

suspicion, unfounded allegations, or error.

In the absence of any request for hearing, or written approval of an extension of time in which to request a hearing, the provisions specified in Section IV above shall be final 20 days from the date of this Order without further order or proceedings. If an extension of time for requesting a hearing has been approved, the provisions specified in Section IV shall be final when the extension expires if a hearing request has not been received. An answer or a request for hearing shall not stay the immediate effectiveness of this order.

Dated this 2nd day of April 2001.  
For the Nuclear Regulatory Commission.

**Carl J. Paperiello,**

*Deputy Executive Director for Materials,  
Research and State Programs.*

[FR Doc. 01-8889 Filed 4-10-01; 8:45 am]

BILLING CODE 7590-01-P

## NUCLEAR REGULATORY COMMISSION

[Docket No. 030-32714]

### **Environmental Assessment: Finding of No Significant Impact, and Notice of Opportunity for a Hearing Related to Amendment of U.S. Nuclear Regulatory Commission Byproduct Materials, License 13-26398-01, Dow AgroSciences LLC**

**AGENCY:** U.S. Nuclear Regulatory  
Commission (NRC).

**ACTION:** NRC plans to issue an  
amendment to NRC Byproduct Materials  
License 13-26398-01, authorizing use  
of carbon-14 (C-14) in field studies at  
the Dow AgroSciences Midwest U.S.  
Research Center located in Fowler,  
Benton County, IN.

**FOR FURTHER INFORMATION, CONTACT:**  
Binesh K. Tharakan, Office of Nuclear  
Material Safety and Safeguards, Mail  
Stop T8F5, U.S. Nuclear Regulatory  
Commission, Washington, DC 20555,  
Telephone (301) 415-7138, e-mail:  
bkt@nrc.gov.

### **Environmental Assessment**

#### *Background*

This environmental assessment (EA)  
is being performed to evaluate the  
environmental impacts of the proposed  
amendment to Dow AgroSciences' NRC  
Byproduct Materials License 13-26398-  
01, which would permit the use of  
radioactive materials in field studies at  
the Dow AgroSciences' field research  
station known as the Midwest U.S.  
Research Center (hereafter referred to as

the Center). The Center is located at  
1736 N 1200 E in Fowler (Benton  
County), IN.

In 1993 and again in 1996, this  
licensee (previously known as  
DowElanco) was approved for similar  
radiolabeled field studies at its former  
field research site known as the  
DowElanco Greenfield Field Research  
Station in Greenfield, IN. All  
radioisotope use ceased at the  
Greenfield Station and the site was  
decommissioned in 1998. Two previous  
**Federal Register** notices—58 FR 28638  
and 61 FR 16937—describe using  
radioactive materials to provide data for  
previous “nature-of-residue,” “uptake,”  
and “crop rotation” field pesticide  
studies performed by this licensee. The  
purpose of the pesticide studies, which  
are similar to the requested studies, was  
explained in detail in each of these  
**Federal Register** notices. The field use  
of radiolabeled chemicals described for  
the proposed amendment (including  
study design, specific radioisotopes,  
amount used, and personnel training) is  
essentially unchanged from the  
previously licensed use at the  
Greenfield Station.

#### *Proposed Action*

The proposed action is to amend  
NRC's Dow AgroSciences Byproduct  
Materials License No. 13-26398-01,  
which was originally issued to  
DowElanco on September 21, 1992, to  
allow a maximum of 1110  
megabecquerels (30 millicuries) of C-14  
radiolabeled pesticides to be used in a  
year for outdoor agricultural field  
studies at the Center. The plots where  
the material will be used are described  
in the site characterization section of  
this document. The overall objective of  
these small plot field studies is to use  
radioactivity to identify the metabolic  
pathway for a given agrochemical after  
its application to a particular crop or to  
the soil in which the crop is grown.  
Once the metabolites have been isolated  
and structurally identified, it will then  
be possible to conduct non-radiolabeled  
studies, using large-scale field  
applications, to provide quantitative  
data on the metabolic residues found in  
the plants studied.

#### *Need for the Proposed Action*

The U.S. Environmental Protection  
Agency (EPA) requires these Center  
studies so it can make regulatory  
decisions on the registration of  
biologically active chemicals as  
pesticides, according to the criteria set  
forth in the amended Federal  
Insecticide, Fungicide, and Rodenticide  
Act (FIFRA). The use of radiolabeled  
materials is specifically required, in 40

CFR 158.240 and 158.290, to determine:  
(1) the “nature of residue” in crops after  
treatment with a biologically active  
chemical; and (2) the “uptake” of a soil-  
applied, biologically active chemical by  
crops grown in the treated soil. The  
analytical sensitivity afforded through  
the use of radioisotope labels in field  
studies is essential for isolation and  
identification of metabolites present in  
trace amounts in complex biological  
matrices. In the absence of such  
radiolabeled molecules, it would be  
extremely difficult to trace, isolate, and  
identify a single chemical in these  
complex matrices. EPA specifically  
identifies the use of radiolabeled test  
materials, in 40 CFR 158.240, to  
determine the “nature-of-residue”  
studies; no alternatives are given. The  
current amendment request proposes to  
perform studies at the Center similar to  
the C-14 field studies that were  
performed at the Greenfield Research  
Station.

These studies are being completed, as  
required by EPA, for registering the  
pesticide and permitting sale of the  
pesticide in the United States and  
abroad. Specifically, the Federal Food,  
Drug, and Cosmetic Act (as amended)  
requires pesticides intended for use on  
agricultural commodities to be  
registered by EPA under FIFRA (as  
amended).

#### *Site Characteristics*

The Center's land is fully owned by  
Dow AgroSciences and, as private land,  
it does not have a U. S. Bureau of Land  
Management designation. It is located in  
rural agricultural Benton County, IN.  
The Center's location consists of the  
following legal description: NE<sup>1</sup>/<sub>4</sub> of S 9,  
T 25 N, R 6 W; and E<sup>1</sup>/<sub>2</sub> of N<sup>1</sup>/<sub>4</sub> S 9, T  
25 N, R 6 W; and S<sup>1</sup>/<sub>2</sub> of SW<sup>1</sup>/<sub>4</sub> Section  
4, T 25 N, R 6 W. It is bordered on the  
north by privately owned farm land  
used for growing row crops. The eastern  
portion of the Center property is  
bordered by County Road 1200 E, a  
moderately traveled country road. To  
the south, the Center's property abuts  
privately owned farmland used for  
growing row crops. Jackmon Ditch  
(county drainage ditch) drains from  
south to north and divides the property  
into one-third and two-third sections,  
perpendicular to the south border, with  
field plots to the east of the ditch  
designated as E-1 through E-8, and  
those to the west as W-1 through W-6.  
The west border abuts private farmland  
used for growing row crops. Big Pine  
Creek drains from east to west and runs  
diagonally from northeast to southwest  
through the center of the approximate  
0.32 square kilometers (80 acres) of the  
Center's property that lies north of

County Road 200 N. County Road 200 N separates the northern sector of the Center (i.e., field plots N-1 through N-4 and the area of the irrigation storage basin) from the remainder of the property (i.e., the E fields, W fields, and the building site).

The Center is approximately 1.25 square kilometers (310 acres). The crop area covers 0.97 square kilometers (240 acres), whereas the non-crop areas cover 0.28 square kilometers (70 acres), including a 0.026-square-kilometer (6.5-acre) man-made basin used to contain irrigation water. There are approximately 0.029 square kilometers (7.25 acres) of apples and grapes. The buildings and lawn take up approximately 0.03 square kilometers (7.5 acres) and the grassed alleys and ditch bank cover approximately 0.23 square kilometers (56 acres). Two areas within the borders of the Center will be designated for radiolabeled field studies. The northwest corner of section W-6 will be designated for radiolabeled row crop studies, and individually identified trees in the orchard area, N-1, may occasionally be used, as well. At any time, less than 1 percent of the land is designated for radiolabeled field studies.

The Center is Class I and II capability agricultural land, according to the U. S. Department of Agriculture Soil Conservation Service. The site ecosystem is tilled farmland, and the property has been in agricultural production for as long as records have been kept in Benton County, IN. A geological investigation was made in 1997 when the present domestic water well was installed. The Center's soil consists of thick deposits of glacial origin. Extensive glaciers of Illinois and Wisconsin age covered this area during the Pleistocene period.

The geographically closest human community to the Center is Otterbein, located approximately 16 kilometers (10 miles) to the south in Benton County, IN. The population of Otterbein is 1291 (1990 Census). The population of Benton County is 9441 (1990 Census). The location of the maximally exposed individual is 450 meters (1475 feet) to the north of N1. The nearest farms (property line) are located 295 meters (955 feet) to the west of W6 plot and 21.6 meters (70 feet) to the north of N1.

#### *Endangered Species*

There are no Federally listed endangered species within Benton County, IN.

#### *Historical, Archaeological, and Cultural Sites*

The Dow AgroSciences site is not situated on or near any registered historical, archaeological, or cultural site, according to the National Park Service registry, and the State of Indiana, Department of Resources, Division of Historical Preservation and Archaeology.

#### *Environmental Impacts of the Proposed Action*

As stated above, the location of the closest human dwelling is 450 meters (1475 feet) to the north of N1, and the maximum radioactivity released in 1 year will be 1110 megabecquerels (30 millicurie). Using this information, impacts on water supplies and the dose to the maximally exposed individual are assessed. The radiological impact from the performance of field studies with radiolabeled materials at the Center has been calculated using both EPA's SCREEN 3 (a Gaussian Dispersion model) and COMPLY models.

#### *Impacts on the Food Chain*

The plants grown in radiolabeled studies will not be available for incorporation into the food chain. Test areas will be enclosed by a 2.1-meter (7-foot) chain link fence, and wire mesh or bird netting will be used to restrict bird and small rodent access to grain crops. All plant material generated will be used for laboratory research purposes or disposed of as radioactive waste. All contaminated soil will be removed from the site after harvest and disposed of as radioactive waste. Because of the precautions taken during application, the physical barriers in place to prevent wildlife access, and the removal of all soil and plant materials at the conclusion of the study, it is reasonable to conclude that the radiolabeled plant material is unlikely to enter the food chain by either direct human ingestion or indirect animal ingestion.

#### *Site-Specific Characteristics Affecting Surface Water and Ground Water*

The following profile of soil layers is provided by the domestic Well Log for the Center: 0-0.6 meters (0-2 feet) of topsoil; 0.6-11.7 meters (2-38 feet) of clay; 11.7-14.5 meters (38-46 feet) of coarse sand and gravel; 14.5-16.7 meters (46-54 feet) of gray clay; and 16.7-18.8 meters (54-61 feet) of coarse sand and gravel. The well is screened at 17.3-19.1 meters (56-62 feet). The underlying geography for the site does not include a principal aquifer.

The fields at the Center are equipped with drainage tiles, spaced approximately 18-meters (60-foot) apart

and 91-122 centimeters (36-48 inches) deep. The tile system providing drainage for W6 slopes to the east and dumps into Jackmon Ditch, approximately 12.4 meters (40 feet) south of Co. Rd. 200 N, which eventually dumps into Big Pine Creek. The tile system providing drainage for the orchard (N1) flows west into a trunk line that flows south and dumps into Big Pine Creek. Big Pine Creek is supplied by runoff from farms and roadways both upstream and downstream from the Center, which would significantly dilute any contribution from the Center.

#### *Results of Radioactive Monitoring During Similar Test at the Greenfield Station*

Dow AgroSciences will use the same application precautions, when applying radiolabeled pesticides at the Center, as were used during the Greenfield station applications. As a result of the precautions taken at Greenfield station during application of the radiolabeled test materials (e.g., 0.9-1.8-meter (3-6-foot)- wide sheets of plastic placed on the ground outside the plot borders during application; applications made only when wind speeds were <4.8 kilometers (<3 miles) per hour; etc.), 100 percent of the applied radioactivity was initially accounted for on the soil and/or plants within the test plot. Since wood borders, extending 15.2 centimeters (6 inches) above the soil surface and 10.2-15.2 centimeters (4-6 inches) below surface, surround the immediate plot area, there was minimal chance for lateral movement of the applied radioactivity from runoff. Combustion analyses of soil samples collected from outside plot borders at the Greenfield station at the termination of each study conducted there confirmed that no radioactivity was ever found outside the plots. Based on those results, it is not anticipated that any of the applied radioactivity will be found in the soil outside of the test plots at the Center.

Vertical movement of radioactivity in the soil column within a treated plot was monitored at the Greenfield site, to give an idea of the potential for movement of radioactivity into subsurface water. For most materials at the time the plots were remediated, the bulk of the applied radioactivity (75-90 percent) remained in the top 15.1 centimeters (6 inches) of the soil profile, whereas most of the remaining residues were usually accounted for in the 15-30-centimeter (6-12-inch) segments. For more mobile compounds, small amounts of the total applied radioactivity (1-10 percent) were

sometimes observed in the 30–45-centimeter (12–18-inch) and 45–60-centimeter (18–24-inch) segments. No significant levels of radioactivity were ever accounted for at depths below 60 centimeters (24 inches). These results indicated that radioactivity in typical study plots would not move deeply enough into the soil profile to get into ground water or be transported by the field tiles.

The tile system would remove the majority of water that infiltrates the soil, minimizing that which enters the ground or well-water supplies. Periodic monitoring of water in the field tiles that drained the radioactive plot area at the Greenfield location showed no detectable radioactivity in the drainage water. Based on those results, use of similar field tile systems, and the fact that the similar soil type at the Center site is also considered to have a low vulnerability to leaching, it is not anticipated that any of the applied radioactivity will be found in the water from the plot area. Past radiolabeled tests at the Greenfield location showed only minimal amounts of radiolabeled material at a maximum depth of 45–60 centimeters (18–24 inches) in the soil profile, and no radiolabeled material was ever found in “grab samples” collected from the field-tile drainage water.

#### *Ground-water Impacts*

Given these observations from the Greenfield station, the use of the same application precautions, use of similar wooden borders, similar soil types, and presence of a similar drainage field-tile system, it is not anticipated that any of the applied radioactivity will be found in the soil outside of the test plots, and it is not considered likely that radiolabeled material from the Center will contaminate ground water.

#### *Surface-Water Runoff*

An unrealistic worst-case and bounding radiological assessment can be estimated based on a severe rainfall event that washes all the applied activity from the plant or soil. Since both the crop and the soil would be expected to contain radioactive pesticides or their metabolites, a release of all of the applied activity could occur only if both the crop and the soil were washed over the 15.1-centimeter (6-inch) wooded border and away from the plot. The maximum activity to be used per application is 370 megabecquerels (10 millicuries), with a maximum per year, for the site, of 1110 megabecquerels (30 millicuries).

The 30-year average rainfall in the nine counties in the northwest district,

including Benton County, is 96.2 centimeters (37.86 inches), usually evenly distributed over the course of the year. The greatest monthly rainfall from 1972 to 1996 occurred in June 1993, when 25.8 centimeter (10.15 inches) were recorded. If 25.8 centimeters (10.15 inches) of rain were to fall over the 70-meter by 70-meter (230-foot by 230-foot) W6 research plot, where 1110 megabecquerels (30 millicurie) of C-14 had been applied, a volume of  $1260 \times 10^9$  cubic centimeters [milliliters (ml)] of water would leave the plot as surface runoff. If 100 percent of an 1110-megabecquerels (30-millicurie) application were lost to surface runoff during this rainfall, the activity concentration of the surface runoff from the plot would be 0.89 becquerel per ml (0.024 nanocurie per ml). This is below 1.11 becquerel per ml (0.030 nanocurie per ml), the C-14 water-effluent limit in 10 CFR Part 20 (Appendix B, Table II, Column 2). This activity concentration lost to surface runoff would result in a dose of less than 0.5 millisievert (50 millirem) to a member of the public, if it were ingested continuously over an entire year.

The plot runoff would be significantly diluted by the surface-water runoff from the rest of the Center and further diluted after it entered Big Pine Creek, which would also contain a large volume of runoff from the road and surrounding farms. It is reasonable to assume that significant dilution would occur and greatly reduce any potential dose to an individual off-site.

#### *Dose to the Maximally Exposed Individual*

The EPA SCREEN model was used to estimate potential airborne concentrations of C-14 inhalation doses to the maximally exposed individual (i.e., the nearest resident located 450 meters (1475 feet) downwind from the test plot). This is a worst-case scenario, using unrealistically constant meteorological conditions and extremely conservative assumptions in the estimations. The scenario modeled assumed that the release of the maximum amount of C-14 applied in one year is 1110 megabecquerels (30 millicurie); that 100 percent of the applied C-14 is emitted as carbon dioxide; that there are constant meteorological conditions for the entire year [D-stability class during the day and F-stability class during the night, 1 meter per second (3.3 feet per second) wind speed, and the wind direction is constant in the direction of the nearest resident]. Under these conditions, the annual average concentration resulting from the use of C-14 radiolabeled

material at the Center would be 0.345 picograms per cubic meter (.345 attograms per ml) of air. This corresponds to a worst-case and bounding air concentration of 0.056 microbecquerel per ml (0.0015 femtocurie per ml) at the receptor site and a maximum annual intake, by the maximally exposed individual, of 0.7 kilobecquerel (11 nanocuries). ]

To put these values into perspective, they are compared with values in Part 20. The air concentration value is a small fraction of the Part 20 limit, 110,000 microbecquerel per ml (300 femtocurie per ml), for carbon dioxide effluent release which, if inhaled continuously over the course of a year, would result in a total effective dose equivalent of 0.5 millisievert (50 millirem). The annual intake value is a small fraction of the Part 20 annual limit on the intake value of 74 megabecquerels (2 millicuries) which would result in a dose of 0.5 millisievert (50 millirem). In fact, based on the estimated annual intake value determined from the EPA SCREEN model, the estimated dose to a member of the public is less than 0.0005 millisievert (0.0001 millirem).

The EPA COMPLY model was also used to evaluate the worst-case and bounding dose to the general public from all pathways, including inhalation, ingestion of contaminated food, immersion, and ground deposition. Again, the maximum activity of 1110 megabecquerels (30 millicuries) of C-14 was assumed to be released in 1 year, at a distance of 450 meters (1475 feet) from the nearest residence. The COMPLY program calculated the maximum effective whole body dose for the maximally exposed individual to be 0.00069 millisievert per year (0.069 millirem per year), an amount well below the NRC regulatory limit of 1 millisievert (100 millirem) per year and EPA's clean air act concentration limit of 0.1 millisievert (10 mrem).

Further evaluation of the offsite analysis was not considered necessary.

#### *Alternatives to the Proposed Action*

As required by Section 102(2)(E) of the National Environmental Policy Act (NEPA) [(42 U.S.C. 4322(2)(E)], possible alternatives to the final action have been considered. One alternative to the field studies is the treatment of greenhouse-grown plants with the radiolabeled research chemical. A second alternative is not to perform the studies. However, these alternatives are not feasible for two reasons. First, not all plants can be grown successfully in a greenhouse. Second, EPA requires the C-14 field studies to be conducted at the Center.

The EPA-required studies must evaluate the behavior of agricultural chemicals under normal agriculture conditions.

Dow AgroSciences is already authorized to conduct studies on greenhouse-grown plants with radiolabeled research chemicals at its Indianapolis research facility; however, this is not a viable alternative to collecting data generated by outdoor field studies. Greenhouse studies provide an unnaturally stable environment void of normal weathering field conditions, which traditionally leads to non-representative metabolic profiles. Photolysis, heat, humidity, and other conditions influence the degradative processes that occur in the soil and on the plant surface. EPA requires the identities of the degradates formed as a result of these natural outdoor conditions.

#### Agencies and Persons Contacted

NRC contacted Dow AgroSciences; the Bloomington, IN, field office of the U.S. Fish & Wildlife Service; the National Park Service Registry; the State of Indiana, Department of Resources, Division of Historical Preservation and Archaeology; and the State of Indiana, Department of Health, Indoor & Radiological Health Division. The U.S. Fish & Wildlife Service provided information regarding Federally listed endangered species. The National Park Service Registry and the State of Indiana, Department of Resources, provided information on registered historical and archaeological sites. The State of Indiana, Department of Health, Indoor & Radiological Health Division agrees with the proposed action and has no additional comments.

#### References

1. Letter dated September 10, 1999, from Dow AgroSciences to U.S. NRC Region III, Lisle, IL, requesting amendment of Byproduct Materials License Number 13-26398-01.
2. Letter dated May 3, 2000, from Dow AgroSciences to U.S. NRC, Washington, DC, providing clarification to the amendment request.
3. **Federal Register** notice, Volume 58, pages 28638-28645, "Environmental Assessment, Finding of No Significant Impact, and Notice of Opportunity for a Hearing Related to Amendment of Byproduct Materials License 13-26398-01, DowElanco," Washington, DC, 1993.
4. **Federal Register** notice, Volume 61, pages 16937-16940, "DowElanco, Environmental Assessment: Finding of No Significant Impact and Notice of Opportunity for Hearing Related to Amendment of Byproduct Materials License Number 13-26398-01," Washington, DC, 1996.
5. *Ground Water Atlas of the U.S.*, Segment 10, Hydrogeological Investigations Atlas 730-K, U.S. Geological Survey, 1995.

#### Finding of No Significant Impact

Pursuant to NEPA and the Commission's regulations in 10 CFR Part 51, the Commission has determined that there will not be a significant effect on the quality of the human environment resulting from the use of C-14 in field studies at the Dow AgroSciences' Midwest U.S. Research Center located in Fowler, Benton County, IN. Accordingly, the preparation of an Environmental Impact Statement is not required for the amendment to Byproduct Materials License 13-26398-01, which will authorize the use of C-14 in field studies at the Center. This determination is based on the foregoing EA performed in accordance with the procedures and criteria in Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions."

The Dow AgroSciences amendment request and related documents are available for inspection and copying for a fee in the Region III Public Document Room, 801 Warrenville Road, Lisle, IL 60532-4351. The documents may also be viewed on the Agency-wide Documents Access and Management System located on the NRC website at [www.nrc.gov](http://www.nrc.gov)

#### Notice of Opportunity for a Hearing

Any person whose interest may be affected by the issuance of this action may file a request for a hearing. Any request for hearing must be filed with the Office of the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555, within 30 days of the publication of this notice in the **Federal Register**; be served on the NRC staff (Executive Director for Operations, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852), and on the licensee (Dow AgroSciences, LLC, 9330 Zionsville Road, Indianapolis, IN 46268-1054); and must comply with the requirements for requesting a hearing set forth in the Commission's regulations, 10 CFR Part 2, Subpart L, "Information Hearing Procedures for Adjudications in Materials Licensing Proceedings."

These requirements, which the request must address in detail, are:

1. The interest of the requestor in the proceeding;
2. How that interest may be affected by the results of the proceeding (including the reasons why the requestor should be permitted a hearing);
3. The requestor's areas of concern about the licensing activity that is the subject matter of the proceeding; and

4. The circumstances establishing that the request for hearing is timely—that is, filed within 30 days of the date of this notice.

In addressing how the requestor's interest may be affected by the proceeding, the request should describe the nature of the requestor's right under the Atomic Energy Act of 1954, as amended, to be made a party to the proceeding; the nature and extent of the requestor's property, financial, or other (i.e., health, safety) interest in the proceeding; and the possible effect of any order, that may be entered in the proceeding, on the requestor's interest.

Dated at Rockville, Maryland, this 5th day of April, 2001.

For The Nuclear Regulatory Commission.

**John W. N. Hickey,**

*Chief, Material Safety and Inspection Branch, Division of Industrial and Medical Nuclear Safety, Office of Nuclear Material Safety and Safeguards.*

[FR Doc. 01-8890 Filed 4-10-01; 8:45 am]

BILLING CODE 7590-01-P

## NUCLEAR REGULATORY COMMISSION

[Docket 72-37]

### Exelon Generation Company, LLC Dresden Independent Spent Fuel Storage Installation; Issuance of Environmental Assessment and Finding of No Significant Impact

The U.S. Nuclear Regulatory Commission (NRC or Commission) is considering issuance of an exemption, pursuant to 10 CFR 72.7, from the provisions of 10 CFR 72.212(a)(2), 72.212(b)(2)(i)(A), and 72.214 to Exelon Generation Company, LLC (EGC). The requested exemption would allow EGC to deviate from the requirements of Certificate of Compliance 1014 (the Certificate), Appendix B, Table 2.1-3, "BWR Fuel Assembly Characteristics," which describes the acceptable fuel design characteristics. Some of the fuel assemblies EGC plans to store in the HI-STORM casks have parameters outside those specified in the Certificate, Appendix B, Table 2.1-3. The requested exemption would allow, in addition to the parameters in Appendix B, Table 2.1-3, boiling water reactor (BWR) fuel assemblies with the following fuel assembly characteristics:

Fuel assembly maximum design initial uranium mass  $\leq$  110 kg/assembly  
 Fuel assembly array/class 6x6A fuel rod clad ID  $\leq$  0.5105 inches  
 Fuel assembly array/class 6x6A fuel pellet diameter  $\leq$  0.4980 inches  
 Fuel assembly array/classes 6x6A and 6x6B fuel rod pitch  $\leq$  0.710 inches