16: The commenter requests the proposed rule clarify whether SDA's radioactive waste is considered "residual radioactivity."

Commenter: 25

Response to Comment #16: During the decommissioning process at a site, any residual radioactivity will be identified and investigated further. The current dose/risk to maximally exposed individuals under agreed upon future use scenarios will be determined. Should the dose exceed 25 mrem/year, then the residual radioactivity will have to be remediated to achieve that benchmark. Furthermore, these proposed regulations contemplate the termination of a license at an active facility. The facility will be required to meet the license termination regulations of the licensing agency. These regulations will be applicable to soils and groundwater.

Comment #17: The commenter seeks clarification on how alternative guidelines, different than the Derived Concentration Guideline Level (DCGL) will be determined to provide descripted levels of public and environmental protection and how annual TEDE is calculated for restricted & unrestricted use, and what time period will be used to calculate peak annual dose, post decommissioning and license termination.

Commenter: 25

Response to Comment #17: The health physics profession analyzes soils in activity per unit mass, and this is how DCGLs are measured. If other methods of analysis are available to prove the ability to meet the 25 mrem/year standard of the regulation, this will need to be discussed at the time of development of decommissioning plans for site closure. The TEDE dose for either restricted, or unrestricted scenarios are calculated using proven modeling software such as RESRAD-ONSITE with the isotope specific peak doses being discussed at the time of development of such modeling.

List of Commenters

Commenter ID number	Commenter Business or Organization	Commenter Name
1	Sierra Club Atlantic Chapter, Private Citizen	Arthur Klein
2	Private Citizen	Judy Allen
3	Private Citizen	John Sullivan
4	Private Citizen	Carla Rae Johnson
5	Private Citizen	Jacquelyn Dreschler
6	Private Citizen	Erica Warren
7	Private Citizen	Gina Sanchirico
8	Axinn, Veltrop, & Harkrider LLP	Stephen Axinn
9	Private Citizen	Victor Tiship
10	Private Citizen	Jean Ann Marwick
11	Private Citizen	Mark Cane
12	Private Citizen	Theresa Kardos
13	Private Citizen	Nancy Noto
14	Private Citizen	Wendy Sanderson
15	Private Citizen	Vicki Fox

16	Private Citizen	Claudi Carr-Levy
17	Private Citizen	Deborah Porder
18	Private Citizen	Judy Allen
19	Westchester County Board of Legislators	Lisa Hochman
20	Riverkeeper	Victoria Leung
21	Private Citizen	Sue Kurian
22	Private Citizen	kil0417@aol.com
23	Private Citizen	Peter Benton
24	Private Citizen	Jan Boudart
25	NYSERDA	Andrea Mellon
26	Private Citizen	Alexandra Sharp
27	Don’t Waste NY and Citizens Concerned about NL Industries	Anne Rabe
28	Private Citizen	Raymond Vaughan
29	Private Citizen	Riley Carey
30	Grassroots Environmental Education	Ellen Weininger
31	Town of Cortlandt	James Creighton

32	Don’t Waste NY and Citizens Concerned about NL Industries	Anne Rabe
33	Nuclear Information & Resource Service	Diane D’Arrigo
34	Grassroots Environmental Education	Ellen Weininger
35	Beyond Nuclear	Kevin Kamps
36	Council on Intelligent Energy & Conservation Policy	Michel Lee, Esq.
37	Friends of the Earth	Lukas Ross
38	Manhattan Project for Nuclear-Free World	Mari Inoue
39	Nuclear Information & Resource Service	Diane D’Arrigo
40	Promoting Health and Sustainable Energy	Michel Lee, Esq.
41	Radiation and Public Health Project	Joe Mangano
42	South Asian Fund for Education, Scholarship and Training Statewide Groups	Mazeda A. Uddin
43	Alliance for a Green Economy	Andra Leimanis
44	Citizens Awareness Network, CT, MA and VT	Deb Katz
45	Citizens’ Environmental Coalition	Barbara Warren
46	Don’t Waste Michigan	Terry J. Lodge
47	Coalition for a Nuclear Free Great Lakes, MI	Michael J. Keegan

48	Coalition to Protect New York	Maura Stephens
49	Ecological Options Network, CA	Mary Beth Branagan
50	Energy Justice Law and Policy Center	Raya Salter
51	Grassroots Environmental Education	Ellen Weininger
52	Green Party of Ohio	Daryl Davis
53	Lake Shore Environmental Action	Susan P. Gateley
54	RadiationTruth.org, NY	Gail Payne
55	San Luis Obispo Mothers for Peace, CA	Molly Johnson
56	Sierra Club Atlantic Chapter	Kate Bartholomew
57	Snake River Alliance, ID	Leigh Ford
58	Energy Democracy Alliance, Network for a Sustainable Tomorrow	Adam Flint
59	Nevada Nuclear Waste Task Force	Judy Treichel
60	Nuclear Watch South, GA	Glenn Carroll
61	Vermont Yankee Decommissioning Alliance	Debra Stoleroff
62	Western Nebraska Resource Council Regional Groups	Buffalo Bruce
63	All Our Energy	George Povall

64	Campaign for Renewable Energy	Brian Eden
65	Catskill Mountainkeeper	Wes Gillingham
66	Clean Air Action Network for Glens Falls	Tracy Frisch
67	Coalition on West Valley Nuclear Wastes	Joanne Hameister
68	Fossil Free Tompkins	Irene Weiser
69	Goshen Green Farm	Rio Hito
70	Indian Point Safe Energy Coalition	Judy Allen
71	Indian Point Safe Energy Coalition	Marilyn Elie
72	Private Citizen	Margaret Hartin Reilly
73	Indivisible Scarsdale	Deborah Porder, Esq.
74	LEAF of Hudson Valley	Susan H. Shapiro, Esq.
75	Mothers Out Front Dutchess County	Caroline Fenner
76	Nassau Hiking & Outdoor Club	Guy Jacob
77	New Jersey Forest Watch and Don’t Gas the Meadowlands Coalition	Ken Dolsky
78	Parents Against Santa Susana Field Lab	Jeni Knack
79	Rockland Coalition to End the New Jim Crow Env. Committee	Jacquelyn Dreschler

80	Safe Energy Rights Group	Courtney M. Williams, PhD
81	San Francisco Bay Physicians for Social Responsibility	Robert M. Gould, MD
82	South Shore Audobon Society	Russ Comeau
83	Syracuse Cultural Workers	Andy Mager
84	Tompkins County Climate Protection Initiative	Peter Bardaglio
85	United for Clean Energy	Tina Volz-Bongar
86	Western New York Drilling Defense	Dr. Charley Bowman
87	Zero Waste Ithaca	Yaoyi Koizumi
88	Private Citizen	Howard Freed, MD
89	Private Citizen	Robert M. Gould, MD
90	Ulster County Legislature	Manna Jo Greene