

Evaluation of the Installation and Subsequent Operation, Maintenance, and Removal of a Solar Photovoltaic Facility on a Non-Impacted Area of the WNYNSC, Rev. 0

Prepared by:

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West Valley Site Management Program**

West Valley, NY

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1 Introduction

The 3,300-acre Western New York Nuclear Service Center (Center) is located primarily in the Town of Ashford and the West Valley Central School District, in northern Cattaraugus County, New York. The property is owned by the New York State Energy Research and Development Authority (NYSERDA), and as such, is exempt from town, county, and school property taxes. The Town of Ashford and West Valley Central School District believe there have been significant economic impacts to the town and school district from the loss of property tax revenue and from a negative perception of the town due to the presence of the Center. To potentially counter the negative perception and offset the economic impacts, for the last several years, the Town of Ashford has been looking for ways to reuse portions of the Center property in a manner that would benefit the town and its residents.

In 2016, the Town of Ashford began talking to solar developers to learn more about the possibility of establishing a community shared solar project on the Center property. The town also approached NYSERDA to discuss the possibility of entering into an agreement with NYSERDA to allow the development of a solar facility. At that time, NYSERDA identified a 40-acre parcel on the eastern side of Buttermilk Creek as a potential site for a solar facility. Because the property is regulated under a United States Nuclear Regulatory Commission (NRC) Part 50 license, NYSERDA staff introduced the solar facility concept with NRC staff.¹ NRC staff stated that, in order to evaluate the project, NRC would want to see a project description, documentation to show the proposed facility would be located on non-impacted property, an evaluation under 10 CFR 50.59 to determine whether a license amendment would be needed, and a determination from the United States Department of Energy (DOE) as to whether the proposed solar facility would have any negative impact on the West Valley Demonstration Project (WVDP) work presently being conducted by DOE at the Center.

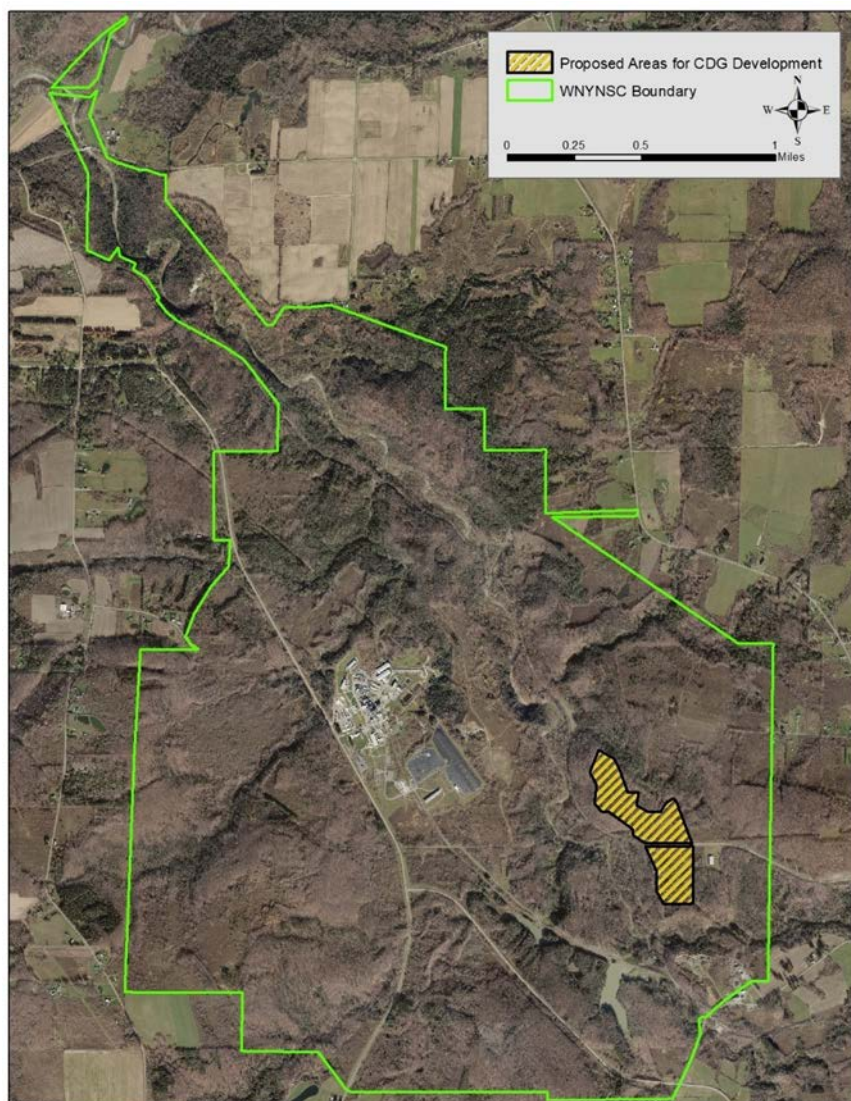
In July 2017, the Town of Ashford approached NYSERDA with a specific proposal to reuse a portion of Center property for a solar photovoltaic generation facility. Under the proposal, the town would lease the property from NYSERDA, and the town would enter into an agreement with a renewable energy developer who would construct and operate the facility. While there are a number of ways the photovoltaic facility could provide power to the grid, the concept described by Town of Ashford for the

¹ Conversations on the concept of locating a solar facility on Center property were held in late 2016 with Michael Norato, Chief, Materials Decommissioning Branch, Division of Decommissioning, Uranium Recovery and Waste Programs; and in February 2017 with Theodore Smith, Acting Branch Chief, Materials Decommissioning Branch, Division of Decommissioning, Uranium Recovery and Waste Programs. In March 2017, Amy Snyder, Senior Project Manager, Materials Decommissioning Branch, Division of Decommissioning, Uranium Recovery, and Waste Programs, identified the information NRC would expect to evaluate for a proposed solar facility on Center property.

project includes a 13 MW facility that would provide large blocks of power to electric utilities serving the area, and also provide renewable energy to local off-takers through a Community Distributed Generation (CDG) arrangement. The solar developer informed the town that the solar photovoltaic project would require up to 50 acres of property; and in response to the town's request, NYSERDA identified a 53.6-acre parcel on the eastern portion of the Center as an acceptable location for this facility (see Figure 1.1).

Figure 1.1. Western New York Nuclear Center and Location of Proposed Solar Facility

Source: NYSERDA



Because the Town of Ashford wishes to move forward with the construction of a solar photovoltaic facility on the Retained Premises² of the Center (see Figure 1.2), NYSERDA prepared this document for submittal to NRC for their consideration of the project. While NYSERDA may enter into an agreement with the town contingent upon NRC review and approval of the project, NYSERDA will not allow construction activities to commence before receiving NRC's feedback on the proposal.

This document includes the following information to support NRC's evaluation of

² The Retained Premised portion of the Center is the 3,100-acre portion of the site that does not include the West Valley Demonstration Project Premises or the State-Licensed Disposal Area.

the proposed project within the context of the existing Part 50 license for the Center:

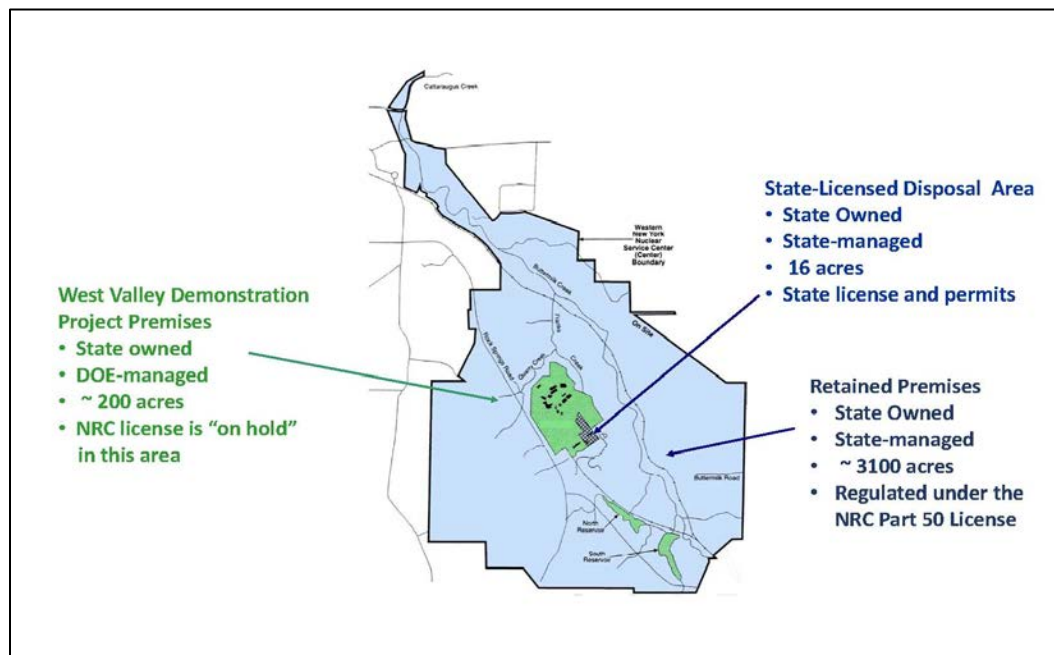
- A description of the solar photovoltaic generation project, including the potential for ground disturbance during construction, operational aspects of the facility, and removal of the project at the end of its useful life;
- Documentation that the area proposed for the solar project is non-impacted;³
- Evaluation of the solar photovoltaic facility project under 10 CFR 50.59 to determine whether a license amendment is needed; and
- A determination from DOE stating that they have no objections to the solar project, and there will be no impact from the solar facility on the safety of the WVDP facilities or systems.

This information is organized in this document as follows:

- Section 1 – Introduction.
- Section 2 – Description of the Proposed Solar Photovoltaic Project.

Figure 1.2. Retained Premises of the Western New York Nuclear Center

Source: NYSERDA



³ The term "non-impacted" as used in this document is intended to mean areas that have no reasonable potential for residual contamination.

- Section 3 – Documentation that the area identified for the proposed Solar Photovoltaic Project is non-impacted.
- Section 4 – 50.59 Analysis for the Proposed Placement of a Solar Photovoltaic Facility on the Retained Premises of the Center.
- Section 5- Determination from DOE stating that they have no objections to the solar project, and there will be no impact from the solar facility on the WVDP facilities or systems.
- Section 6 – Conclusions.

2 Description of the Proposed Solar Photovoltaic Project

The property identified for the proposed solar photovoltaic project is a 53.6-acre parcel on the eastern portion of the Center (see Figure 1.1). The property is at the end of Buttermilk Road, near the Bulk Storage Warehouse (BSW) (see Figure 2.1). The current contractual concept for the development of the facility includes an agreement (lease) between NYSERDA and the Town of Ashford for the town to use 53.6 acres of the Center property for the development of a solar photovoltaic facility. The Town of Ashford will enter into a separate agreement with a solar developer for the construction and operation of the facility.

Because DOE is conducting a decontamination and decommissioning project at the Center (the WVDP) that includes open-air demolition activities, and because the Phase 2 decommissioning decisions for the WVDP and other areas of the Center have not yet been made, NYSERDA is not pursuing the release of Center property from the NRC License at this time. Rather, the proposed solar facility will be located on property that remains under NYSERDA ownership and under the Part 50 license. The agreement between the town and NYSERDA will include any specific requirements or restrictions needed to limit public access to the property and ensure that there are no changes in site boundaries that were established to protect public health and safety.

The currently proposed term for the project is 20 years. NYSERDA's agreement with the town will also have requirements for the disposition of the panels at the end of the project.

2.1 Physical Layout and Construction of the Facility

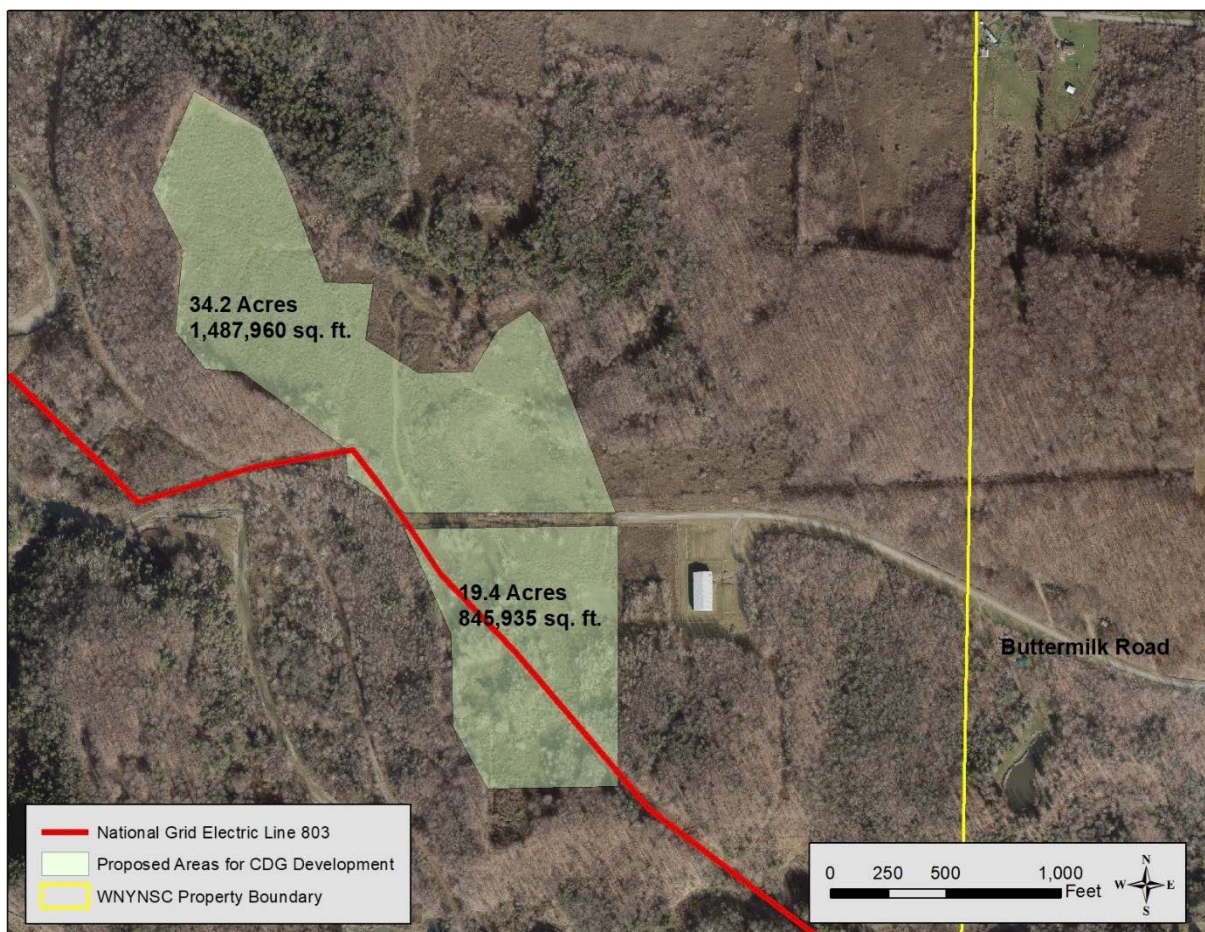
The property identified for the solar facility includes two parcels separated by an abandoned portion of Buttermilk Road (see Figure 2.1). The northern parcel is 34.2 acres, and the southern parcel is 19.4 acres.

These parcel boundaries are dictated by the amount of property needed and in general, the topography of the area. The property boundaries can be adjusted to address wetlands, topographic issues, or needed separation from adjacent areas.

The proposed solar facility would be a 13 MW solar photovoltaic generation facility. The facility will use alternating current central inverters to supply power to the electric power grid. Depending on the final design and determination of the power output for the facility, the site could have as many as 36,000 solar panels. The facility will interconnect to the 34kV National Grid sub-transmission line no. 803 that runs through the Center property proposed for the solar facility (see Figure 2.1). The equipment installed will include protective relay equipment (e.g., a direct transfer trip) that would prevent a malfunction at the solar photovoltaic facility from impacting the utility's power supply to the local community and the WVDP.

Figure 2.1. Proposed Solar Facility Site

Source: NYSERDA



The mounting and anchoring system proposed for the solar panels is a ballast-mounted system that eliminates the need for subsurface ground disturbance, as shown in Figure 2.2. Typically, these systems are used for landfill sites where subsurface membrane integrity is paramount, or rocky sites where traditional driven-post racking is not feasible. While the area identified for the project is in a non-impacted area, the ballast-mounted system is conservatively proposed for use at the West Valley solar photovoltaic facility in order to minimize ground disturbance on the Retained Premises of the Center.

During construction, equipment will be stored in a central location and laid out across the site area as construction progresses. Foundations will either be poured-in-place or brought to the site ready to be placed. A pad-mounted transformer and a main distribution switchboard will also be installed. No permanent accessible or habitable structures will be built on the project site.

The lease will require that construction contractors inform NYSERDA that personnel are entering the property at the beginning of the day and leaving the property at the end of the day. Since the work will be conducted in a non-impacted area, the field crew will not be required to be radiological-worker trained, and personnel and equipment radiation surveys will not be required upon leaving the work area. This is consistent with NYSERDA work practices for other non-impacted areas of the Center.

Installation of 36,000 solar panels will occur over a period of approximately six months, and it is anticipated that the installation crew will peak at about 50 individuals. The manpower and work intensity would vary over the installation period. Rack installation is mechanical in nature, and the electrical work will follow the rack installation. Usually, very little grading is required for this type of installation, but there may be some grading to remove "high spots" and to fill in surface ruts. The installation approach will address water flow patterns, wetlands, etc., and all environmental and permitting requirements will be met by the town or the solar developer.

2.2 Operation of the Solar Facility

Once the solar facility is constructed and is operational, day-to-day operations will be conducted remotely. The entire site will be controlled and monitored via remote equipment, and there is no need to have staff at the facility on a daily or even a non-daily, routine basis. The only regular maintenance activity that will be conducted will be cutting grass and otherwise maintaining the vegetation around the panels so it does not interfere with the operation of the panels and cause production losses. Any routine maintenance work will be conducted by local contractors, and again, the lease will require that contractors

inform NYSERDA that personnel are entering the property at the beginning of the day and leaving the property at the end of the day.

2.3 Dismantlement and Removal of the Panels and Associated Equipment

The current concept includes a 20-year operational life for the solar facility. At the end of the 20-year period, decisions will be made in regard to whether the equipment will be removed or whether the facility will continue operation for some additional period of time.

When the facility ceases operations, the lease with the town will require the removal of all equipment and the restoration of the property. Removal of the facility would include the dismantlement of the solar panels and all associated electrical equipment. The ballast racking systems would also be removed. There may be some minor grading to maintain drainage paths, smooth out ruts, etc. Final restoration will include reseedling as necessary to promote reestablishment of vegetative cover.

Figure 2.2. Ballast Racking System for Solar Panels

Source: BQ Energy



3 Documentation that the Area Identified for the Proposed Solar Photovoltaic Project is Non-impacted

3.1 Review of Historical Site Information

The 53.6-acre area identified for the construction of the proposed solar photovoltaic project is a largely undeveloped area of the Center located on the eastern side of the Buttermilk Creek Valley. The property is located at the end of Buttermilk Road, one mile from the intersection with County Route 240, near the BSW (see Figure 2.1). The 53.6-acre parcel is part of a 345-acre area that had been identified in 2009 when the Town of Ashford first approached NYSERDA to discuss potential reuse options for the Center property. The 345-acre area was identified through a GIS screening process⁴ that considered the presence of site facilities, the railroad spur, site reservoirs and dams, streams, watersheds, steep slopes, and known areas of radiological contamination.

Before identifying a specific project area for the proposed solar development, NYSERDA reviewed historical documentation of site operations in the area identified through the screening process. This review included the Part 50 license (CSF-1), the Nuclear Fuel Services (NFS) Safety Analysis Report, other NFS documents, WVDP Annual Site Environmental Reports, NYSERDA's RCRA Facility Investigation and other reports, and NYSERDA's files. All available information provided no indication that the 53.6-acre property proposed for the solar photovoltaic facility is impacted by radioactive material. Although solar installations are sometimes constructed directly on landfills, brownfields, or other potentially contaminated properties, the area for the solar facility was specifically selected by NYSERDA to avoid installing the solar panels or other electrical equipment in or on potentially contaminated soils.

The historical site review did identify two areas adjacent to the proposed solar project where radioactive material was stored or used during the NFS reprocessing operations at the Center. These two areas, the Oak Ridge Hydrofracture Test Area and the Plutonium Storage Facility (presently known as the BSW), are discussed in Section 3.2 below. The review of historical site operations also identified a soil mound adjacent to the BSW that was part of a soil testing program for a possible expansion of the NFS plutonium processing operation at West Valley. Although the expansion program was never undertaken, the soil testing mound is also described below.

⁴ Candidate Area Screening for Partial Site Release, Presentation to the Town of Ashford Board, October 27, 2009. Presented by Lee M. Gordon, October 27, 2009.

In summary, historical site information shows that there were no historical site operations in the 53.6-acre area that would have impacted the area with radioactive materials. Additional information on potential impacts to the 53.6-acre property from site operations in other areas of the Center (i.e., releases from the Main Plant Process Building) is provided below.

3.1.1 Gamma Radiation Surveys of the Solar Project Area

Aerial gamma radiation surveys of the Center were conducted by the United States Atomic Energy Commission (USAEC) and DOE in 1968 and 1969,⁵ 1979, and 1984.⁶ In 2014,⁷ NYSERDA and DOE performed an aerial radiation survey of the Center and Cattaraugus Creek to provide an updated survey for use in the Supplemental Environmental Impact Statement for decommissioning. In each survey, isopleth maps were generated to depict the varying levels of radioactivity detected across the Center. Gamma radiation exposure rates measured during the 1979, 1984, and 2014 aerial survey were in the range of background for the area of the solar project (the 1968-69 survey did not extend to this area). A review of all the aerial radiation surveys was conducted to determine if the area of interest for the solar facility showed any sign of being impacted by radioactive material. The gamma isopleth map generated from the 2014 aerial gamma survey (the most recent data) is shown in Figure 3.1. The gamma isopleth maps clearly identify elevated levels of cesium-137 (Cs-137) and anthropogenic radionuclides in other areas of the Retained Premises that were deposited through air releases and water effluent discharges from the reprocessing plant. For the 53.6-acre parcel proposed for the solar facility, however, the gamma isopleth maps show no elevated Cs-137 or anthropogenic radionuclide signals. The 2014 map shows that the closest area of elevated Cs-137/anthropogenic radionuclides to the 53.6-acre solar property is over 1,700 feet (ft) away.

In summary, the results of the aerial gamma radiation surveys show no indication that the 53.6-acre is impacted by Cs-137 or other anthropogenic radionuclides that would likely be present if the area was impacted by releases from reprocessing plant operations. This is consistent with the information on

⁵ EG&G, Inc. April 1971. "Aerial Radiological Measuring Surveys of the Nuclear Fuel Services Plant, West Valley, New York, 1968 and 1969.

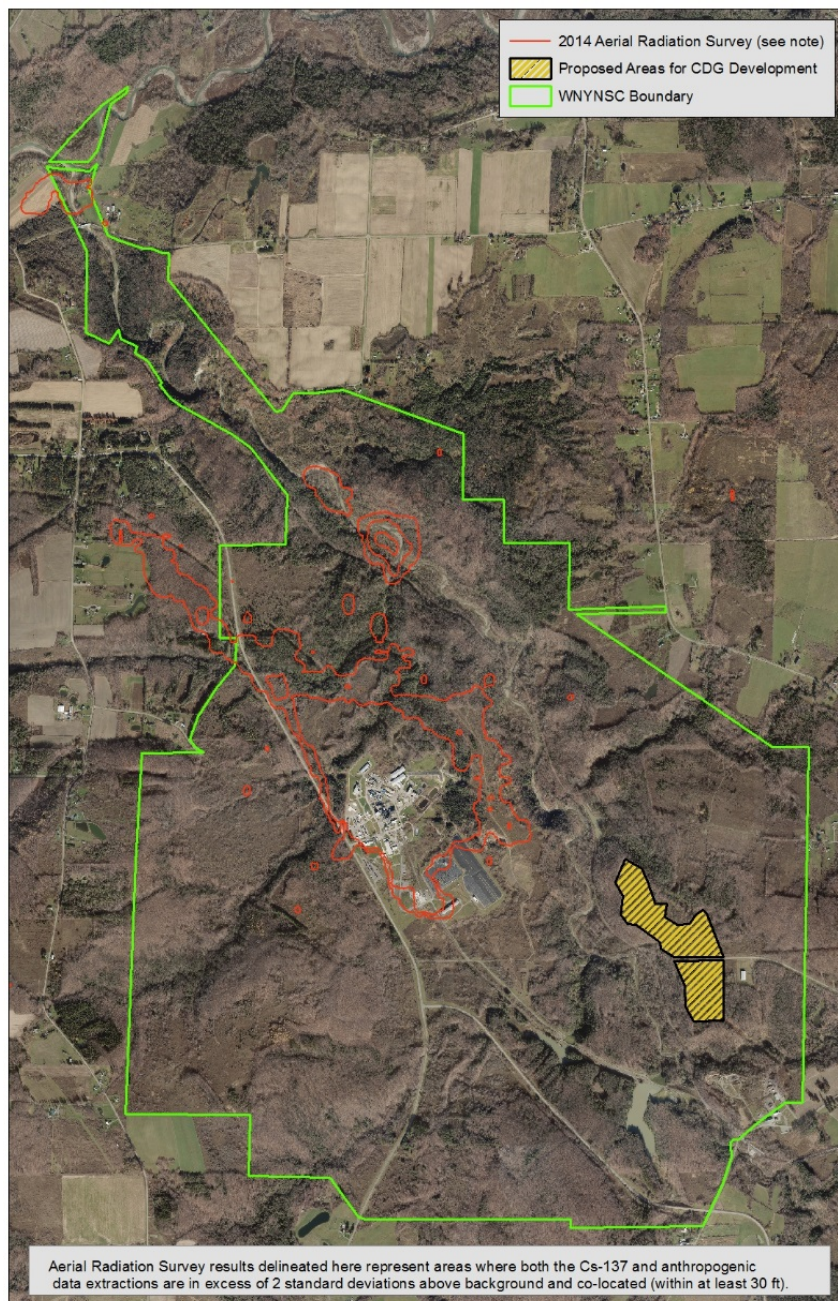
⁶ EG&G/Energy Measurements, September 1991. "An Aerial Radiological Survey of the West Valley Demonstration Project and Surrounding Area, West Valley, New York, Date of Survey: August-September 1984."

⁷ Aerial Measuring Systems Remote Sensing Laboratory National Security Technologies, LLC. October 2015. "An Aerial Radiological Survey of the Western New York Nuclear Service Center, Survey Dates: September 22 – October 4, 2014."

historical site operations which showed no radiological operations in the 53.6-acre area and no indication of releases from the plant impacting this area.

Figure 3.1. 2014 Aerial Radiation Survey and 53.6-Acre Area Proposed for the Solar Facility

Source: NYSERDA



3.2 Radiological Status of Areas Adjacent to the 53.6-Acre Project Area

The historical site review identified two areas adjacent to the proposed solar project where radioactive material was stored or used during the NFS reprocessing operations at the Center. These two areas, the Oak Ridge Hydrofracture Test Area and the Plutonium Storage Facility (presently known as the BSW), are discussed below.

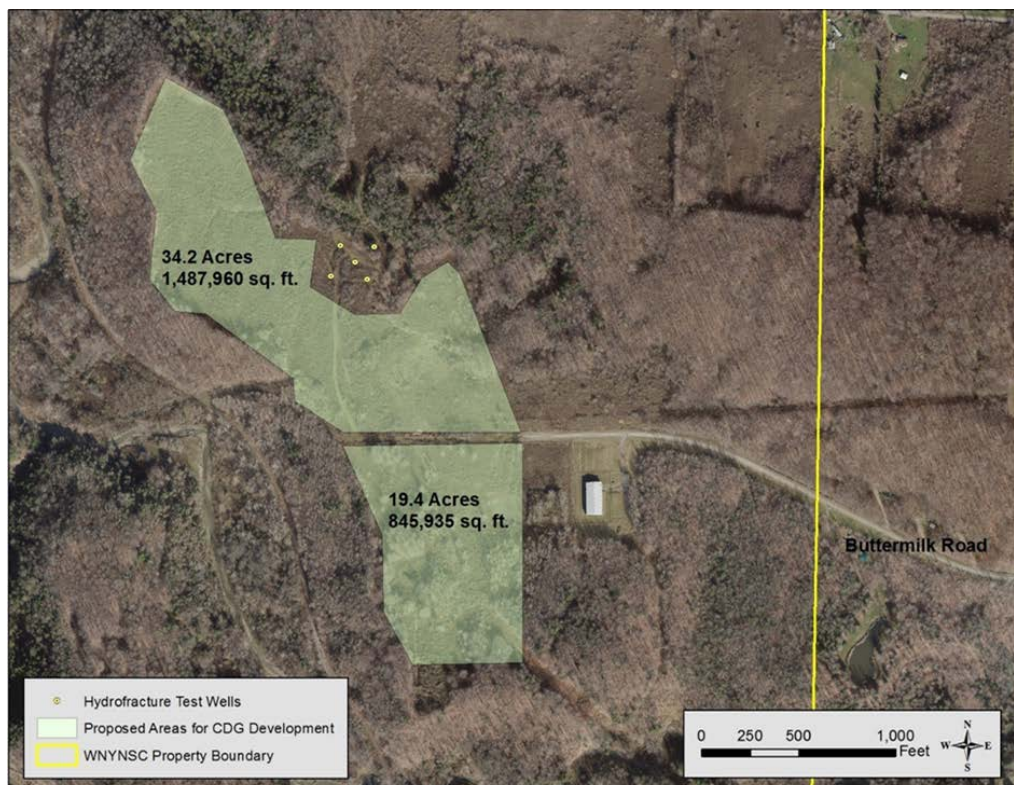
3.2.1 Oak Ridge Hydrofracture Test Area

Between 1969 and 1971, a series of hydraulic fracturing experiments were conducted at the Center by the USAEC Oak Ridge National Laboratory (ORNL). The tests were conducted on a two-acre parcel of property approximately 1,000 ft north of Buttermilk Road^{8, 9} (see Figure 3.2).

Figure 3.2. Proposed Solar Facility with Hydrofracture Test Wells

White building is the Bulk Storage Warehouse

Source: NYSERDA



⁸ Wallace de Laguna. October 1992. "Hydraulic Fracturing Test at West Valley, New York."

⁹ Ren Jen Sun. 1982. "Selection and Investigation of Sites for the Disposal of Radioactive Wastes in Hydraulically Induced Subsurface Fractures," Geological Survey Professional Paper 1215.

The purpose of the experiments was to evaluate whether the subsurface shale units at the Center could be used for the disposal of radioactive waste via high-pressure injection of a liquid-grout waste form into the rock units. The testing was to determine whether the down-hole injection of a fluid under high pressure would result in the bedrock splitting along near-horizontal bedding planes. If such splitting were to occur, a “sheet” of grout waste form could be emplaced within the below-surface bedrock unit. In order to evaluate the fracture properties of the bedrock units beneath the Center, a series of high-pressure water injections and one grout injection were conducted to determine the geometry of the resulting fractures planes in the shale units.

The ORNL Hydrofracture Test Area consists of an injection well surrounded by four observation wells. The observation wells are located 150 ft from the injection well at 90-degree intervals (see Figure 3.2). All five wells were completed to approximately 1,500 ft below ground surface (BGS). Six test injections into the subsurface rock units were performed between 1969 and 1971. The test injections began at a depth of 1,450 ft BGS, and each subsequent test injection was conducted at a shallower depth, up to the final injection depth of 500 ft BGS. Two injections consisted only of water, three injections contained water with 2.7 curies of Zirconium-95/Niobium-95 as a radioactive tracer with illite clay as a carrier for the tracer, and the last injection consisted of a bentonite-grout slurry that also contained the Zr-95/Nb-95 tracer. All test injections were made at the central well, and gamma logging was conducted at the observation wells to determine the nature and extent of fractures that developed in response to the high-pressure fluid injection. After the last injection was conducted at a depth of 500 ft BGS, the central injection well was grouted to a depth of 45 ft BGS.

The Zr-95/Nb-95 radioactive tracer has a half-life of 65 days, and a total of 10.8 curies of the tracer was used in the testing. As of February 2017, the 10.8 curies of Zr-95/Nb-95 used in the testing has undergone 256 half-lives. Decay correcting the 10.8 curies to February 2017 shows that the remaining down-hole inventory of Zr-95/Nb-95 would be $5.5E-78$ curies, meaning that there is no Zr-95/Nb-95 tracer remaining in the subsurface (or at the surface, if any was ever present). Records do not indicate that any other radioactive materials were ever injected into the hydrofracture test wells.

In the late 1980s, the WVDP conducted radiological evaluations of the ORNL Hydrofracture Test Area. These evaluations included document reviews, personnel interviews, overland gamma surveys, and the collection of environmental samples. Environmental samples collected by the WVDP included soil, surface water and sediment, and one water sample from the upper portion of the central injection well, above the grout plug that was emplaced to a depth of 45 ft BGS (information on the samples collected and

the analytical results are provided in Appendix A). All soil sample results were in the range of background except for one soil sample at the edge of the concrete pad surrounding the injection well. This sample showed a slightly elevated Cs-137 result (2.12 pCi/g as compared to the average of the background samples of 0.5 pCi/g). The WVDP report, *Investigation of the ORNL Injection Well at the Western New York Nuclear Service Center*,¹⁰ states that, because there is no record of Cs-137 being used in the experiments, this result was likely due to fallout accumulation at the edge of the concrete pad from wash-off by precipitation. Fallout data collected between 1984 and 1987 in New York State¹¹ indicated that Cs-137 concentrations in soil range from less than 0.01 pCi/g, the detectable limit, to 12 pCi/g. The sample result from the edge of the concrete pad falls well within the range of fallout activity identified in New York State. The Dames and Moore report¹² concludes: “Extensive surface sampling of the area was undertaken and nothing presenting a health risk was found. At present, the injection well and surrounding bedrock are considered to be free of any radioactive contaminants.”

In 1990, a gamma walkover survey was conducted at the Hydrofracture Test Area,¹³ and the results were again in the range of background. The 1990 overland gamma survey results are provided in Appendix A and ranged from 3 to 10 $\mu\text{rem/hr}$ at one meter, and 3 to 9 $\mu\text{rem/hr}$ at one centimeter, all within the range of background radiation levels.

Finally, NYSERDA notes that the Zr-95/Nb-95 tracer used in the hydrofracture tests is a high-energy gamma emitter. While consideration of the half-life of these radionuclides alone is sufficient to demonstrate that these radionuclides are not present at the hydrofracture test area today, the absence of these radionuclides is also supported by the lack of any Zr-95/Nb-95 signal in this area from 2014 aerial gamma radiation survey.

To provide for adequate working space for the five wells to be closed in accordance with New York State regulations in conjunction with Phase 2 decommissioning activities, NYSERDA’s agreement with the Town of Ashford will require that the solar panels be kept at least 100 ft from the nearest hydrofracture test well (as shown in Figure 3.3).

¹⁰ Dames and Moore. 1990. “Investigation of the ORNL Injection Well at the Western New York Nuclear Service Center.” DM50256:SEA-133.

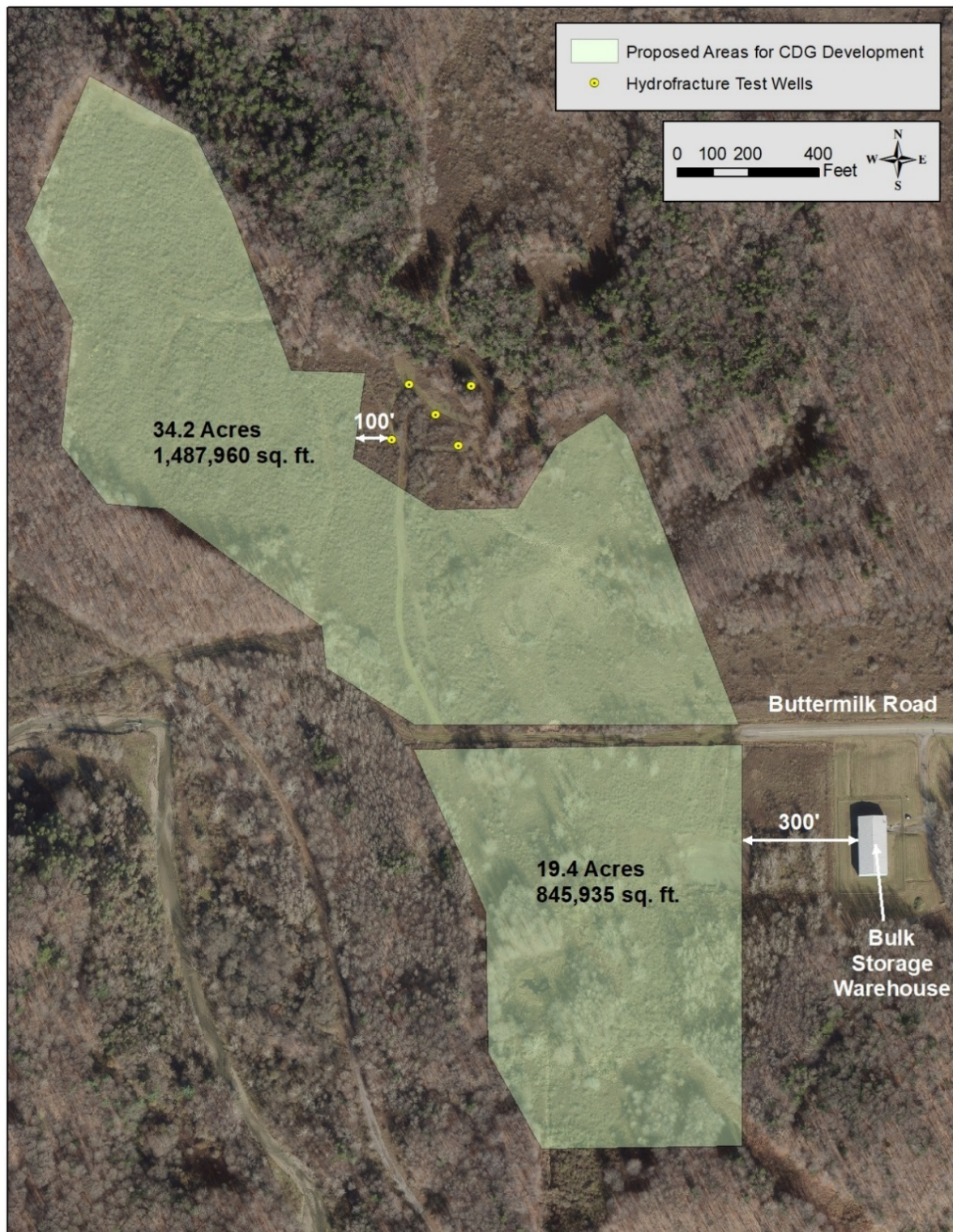
¹¹ Wallow III, M. Moscovitch, J. E. Rodgers (Georgetown University), D. Duffey (University of Maryland), and C. Soares (National Institute of Science and Technology). 1994. “Investigations of Natural Variations of Cesium-137 Concentrations in Residential Soils,” Health Physics Society 39th Annual Meeting, June 28, 1994.

¹² Dames and Moore. 1990.

¹³ West Valley Demonstration Project. June 3, 1992. “1990-1991 Overland Gamma Radiation Survey Site Characterization Facility Assessment Program,” Document Number: WVDP-EIS-0003.

Figure 3.3. Proposed Solar Facility with Hydrofracture Test Wells and BSW

Source: NYSERDA



In summary, the historical reports on the hydrofracture test program, the soil sampling and other evaluations conducted in the late 1980s and 1990s,¹⁴ and the 2014 aerial gamma radiation survey all support the conclusion that there is no reasonable potential for residual contamination at this location, and no reasonable potential for residual contamination in the 53.6-acre area from the hydrofracture test area.

3.2.2 Bulk Storage Warehouse

The BSW is located 300 ft east of the proposed solar facility area (see Figure 3.3). It is a corrugated steel building approximately 80 ft wide and 163 ft long, surrounded by a seven-foot-high chain link fence with three strands of barbed-wire along the top.

The building was built in 1968, and initially served as the site's Plutonium Storage Facility (PSF). It was operated from 1969 to 1974 by New York State Atomic and Space Development Authority (a predecessor agency of NYSERDA), under Special Nuclear Material License No. SNM-1138 issued by the USAEC.

The PSF was used to store plutonium nitrate from the NFS reprocessing facility before it was shipped to receiving facilities. The plutonium nitrate solution was sent to the PSF in double-sealed containers (10-liter polyethylene bottles sealed in gas-tight stainless-steel capsules). Each sealed container was placed in a specially constructed storage container, consisting of two, 55-gallon drums welded end-to-end, with a carbon steel pipe through the center of the drum surrounded by a concrete annulus for shielding. The sealed container was placed in the pipe in the center of the shielded drum for storage until it was shipped to a receiving facility.

The PSF operated until 1974. NRC terminated license SNM-1138 in April 1975, after closeout radiation surveys were performed of the building and the 326 empty storage containers. All materials were demonstrated to be below NRC limits for unrestricted use (see Appendix B for the license termination letter). In 1982, NYSERDA requested approval from the New York State Department of Environmental Conservation (DEC) and NRC to dispose of the 326 empty, concrete-shielded storage containers in a small disposal trench (120 ft long, 10 ft wide, 14 ft deep) approximately 100 ft south of the BSW. Copies of the NRC letter approving free release of the storage containers and a transfer hood, and the DEC letter approving disposal of these same items, are provided in Appendix C.

¹⁴ In 1992, as part of activities under the RCRA Section 3008(h) Administrative Order On Consent, NYSERDA conducted an evaluation of the Hydrofracture Test Area and determined it was also not a solid waste management unit (Ecology and Environment, Inc. August 1992. "Assessment of Hydrofracture Test Area, Western New York Nuclear Service Center).

DOE leased the building from NYSERDA from 1982 to 2009 for general storage of WVDP files and excess equipment. During this time, the building was renamed the BSW, and DOE occasionally held public auctions of the excess equipment at this building. There was no radioactive material stored or used at the BSW during the time DOE leased the facility from NYSERDA. The building was transferred to NYSERDA in 2009. It is not presently being used and is maintained by NYSERDA in a weather-tight, cold and dark condition.

The BSW has a nearby well that provides water to the bathroom, shower, and utility sink. This water was discharged from these fixtures through an underground drain line to a 750-gallon septic tank located just outside the northern edge of the BSW fence line. The septic tank was installed at a depth of about 3.5 ft BGS. The leach field for the septic tank is estimated to be 20 ft by 50 ft and north of the septic tank. An outdoor catch drain, located at the truck bay on the east side of the BSW, directs runoff from the low point of the truck bay to a discharge point on the eastern side of the driveway. Precipitation runoff from the building was designed to collect in swales located on the east and west sides of the building, and then was directed away from the building via underground piping.

The WVDP conducted regular surface soil sampling at the BSW as part of the routine environmental monitoring program. Location SFBLKST was located just outside the northeast corner of the BSW fence. Routine samples were collected from 1992 to 2004 and included samples of the top six inches of soil. The samples were analyzed for gross alpha, gross beta, potassium-40 (K-40), cobalt-60 (Co-60), strontium-90 (Sr-90), Cs-137, plutonium-238 (Pu-238), plutonium-239/240 (Pu-239/240), and americium-241 (Am-241). The 2004 results from the routine sampling were consistent with background concentrations and are presented in Appendix E.

In addition, in 1990, a walkover gamma radiation survey of a 9.6-acre area at the BSW was conducted, including the BSW driveway, Buttermilk Road north of the BSW, and the area west of the BSW including the area of the soil loading test project. The walkover gamma radiation dose rates for that survey are consistent with background (see Appendix F).

In 2010, NYSERDA conducted sampling around the BSW as part of an initiative to evaluate a parcel of property on the east side of the Center for release from the Part 50 License. Sampling activities consisted of one sample of residual material from the drain in the truck bay on the east side of the building, three samples of residual material in the BSW septic tank, and three soil samples collected as background samples. These samples were analyzed for Am-241; Cs-137; Pu-239, 240, 241; and Sr-90.

Appendix D shows that the septic tank samples had very low, positive results for Cs-137, Am-241, and Pu-239/240. The Cs-137 result was 3.06E-01 pCi/g, the Am-241 results ranged from 8.13E-2 pCi/g to 8.37E-2 pCi/g, and the Pu-239/240 results ranged from 5.70E-2 to 8.16E-2 pCi/g.

The sample results were compared to the values listed in Table H.2, Appendix H, Volume 2, of NUREG 1757.¹⁵ Table H.2 presents the concentrations of radionuclides that would result in a 25 mrem/year dose to a resident farmer, assuming the radionuclides are present in the top layer of surface soil (15 cm) and distributed over a cultivated area of 25,800 ft². This comparison of the individual radionuclide results to the Table H.2 values yielded a fraction of 2.78E-02 for Cs-137, 3.99E-2 for Am-241, and 3.55E-2 for Pu-239/240.

Because there were multiple radionuclides detected, the unity rule was applied to the cesium, americium, and plutonium results, and a sum-of-the-fractions calculation was conducted using the highest results for each of these radionuclides. The sum-of-the-fractions value was 10.3 percent of the Table H.2 soil screening values with the Cs-137 result included, and 7.53 percent of the Table H.2 values without the Cs-137 result.¹⁶ (The Cs-137 septic tank result [0.3 pCi/g] was below the mean soil background sample concentration calculated from samples collected for this sampling activity [0.63 pCi/g] and was equal to the Cs-137 average surface soil background concentration from the Center background samples as presented in NYSERDA's offsite soil sampling project¹⁷). According to Section 3.4 of NUREG 1757, licensees may eliminate insignificant radionuclides and exposure pathways from further detailed consideration in decommissioning, where "insignificant" means no greater than 10 percent of applicable dose criterion. The septic tank sum-of-the-fractions result without Cs-137 (7.53 percent), falls into the "insignificant" category.

Additionally, the Table H.2 values are clearly a conservative metric for evaluating the septic tank data. Table H.2 values are derived assuming a resident farmer scenario with radionuclides present in the top layer of surface soil (15 cm) and distributed over a cultivated area of 25,800 ft². The septic tank, approximately 3.5 ft belowground, is designed such that the solids will settle and accumulate in the tank. Literature values for distribution factors show that Cs has a K_d of 280 cm³/g, and Am and Pu, have K_ds

¹⁵ NUREG 1757, Volume 2, Rev. 1. September 2006. "Consolidated Decommissioning Guidance, Characterization, Survey, and Determination of Radiological Criteria."

¹⁶ According to Section 3.4 of NUREG 1757, licensees may eliminate insignificant radionuclides and exposure pathways from further detailed consideration, where "insignificant" means no greater than 10 percent of applicable dose criterion.

¹⁷ Radiological Survey and Dose Assessment Report for the Western New York Nuclear Service Center and Off-Site Areas in Follow Up to Aerial Gamma Radiation Survey Conducted in 2014, Rev 1, MJW Technical Services, 2016.

greater than or equal to 550 cm³/g¹⁸ (the site-specific Kds for these radionuclides are significantly higher¹⁹) meaning that all would likely be associated with the septic tank solids and retained in the tank.

The very low concentrations of cesium; americium, and plutonium in the septic tank; the design of the tank to promote the retention of solids; the high Kd values and low mobility for Cs, Pu, and Am in soils; and the distance of over 300 ft between the septic tank and the solar facility; all suggest that there is no reasonable potential for residual contamination in the area of the proposed solar facility from the BSW septic tank. In addition, the 326 empty storage containers and transfer hood were each individually smeared and surveyed for radioactive contamination before they were disposed in the trench 100 ft south of the BSW. NRC approved the release of the containers and transfer hood for unrestricted release, and these items are located more than 300 ft away from the area proposed for the solar facility. As such, there is also no reasonable potential for residual contamination in the 53.6-acre area of the proposed solar facility from the 326 storage containers and transfer hood.

3.2.3 Soil Loading Test-Mound for a Proposed Plutonium Fuel Facility

In 1970, NFS constructed a large soil mound approximately 250 ft west of the Plutonium Storage Facility (BSW) to test the load-bearing capabilities of the soil to evaluate the feasibility of constructing a plutonium fuel plant adjacent to the PSF.²⁰ Geotechnical testing was performed at this location to determine the foundation requirements for this new plant. Two soil borings were drilled through the soil mound to a depth of 230 ft, and the remaining seven borings were drilled through the soil mound to a depth of approximately 42 ft. Soil cores were sent for laboratory analysis, and settlement indicators were installed in the soil mound. Although the soil mound is still present to the west of the BSW, there were no radioactive materials used during the testing, and the plutonium processing facility was never constructed. In summary, there is no reasonable potential for residual contamination in the soil mound or in the 53.6-acre area proposed solar facility from the soil mound.

3.3 Conclusion

Based on the review of historical documents, there were no historical operations in the 53.6-acre area proposed for the construction of the solar electric generation facility that would have resulted in contamination in this area. In addition, while the aerial gamma radiation surveys have identified

¹⁸ Health Physics Journal. 1990. Volume 59, Number 4, Pages 471-482.

¹⁹ Phase 1 Decommissioning Plan for the West Valley Demonstration Project, Revision 2, December 2009.

²⁰ Nuclear Fuel Services, Inc. December 1971. "Draft Environmental Report: Plutonium Fuel Fabrication Plant, West Valley, NY."

radioactive material on other areas of the Center that are associated with releases from the Main Plant Process Building, the aerial gamma radiation surveys of the area show no radioactive materials in this area that would be associated with nuclear activities in this area or releases of radioactive material from the reprocessing plant. For the areas adjacent to, but not part of the 53.6-acre area, there is no reasonable potential for the historical operations in these areas to have led to contamination in the 53.6-acre area. All information shows that the area proposed for the construction of the solar facility is non-impacted by radioactive materials.

4 50.59 Analysis for the Proposed Placement of a Solar Renewable Energy Facility on the Retained Premises of the Western New York Nuclear Service Center

Introduction

The Town of Ashford is requesting to lease 53.6 acres of Center property for the purpose of entering into a sublease with a developer that will construct and operate a solar photovoltaic renewable energy facility on the leased property. NYSERDA is not presently requesting to release this property from the license. As described in Section 2, the property will remain under NYSERDA ownership and the Part 50 license, and public access to the property will continue to be restricted. The only changes to the property will be the installation of solar panels and related electrical equipment. After the construction of the project, the facility will be operated remotely, only occasional vegetation maintenance will be required, and access to the property by members of the public will continue to be restricted.

In discussing the proposed project with NRC staff, NYSERDA was informed that NRC would expect a 10 CFR 50.59 analysis to be prepared to address the question of whether the construction of solar photovoltaic facility on the Retained Premises of the Center property would require a Part 50 license amendment. The process used for the 50.59 analysis, and the result of the analysis, is described below.

NRC Reg Guide DG-1334 and NEI 96-07 Revision 1

In considering the 50.59 analysis for the proposed solar facility, NYSERDA consulted NRC's Draft Regulatory Guide DG-1334, (*Proposed Revision of Regulatory Guide 1.187, Guidance for*

*Implementation of 10 CFR 50.59, Changes, Tests, and Experiments*²¹) to identify an acceptable approach for conducting the 50.59 analysis. Reg Guide DG-1334 states that the NRC has approved NEI-96-07, Revision 1²² as a method acceptable to NRC staff for complying with the provisions of 10 CFR 50.59, with the clarifications as provided in DG-1334.

Reg Guide DG-1334 notes that while most of the discussion and examples in NEI-96-07 apply to power reactors, the guidance in Rev 1 of NEI-96-07 is also applicable to evaluations performed by Class 104 licensees for medical therapy and research and development facilities (non-power production or utilization facilities). The West Valley facility is licensed as a Class 104.b production facility, licensed under 10 CFR Part 50 by the USAEC in 1966. The facility operated from 1966 until 1972, when it was shut down for modifications, and the facility never resumed operations. In 1980, the United States Congress passed the West Valley Demonstration Project Act, directing DOE to conduct a decontamination and decommissioning demonstration project at West Valley in cooperation with NYSERDA.

In 1981, the NRC amended the Part 50 license to allow DOE to conduct the WVDP (Change No. 31). This amendment transferred the facility to DOE, put the license's technical specifications in abeyance, and suspended NYSERDA's reporting requirements during the time DOE is in possession of the facility. License Change No. 32, issued by NRC in 1982, removed NFS, the private company that operated the facility, from the Part 50 license, and made NYSERDA the sole licensee.

Since 1982, DOE, under the authority of the West Valley Demonstration Project Act, has been actively decontaminating, deactivating, and dismantling the Part 50-licensed facility. Although the Part 50 license remains in existence, the primary facilities used in the reprocessing operation have been deactivated and decontaminated in preparation for demolition. For the Main Plant Process Building, most major systems, tanks, vessels, piping, etc. have been flushed, drained, and decontaminated, and many have been completely removed. As of April 1, 2018, the Main Plant Process Building is over 86 percent deactivated (deactivated means that systems have been removed and contamination has been fixed or removed sufficiently to allow open-air demolition). As a result of the WVDP decommissioning work conducted at West Valley over the past three decades, the West Valley facility is no longer a production facility in a physical or operational sense. Regardless, to meet NRC's expectations for an evaluation of changes to a

²¹ U. S. Nuclear Regulatory Commission. 2016. NRC Regulatory Guide. "Guidance for Implementation of 10 CFR 50.59, Changes, Tests, and Experiments." Draft Reg. Guide DG-1334.

²² NEI 96-07, Rev. 1, (Final Draft). February 22, 2000. "Guidelines for 10 CFR 50-59 Evaluations."

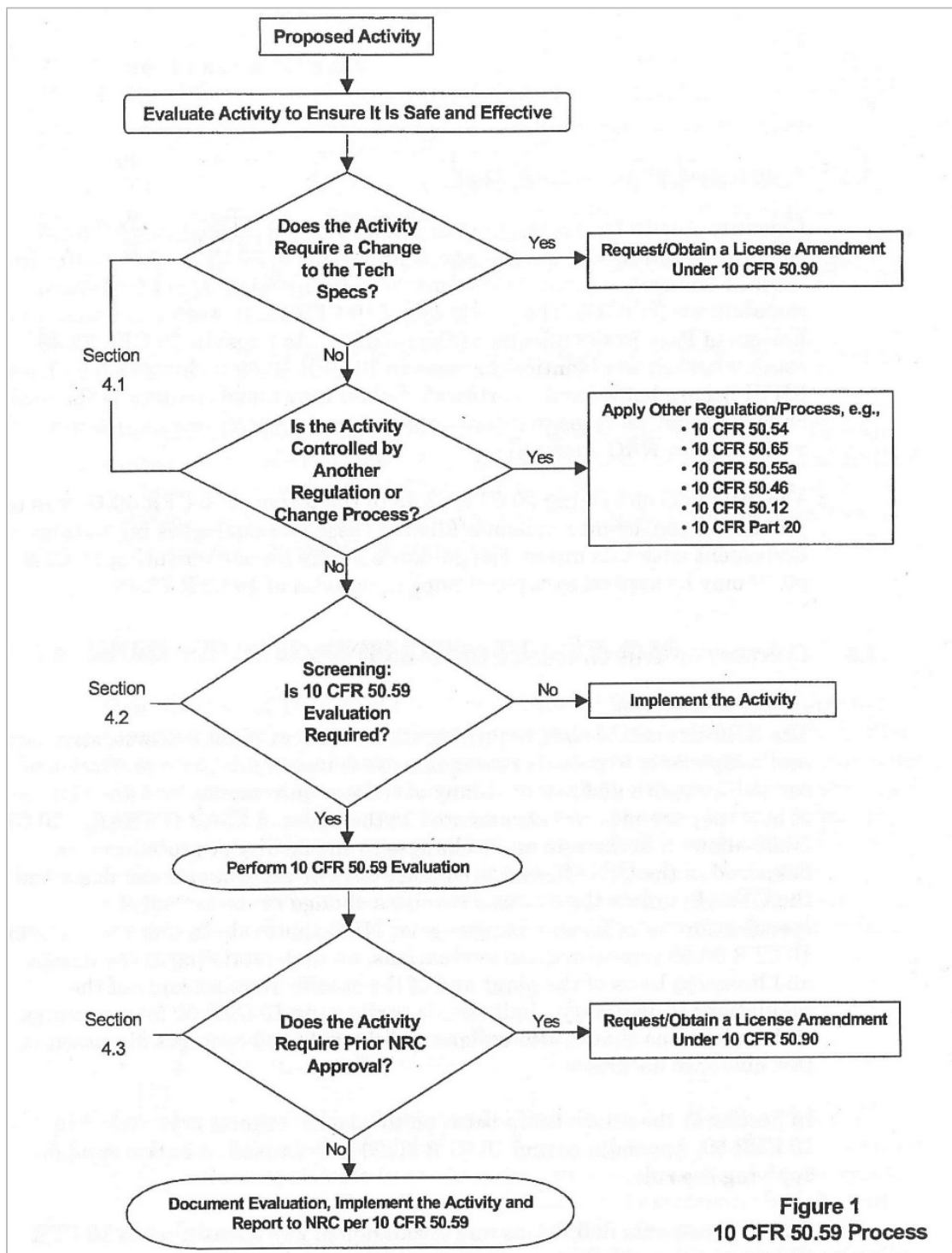
facility that remains licensed under a Part 50 license, NYSERDA prepared an evaluation of the proposed solar photovoltaic facility under 10 CFR 50.59, using the guidance identified in NEI 96-07, Rev 1, as clarified by Reg Guide DG-1334.

NEI 96-07, Revision 1 Implementation Guidance

Section 4.0 of NEI 96-07, Rev 1 states that licensees may determine applicability and screen activities, as described in Sections 4.1 and 4.2, to determine if 10 CFR 50.59 evaluations are required. The evaluation of applicability and screening analysis is presented below, and a summary of the 10 CFR 50.59 process is provided in Figure 4.1.

Figure 4.1. Summary of the 10 CFR 50.59 Process

Source: NEI 96-07 Rev1



4.1 Applicability

As stated in Section (b) of 10 CFR 50.59, the rule applies to each holder of a license authorizing operation of a production or utilization facility. Because NYSERDA is the holder of a license authorizing operation of a production facility, 10 CFR 50.59 applies to NYSERDA and 10 CFR 50.59 should be used to determine whether the proposed solar facility would require a license amendment.

4.1.1 Applicability to Licensee Activities

The first step in the 50.59 evaluation process is to determine whether the specific activity or change being considered by the licensee requires a formal evaluation under 10 CFR 50.59. NEI-96-07 Rev 1 states that 50.59 is applicable to tests or experiments not described in the UFSAR (Updated Final Safety Analysis Report), and to changes in the facility and procedures as described in the UFSAR, including changes made in response to new requirements or generic communications, and tests or experiments not described in the UFSAR. Section 4.1.1. of NEI-96-07 Revision 1 also states that 50.59 would not be applicable to: a) proposed activities that would require a change in the technical specifications under the license (because those changes would require a license amendment under 10 CFR 50.90); or b) changes that are controlled by other more specific requirements and criteria established by regulation (because those changes would be governed by those specific requirements and criteria). These applicability tests are evaluated below.

Does the proposed activity require a change in the technical specifications under the license?

In determining whether the proposed activity would require a change in the technical specifications of the license, NYSERDA conducted a review of all Technical Specifications that are incorporated in the Part 50 license. This review did not identify changes to the Technical Specifications that would be required by the construction of a solar electric generation facility on the Retained Premises of the Center. Table 1 presents a list of the Technical Specifications for the Part 50 License for the Center as well as the rationale for the conclusion that no changes to the Technical Specifications are required.

If a change in the Technical Specifications had been required, that change would be made via the license amendment process under 10 CFR 50.90, rather than continuing the evaluation under the 50.59 process. Because a license amendment was not triggered due to the need to modify Technical Specifications, the evaluation under 10 CFR 50.59 as to whether the construction of a solar facility requires a license amendment proceeded to the next step.

Table 1 – Evaluation of Impacts on the Technical Specifications for License CSF-1 from the Proposed Solar Facility

Column A	Column B	Column C	Column D
Technical Specification Number and Name	Objective	Will the proposed solar facility require a change in this Technical Specification?	Basis for answer in column C.
1.1 Location of Site	Describes the location of the site.	No	<ul style="list-style-type: none"> Site location not changed by construction of a solar facility.
1.2 Location of Plant	Describes the location of the plant within the site.	No	<ul style="list-style-type: none"> Plant location not changed by construction of a solar facility.
1.3 Flow of Material	Provides an upper-level description of material flow through the plant.	No	<ul style="list-style-type: none"> Material no longer flows through the plant as described in the technical specifications. Material flows would not be changed by the construction of a solar facility.
1.4 Auxiliary Systems	Identifies the auxiliary systems	No	<ul style="list-style-type: none"> The list of auxiliary systems identified in this technical specification would not be changed by the construction of a solar facility.
2.0 Definitions	Defines key terms in the Technical Specifications	No	<ul style="list-style-type: none"> The definitions provided would not be changed by the construction of a solar facility.
3.0 Authorized Materials			
3.1 Nuclear Fuel	Provides the pre-irradiation fuel compounds and U-235 enrichment allowed to be received at the NFS plant.	No	<ul style="list-style-type: none"> The plant is being prepared for demolition and no longer receives nuclear fuel for reprocessing. All fuel has been removed from the NFS West Valley plant.
3.2 Unirradiated Source Materials	Identifies the materials, possession limits, and form of source materials allowed at the NFS plant.	No	<ul style="list-style-type: none"> The plant is being prepared for demolition and no longer receives source materials for testing the flow of material through the plant.
3.3 Calibration, Laboratory Standard and Test Material	Identifies the radionuclides, possession limits and form of material allowed for standards, tests, measurements, and calibrations.	No	<ul style="list-style-type: none"> Radioactive material for standards, tests, measurements, and calibrations, as described and regulated under the Part 50 License, are no longer used at the NFS plant. Any sealed sources used for equipment calibration are controlled under the DOE-WVDP and would not be impacted by the construction of a solar facility.

Table 1 – Evaluation of Impacts on the Technical Specifications for License CSF-1 from the Proposed Solar Facility

Column A	Column B	Column C	Column D
4.0 Safety Limits			
4.1 Radioactivity Content of Released Gaseous Effluents	To provide reasonable assurance that concentrations of radioactivity occurring off site from the airborne release of radioactivity will meet with the requirements of Title 10, Code of Federal Regulations Part 20, and the guidance values established by the Federal Radiation Council.	No	<ul style="list-style-type: none"> Airborne releases would not be changed by the construction of a solar facility. Gaseous effluent concentrations in off-site areas are controlled by DOE-WVDP and would not be impacted by the construction of a solar facility.
4.2 Radioactivity Content of Released Liquid Effluents	To limit the concentrations of radioactivity in liquid effluents discharged from the site.	No	<ul style="list-style-type: none"> The radioactivity limits for liquid effluents identified in the technical specification no longer apply since the reprocessing facility no longer operates and is being prepared for demolition. Current water effluent concentrations are controlled by DOE-WVDP and would not be impacted by the construction of a solar facility.
4.3 Fuel Quantity and Canister Spacing	To assure that individual units and arrays of units are maintained in subcritical configuration in the FRS.	No	<ul style="list-style-type: none"> Spent fuel is no longer stored in the FRS or anywhere else on site. This technical specification is no longer relevant and would not be impacted by the construction of a solar facility.
4.4 Dissolver Charger	To prevent criticality in the dissolvers.	No	<ul style="list-style-type: none"> Dissolvers are no longer used in the facility and have been removed. The construction of a solar facility would have no impact on any criticality issues anywhere in the facility.
4.5 Feed Solution Concentration	To maintain a subcritical concentration of fissile material in feed solutions.	No	<ul style="list-style-type: none"> Technical Specification for feed solutions is no longer relevant. The plant no longer operates and is being prepared for demolition. The construction of a solar facility on the Retained Premises will have no impact on this technical specification.

Table 1 – Evaluation of Impacts on the Technical Specifications for License CSF-1 from the Proposed Solar Facility

Column A	Column B	Column C	Column D
4.6 Fissionable Isotope Concentration in Solvent Extraction	To assure subcritical operation of the solvent extraction columns.	No	<ul style="list-style-type: none"> The production plant no longer operates and is being prepared for final demolition. The extraction cells have been deactivated and the solvent extraction columns have been removed from the cell. The construction of a solar facility on the Retained Premises will have no impact on this technical specification.
4.7 Extractant Concentration	To limit the concentrations of fissile isotopes in the solvent to prevent nuclear criticality.	No	<ul style="list-style-type: none"> The reprocessing facility no longer operates and is being prepared for demolition. The technical specification for the concentration of fissile isotopes in the extraction solvent is no longer relevant to site operations.
4.8 Uranium Product Solution Storage	To assure that the uranium product solutions will be stored under nuclear safe conditions.	No	<ul style="list-style-type: none"> The reprocessing facility no longer operates and is being prepared for demolition. The technical specification for Uranium Product Solution Storage is no longer relevant to site operations.
4.9 Plutonium Ion Exchange Operation	To prevent uncontrolled exothermic reactions in the ion exchange columns.	No	<ul style="list-style-type: none"> The plant no longer operates and is being prepared for final demolition. The ion-exchange columns have been removed from the plant. The construction of a solar facility on the Retained Premises will have no impact on this technical specification.
4.10 Plutonium Solution Storage	To assure that plutonium solutions are stored in a safe manner.	No	<ul style="list-style-type: none"> The plant no longer operates and is being prepared for final demolition. Plutonium solutions are no longer stored on site. The construction of a solar facility on the Retained Premises will have no impact on this technical specification.
4.11 Rework Solution Concentration	To assure that the solution containing special nuclear material will remain subcritical in both the Rework Evaporator and the Rework Evaporator Feed Tank.	No	<ul style="list-style-type: none"> The plant no longer operates and is being prepared for final demolition. The Rework Evaporator and the Rework Evaporator Feed Tank are no longer in operation. This technical specification is no longer relevant to site operations, and the construction of a solar facility on the Retained Premises will have no impact on this technical specification.

Table 1 – Evaluation of Impacts on the Technical Specifications for License CSF-1 from the Proposed Solar Facility

Column A	Column B	Column C	Column D
4.12 Caustic Concentration in Carbon Steel Waste Storage Tanks	To assure that the liquid waste in carbon steel waste storage tanks shall be maintained in alkaline condition at all time to prevent excessive corrosion of the tanks.	No	<ul style="list-style-type: none"> Tanks 8D-1 and 8D-2 are empty and the tank heels are kept dry using a Tank and Vault Drying System. Tanks 8D-3 and 8D-4 were not present when this SAR was prepared, but are stainless steel, not carbon steel tanks. 8D-3 is empty, and 8D-4 has approximately 4,000 gallons of liquid and is being properly managed by the DOE-WVDP. There are no process or other interconnections between the proposed solar facility and the Waste Tank Farm, and the Solar facility is 4,700 ft. from the Waste Storage Tanks.
4.13 Solid Radioactive Waste Burial	To assure that activity associated with buried waste does not migrate from the burial area.	No	<ul style="list-style-type: none"> There are no process or other interconnections between the proposed solar facility and the Waste Disposal Area (NDA). Solar facility is 3,000 ft. from the Waste Disposal Area (NDA). The construction of the solar facility would have no impact on the management of the NDA or the content of Technical Specification 4.13.
4.14 Exhaust Filter Differential Pressure	To minimize the probability of filter failure in exhaust ventilation systems.	No	<ul style="list-style-type: none"> Ventilation systems are in various stages of being deactivated and removed. The construction of a Solar Electric Generation Facility on the Retained Premises, approximately 4,700 ft to the east of the Main Plant Process Building, will not impact any aspect of the ventilation systems at the site, including exhaust filter differential pressures.
4.15 Evaporator Steam Pressure	To prevent rapid exothermic degradation reactions of organic materials that could be present in process or waste evaporators.	No	<ul style="list-style-type: none"> The plant no longer utilizes steam and the steam boilers have been decommissioned in preparation for demolition of the utility room. Process and waste evaporators are no longer used at the facility. A steam source is no longer needed or used for processes in the facility.
4.16 Respiratory Protection Equipment	To assure that plant personnel, utilizing respiratory protection equipment, will not inhale	No	<ul style="list-style-type: none"> The plant respiratory protection program is managed and controlled by the DOE-WVDP. The construction of a solar facility on the Retained Premises will have no impact on the

Table 1 – Evaluation of Impacts on the Technical Specifications for License CSF-1 from the Proposed Solar Facility

Column A	Column B	Column C	Column D
	excessive quantities of radioactive material.		site respiratory protection program or this technical specification.
5.0 Minimum Conditions for Operation			
5.1 Effluent and Environmental Monitoring	To establish sampling points, sampling frequency and sample analytical requirements for gaseous and liquid plant effluents and to establish an environmental monitoring program and reporting requirements.	No	<ul style="list-style-type: none"> The WVDP effluent and environmental monitoring program is managed and controlled by the DOE-WVDP. The construction of a solar facility on the Retained Premises will have no impact on the site effluent or environmental monitoring program or this technical specification.
5.2 Process Instrumentation	To assure that process instrumentation necessary to prevent nuclear criticality is in operating condition at all times.	No	<ul style="list-style-type: none"> The process instrumentation described in this technical specification is no longer needed or present in the facility. The construction of a solar facility on the Retained Premises will have no impact on this technical specification.
5.3 Ventilation	To assure that ventilation equipment necessary for safety is operable during plant operation.	No	<ul style="list-style-type: none"> Ventilation systems are in various stages of being deactivated and removed. The construction of a Solar Electric Generation Facility on the Retained Premises, approximately 4,700 ft to the east of the Main Plant Process Building, will not impact any aspect of the remaining ventilation systems at the site. The remaining site ventilation systems are being managed and readied for demolition by the DOE-WVDP.
5.4 Spare Waste Storage Capacity	To prevent loss of stored radioactive waste liquids to the environment.	No	<ul style="list-style-type: none"> Spare waste storage capacity, as described in this technical specification, is no longer needed. The construction of a solar facility on the Retained Premises will have no impact on this technical specification.
5.5 High Radiation Area Access	To assure that personnel do not inadvertently enter areas where the radiation	No	<ul style="list-style-type: none"> The DOE-WVDP manages the worker radiation protection program at the facility, including limiting access to high radiation areas.

Table 1 – Evaluation of Impacts on the Technical Specifications for License CSF-1 from the Proposed Solar Facility

Column A	Column B	Column C	Column D
	exposure potential may be significant.		<ul style="list-style-type: none"> The construction of a Solar Electric Generation Facility on the Retained Premises, approximately 4,700 ft to the east of the Main Plant Process Building, will not impact any aspect of the high radiation access program at the site, or this technical specification.
5.6 Contamination and Radiation Control	To maintain adequate radiological conditions for the protection of the health and safety of plant personnel.	No	<ul style="list-style-type: none"> The DOE-WVDP manages the contamination and radiation control program at the facility. The construction of a Solar Electric Generation Facility on the Retained Premises, approximately 4,700 ft to the east of the Main Plant Process Building, will not impact any aspect of the contamination and radiation control program at the site, or this technical specification.
6.0 Surveillance Requirements			
6.1 Boron Raschig Rings	To assure that adequate boron-containing Raschig rings are present in equipment in which the rings are used as fixed neutron absorbers.	No	<ul style="list-style-type: none"> The plant no longer operates and is being prepared for final demolition by the DOE-WVDP. Boron-containing Raschig rings are no longer needed or present in equipment in the Main Plant. The construction of a solar facility on the Retained Premises will have no impact on this technical specification.
6.2 Sump Alarms and Eductors	To assure that liquid accumulation will be detected and can be removed.	No	<ul style="list-style-type: none"> The plant no longer operates and is being prepared for final demolition by the DOE-WVDP. Sump alarms and eductors in the PPC and XC-2 and XC-3 are no longer needed or present. The construction of a solar facility on the Retained Premises will have no impact on this technical specification.
6.3 Waste Storage Tank Pan Instrumentation	To assure that liquid accumulation will be detected.	No	<ul style="list-style-type: none"> The DOE-WVDP is presently managing the Waste Storage Tanks under DOE's programs, directives, and orders rather than this technical specification. The construction of a solar facility on the Retained Premises will have no impact on this technical specification or the DOE-WVDP program for managing the waste storage tanks.

Table 1 – Evaluation of Impacts on the Technical Specifications for License CSF-1 from the Proposed Solar Facility

Column A	Column B	Column C	Column D
6.4 Emergency Utility Equipment	To assure that standby equipment necessary for continued facility operations is maintained in an operative condition.		<ul style="list-style-type: none"> The DOE-WVDP is presently managing standby equipment necessary for facility operations under DOE's programs, directives and orders rather than this technical specification. The construction of a solar facility on the Retained Premises will have no impact on this technical specification or the DOE-WVDP program for managing the standby equipment necessary for facility operations.
6.5 Air Filtration Equipment	To assure proper performance of the final air filters used in the plant.	No	<ul style="list-style-type: none"> The DOE-WVDP is presently managing the requirements to assure proper performance of ventilation systems used in the plant under DOE's programs, directives and orders rather than this technical specification. The construction of a solar facility on the Retained Premises will have no impact on this technical specification or the DOE-WVDP program for managing the ventilation systems.
6.6 Dissolver Dilution Air	To assure that the concentration of hydrogen gas in the dissolver off-gas is below its lower explosive limit.	No	<ul style="list-style-type: none"> Dissolvers are no longer used in the facility, and they have been removed from the plant. This technical specification is no longer relevant, and the construction of a solar facility on the Retained Premises will have no impact on this technical specification.
6.7 Boric Acid	To assure that boric acid will be available to terminate a nuclear reaction should accidental nuclear criticality occur in either the dissolver or the rework evaporator.	No	<ul style="list-style-type: none"> The plant no longer operates and is being prepared for final demolition by the DOE-WVDP. The dissolvers and rework evaporator are no longer used in the plant, and boric acid is no longer needed to terminate a nuclear reaction because the dissolvers and rework evaporator are no longer operational or present in the plant.
6.8 Blanking-Off and Locking Out	To assure that flows are properly routed during a campaign thereby avoiding criticality through precipitation or overconcentration of fissile material.	No	<ul style="list-style-type: none"> The reprocessing plant no longer operates, and material flows through the plant are no longer occurring. The plant is being prepared for final demolition by the DOE-WVDP. This technical specification is no longer relevant, and the construction of a solar facility on the Retained Premises will have no impact on this technical specification.

Table 1 – Evaluation of Impacts on the Technical Specifications for License CSF-1 from the Proposed Solar Facility

Column A	Column B	Column C	Column D
6.9 Water Activity Alarms	To provide added assurance of prompt detection of excessive radioactivity in steam condensate and cooling water.	No	<ul style="list-style-type: none"> Steam and cooling water are no longer used for heating and cooling of process solutions, and the detection of excess radioactivity in steam condensate and cooling water is no longer required. This technical specification is no longer relevant, and the construction of a solar facility on the Retained Premises will have no impact on this technical specification.
6.10 Poisoned Dissolver Baskets	To provide assurance that sufficient neutron absorber is fixed within a dissolver basket.	No.	<ul style="list-style-type: none"> Dissolvers are no longer used in the facility, and they have been removed from the plant. This technical specification is no longer relevant, and the construction of a solar facility on the Retained Premises will have no impact on this technical specification.
6.11 Solvent Analysis	To assure that the solvent used in the extraction systems contains no more tributyl phosphate (TBP) than allowed for the fuel enrichment being processed.	No.	<ul style="list-style-type: none"> Solvent extraction is no longer occurring in the facility. This technical specification is no longer relevant, and the construction of a solar facility on the Retained Premises will have no impact on this technical specification.
7.0 Administrative Controls			
7.1 Administrative Requirements	To assure that a management system responsive to the safety needs of the operation is established and maintained.	No.	<ul style="list-style-type: none"> The plant no longer operates and is being prepared for final demolition by the DOE-WVDP. The DOE-WVDP and their prime contractor are presently managing the facility and have established an administrative framework to maintain the safe operation and control of the facility. This technical specification is no longer relevant, and the construction of a solar facility on the Retained Premises will have no impact on this technical specification.
7.2 Category 10 Fuels Operating Procedures	Provides operational requirements and limits for Category 10 fuels.	No.	<ul style="list-style-type: none"> The plant no longer operates and is being prepared for final demolition by the DOE-WVDP.

Table 1 – Evaluation of Impacts on the Technical Specifications for License CSF-1 from the Proposed Solar Facility			
Column A	Column B	Column C	Column D
			<ul style="list-style-type: none"> The plant no longer receives nuclear fuel for reprocessing. All fuel has been removed from the NFS West Valley plant.

Is the change controlled by other more specific requirements and criteria established by regulation?

According to NEI 96-07 Rev 1, changes to the facility or procedures that are controlled by other more specific requirements and criteria established by regulation are specifically excluded from the scope of 10 CFR 50.59. If specific requirements and criteria established by regulation apply to the change, those specific requirements or criteria would be followed, rather than the 50.59 process. NEI 96-07 provides the following examples of more specific requirements that could control the change:

- 10 CFR 50.54 – Conditions of Licenses
- 10 CFR 50.65 – Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants
- 10 CFR 50.55a – Codes and Standards
- 10 CFR 50.46 – Acceptance Criteria for Emergency Core Cooling Systems for Light-Water Power Reactors
- 10 CFR 50.12 – Specific Exemptions
- 10 CFR 20 - Standards for Protection Against Radiation

NYSERDA staff reviewed each of the specific requirements and criteria established in the regulations identified above and in other sections of 10 CFR 50 to determine whether the construction of a solar photovoltaic facility would be controlled by these other more specific requirements and criteria. The NYSERDA review did not identify any instance where the construction of a solar photovoltaic facility on the Retained Premises would be controlled by other more specific requirements and criteria established by these regulations. As such, the evaluation of the solar photovoltaic facility under 10 CFR 50.59 proceeds to the next step.

4.1.2 Maintenance Activities

According to Section 4.1.2 of NEI-96-07 Rev 1, maintenance activities are activities that restore Structures, Systems, and Components (SSCs) to their as-designed condition, including activities that implement approved design changes. Maintenance activities include troubleshooting, calibration, refurbishment, post-maintenance testing, identical replacements, housekeeping, associated temporary changes, and similar activities that do not permanently alter the design or design function of SSCs, and are thus not subject to 10 CFR 50.59, but are subject instead to the provisions of 10 CFR 50.65(a)(4).

By its terms and provisions, 10 CFR 50.65 – “Requirements for monitoring the effectiveness of maintenance at nuclear power plants” – applies to all conditions of nuclear power plant operation (emphasis added), including normal shut down. The maintenance rule is specifically directed to nuclear power plants and the safety-related and non-safety-related SSCs therein that are relied upon to remain functional during and following design basis events to ensure the integrity of the reactor coolant pressure boundary, the capability to shut down the reactor and maintain it in a safe shutdown condition, or the capability to prevent or mitigate consequences of accidents that result in potential offsite exposures comparable to offsite exposure guidelines for stationary power reactors. See 10 CFR 50.65(b). The Statements of Consideration for the maintenance rule (56 FR 31306, July 10, 1991) are clear: the rule is directed to “commercial nuclear power plant licensees . . . to ensure the continuing effectiveness of maintenance for the lifetime of nuclear power plants . . .”²³ The maintenance rule does not apply to non-power reactors, research and test reactors or production facilities.

The installation of a solar electric generation facility on the Retained Premises of the Center is not a maintenance activity. After construction of the solar facility, the solar facility will operate (passively) and be subject to periodic maintenance and upkeep. Such maintenance does not involve maintenance of SSCs of a nuclear power plant; and the solar facility itself is not a nuclear power plant or any kind of a utilization or production facility under the Atomic Energy Act of 1954, as amended, or NRC’s regulations. Consequently, NRC’s maintenance rule – 10 CFR 50.65 – and its requirements with regard to SSCs for nuclear power plants do not apply. As such, the 50.59 process for evaluating whether the construction, operation, maintenance, and eventual dismantlement-decommissioning of a solar facility on the Retained Premises requires a license amendment proceeds to the next step.

4.1.3 UFSAR Modifications

Per Section 4.1.3 of NEI 96-07, modifications to the Updated Final SAR (UFSAR) that are not the result of activities performed under 10 CFR 50.59 are not subject to control under 10 CFR 50.59.

The installation of a solar electric generation facility on the Retained Premises of the Center is not a change to the SAR. As such, the use of the 50.59 process for evaluating whether the construction of a solar facility on the Retained Premises requires a license amendment proceeds to the next step.

²³ 56 FR 31306, 1st col., 2d col; 56 FR 31322, 2d col.

4.1.4 Changes to Procedures Governing the Conduct of Operations

Per NEI 96-07 Rev 1, changes to managerial and administrative procedures governing the conduct of facility operations, even if described in the UFSAR, are controlled under 10 CFR 50, Appendix B, and are not subject to control under 10 CFR 50.59.

The installation of a solar electric generation facility on the Retained Premises of the Center is not a change to the managerial and administrative procedures governing the conduct of facility operations. As such, the use of the 50.59 process for evaluating whether the construction of a solar facility on the Retained Premises requires a license amendment proceeds to the next step.

4.1.5 Changes to Approved Fire Protection Programs

Per NEI 96-07, changes to approved Fire Protection Programs fall under the control of the Standard Fire Protection License Condition, and such, would not be subject to review under 10 CFR 50.59.

The installation of a solar electric generation facility on the Retained Premises of the Center is not a change to the facility's fire protection program. As such, the use of the 50.59 process for evaluating whether the construction of a solar facility on the Retained Premises requires a license amendment proceeds to the next step.

4.1.6 Conclusions on Applicability Determination

Based on the applicability criteria described above, the installation of a solar facility on the Retained Premises was not eliminated from consideration under 10 CFR 50.59 based on any of the applicability tests. As such, it was determined that 10 CFR 50.59 is the applicable process for determining whether the proposed solar facility requires a license amendment, and the 50.59 evaluation process proceeds to the next step, "screening."

4.2 Screening

According to Section 4.2 of NEI 96-07 Rev 1, once it has been determined that 10 CFR 50.59 is applicable to a proposed activity, screening is performed to determine whether the activity should be formally evaluated against the specific evaluation criteria of 10 CFR 50.59(c)(2). NEI 96-07 states that engineering, design, and other technical information concerning the change and affected SSCs should be used to screen the activity.

Sections 4.2.1 and 4.2.2 of NEI 96-07 Rev 1 provide guidance and examples for determining whether an activity is: (1) a change to the facility or procedures as described in the UFSAR, or (2) a test or experiment not described in the UFSAR. According to Section 4.2 of NEI 96-07, “If an activity is determined to be neither, then it screens out and may be implemented without further evaluation under 10 CFR 50.59.”

4.2.1 Is the Activity a Change to the Facility or Procedures as Described in the SAR

In assessing whether an activity is a “change” to the facility or procedures as described in the UFSAR, it must be determined whether the activity is: *a modification or addition to, or a removal from, the facility that affects: 1) the design function of an SSC, 2) a method of performing or controlling the design function, or 3) an evaluation for demonstrating that intended design functions will be accomplished.*

To determine whether a proposed change affects a design function of an SSC, a method of performing or controlling a design function or an evaluation that demonstrates that design functions will be accomplished, NEI-96-07 Rev 1 says that a thorough understanding of the affected SSCs and the proposed change is essential. According to NEI 96-07 Rev 1, only proposed changes that would, based on supporting engineering and technical information, have adverse effects on SSC design functions require evaluation under 10 CFR 50.59.

NEI 96-07 Rev 1 cites the following questions that could be considered in the evaluation of whether a proposed change affects an SSC design function, method of performing or controlling an SSC design function or an evaluation that demonstrates that SSC design functions will be accomplished:

- Q1 - Does the activity decrease the reliability of the SSC design function?
- Q2 - Does the activity reduce existing redundancy, diversity, or defense in-depth?
- Q3 - Does the activity add or delete an automatic or manual design function of the SSC?
- Q4 - Does the activity convert a feature that was automatic to manual or vice versa?
- Q5 - Does the activity introduce an unwanted or previously unreviewed system interaction?
- Q6 - Does the activity adversely affect the ability or response time to perform required actions, (e.g., alter equipment access or add steps necessary for performing tasks)?
- Q7 - Does the activity degrade the seismic or environmental qualification of the SSC?
- Q8 - Does the activity adversely affect other units at a multiple unit site?
- Q9 - Does the activity use equipment/tools that interface either directly or indirectly with an

operable SSC?

Q10 - Does the activity introduce intrusive test equipment into the SSC such that an SSC design function is affected?

For screening purposes, the SSCs, or equivalent, in the West Valley NFS SAR were evaluated against these questions.

4.2.1.1 Screening of Changes to the Facility as Described in the UFSAR

In terms of identifying whether the proposed solar facility would impact SSC design functions, methods of controlling design functions, or an evaluation that demonstrates intended design functions will be accomplished as described in the USFAR, NYSERDA assessed the West Valley SARs prepared by NFS during the NFS operational period of the Center (one SAR was prepared in the 1962-64 timeframe, and a second SAR was prepared in the 1973-75 timeframe). The two SARs are described below.

1962-1964 SAR - The 1962 -1964 SAR was submitted via 23 separate NFS submissions to the USAEC. Because 10 CFR 50 Appendix A, General Design Criteria for Nuclear Power Plants, was not developed by NRC until 1965, the 1962-1964 SAR does not use the term “Structures, Systems and Components” when describing and evaluating key portions of the West Valley reprocessing facility. The SAR does, however, systematically describe and evaluate the main components of the reprocessing facility and evaluates safety performance of the facility during both routine and abnormal operations.

1973-1975 SAR - The second version of the SAR was prepared by NFS during the period from 1973 through 1975, after the NFS plant had ceased operations. This SAR was prepared after the issuance of 10 CFR 50 Appendix A, so the 1973-1975 SAR does identify SSCs, but does not attempt to apply the term to areas of the plant described in the 1962-1964 SAR. It is also important to note, that this SAR includes the changes NFS planned to make to West Valley Plant as part of a major upgrade in the reprocessing facility. These changes included the installation of an intermediate level radioactive waste treatment system, the installation of an Atmospheric Protection System, the installation of additional dissolvers, additional HLW storage tanks, the installation of a facility to convert plutonium nitrate solution to a PuO₂ solid, and the construction of a 95-foot tall reinforced concrete structure over the majority of the Main Plant Process Building to prevent impacts from flying debris (missiles) associated with a tornado strikes.

SAR Used in the 10 CFR 50.59 Analysis for the Solar Project – After considering the content and timing of the two available NFS SARs, NYSERDA determined that 1962-1964 SAR best represents the facility as it was actually constructed and operated at the Center. The 1962-1964 SAR also provides the

most accurate design description and safety evaluation for those portions of the facility that remain at the site today that could be potentially impacted by the construction of a solar facility on the Retained Premises. Although the 1962-1964 SAR does not identify SSCs, the systematic description and evaluation presented in this SAR covers all significant plant systems, the potential radionuclide release points, and the scenarios for radiological impacts from both normal and abnormal releases from the critical facilities regulated under the Part 50 License, and it appears to be the SAR of record formally submitted to the NRC for licensing purposes. For these reasons, NYSERDA used the 1962-1964 SAR as the primary reference for the 10 CFR 50.59 analysis.

Documented Safety Analysis from the WVDP Operational Period - As described in Section 1, the WVDP operational period for the Center began in 1982, when DOE assumed “exclusive use and possession” of the central 200 acres of the facility to conduct the WVDP. Accordingly, and consistent with current license conditions 7.B.(1) and 7.D from Amendment 31 of License CSF-1, (no activity or action taken by licensee that, in DOE’s judgement, might inhibit or prevent DOE from taking action under the AEA or WVDPA), NYSERDA requested that DOE evaluate potential impacts from the solar facility on current WVDP facilities and operations. In accordance with the WVDP Act, DOE is conducting the WVDP with the informal review and consultation of NRC, and not under “formal procedures or actions by the Commission, the Atomic Energy Act of 1954, the Energy Reorganization Act of 1974, or any other law.” As such, the WVDP is being conducted under DOE’s Directives, which are the Department of Energy’s primary means of establishing policies, requirements, responsibilities, and procedures for Departmental elements and contractors.

DOE employs safety analyses of its nuclear and nonnuclear facilities as the principal safety basis for decisions to authorize the design, construction, or operation of these facilities. DOE develops Documented Safety Analyses (DSAs) to meet the requirements of 10 CFR 830, and a DSA has been prepared for the WVDP. Throughout the life of the WVDP, the DSA has been revised when new information was obtained, preliminary analyses were replaced with final analyses, DOE Directives evolved, and the Project work activities progressed. The DSA for the WVDP has been revised and updated 20 times²⁴ since the initiation of the project in 1982.

In April 2017, NYSERDA requested that DOE provide NYSERDA with an assessment of whether the proposed solar generation facility would have any impact on the effectiveness of the WVDP safety

²⁴ WVNS-DSA-001, Revision 20, Documented Safety Analysis for Waste Processing and Support Activities.

significant structures systems or components. NYSERDA's request letter, and DOE's response, is provided in Appendix G. The DOE letter also addresses the potential limitations placed on potential NYSERDA actions at the Center by Amendment 31 to the Part 50 license, and the stipulation in the DOE-NYSERDA Cooperative Agreement that NYSERDA not take any action on the Retained Premises that would interfere with the WVDP. Because DOE addressed the potential impacts of the solar project on the WVDP facilities and activities, the remainder of this 50.59 evaluation focuses on potential impacts from the proposed solar facility on reprocessing plant components identified in the 1962-1964 NFS SAR.

Is the Proposed Solar Facility “a change to the facility or procedures as described in the UFSAR”?

As stated above, in assessing whether an activity is a “change” to the facility or procedures as described in the SAR, it must be determined whether the activity is: *a modification or addition to, or a removal from, the facility that affects: 1) the design function of an SSC, 2) a method of performing or controlling the design function, or 3) an evaluation for demonstrating that intended design functions will be accomplished.* As also stated above, the 1962-1964 NFS SAR does not identify SSCs, but does include descriptions and evaluations of significant plant systems, process, and equipment; the salient features of the engineering aspects of the plant; the points of loss of radioactivity from the facility; radionuclide release points; and impacts from radiological releases or incidents during both normal and abnormal operations at the West Valley reprocessing plant. Each of these items was considered relative to the construction of a solar photovoltaic facility on the Retained Premises to determine whether the performance and safety of remaining portions of the facility could be impacted by the solar facility. Brief discussions of the evaluations are presented below, and the results are presented in Tables 2 through 5.

Plant Components, Processes, and Equipment

The plant components, processes and equipment, as identified in 1962-1964 SAR Sections III, IV, and V, were evaluated against the 10 questions identified in NEI-96-07 (presented above in Section 4.2.1). The following areas of the facility were evaluated against the 10 questions:

- Fuel Receiving and Storage
- Process Mechanical Cell
- Dissolution
- Feed Adjustment
- Solvent Extraction
- Uranium Product Purification and Concentration
- Product Packaging and Shipping

- Solvent Washing
- Waste Handling
- Exclusion Area

The results of this comparison are provided in Table 2. As the table shows, the solar facility would have no negative impacts for the facilities evaluated, because: 1) most of the facilities, operations, and equipment as described in the NFS SAR no longer exist or operate because they have been deactivated or removed through the WVDP decommissioning activities conducted over the last 35 years; and 2) there is no direct system interconnection between the solar facility and these major components of the facility as described in the SAR. The one area where there is a direct interconnection between the solar facility and a component of the licensed facility is the Exclusion Area (Retained Premises), where the solar facility will be constructed. Although this interconnection exists, the *function* of the Exclusion Area (to serve as a buffer zone) is not altered by the addition of the solar panels. Consequently, the answers to the 10 questions are also “no” for the Exclusion Area. The evaluation of potential impacts to the Exclusion Area is discussed in more detail below.

Based on the evaluation of the 10 questions for the main components of the facility described above, this portion of the screening evaluation shows that the proposed solar facility does not represent a “change to the facility as described in the SAR.”

Salient Features of the Engineering Aspects of the Plant

The NYSERDA evaluation considered whether the construction of a solar photovoltaic facility on the Retained Premises could impact the salient features of the engineering aspects of the plant as described in the 1962-1964 SAR. Section VI of the 1962-1964 SAR evaluates the salient features of the engineering aspects of the plant. These include:

- Ventilation
- Process Control Sampling and Analysis
- Maintenance
- Shielding
- Radiation Monitoring
- Utilities
- Criticality Control

As shown in Table 3, most of the facilities and operations described in the NFS SAR as salient features of the engineering aspects of the plant no longer exist or no longer operate because they have been eliminated or removed through the WVDP decommissioning activities over the last 35 years. In addition, there is no direct system interconnection between the solar facility and most of the components of the facility described above. The one possible exception is “Utilities,” although the electric utility feed to the plant is not specifically addressed in the Utilities section of the 1962-1964 SAR. Regardless, this issue was assessed in Table 3, and as described in that table, the protective relay equipment used in the solar facility would include a Direct Transfer Trip that would prevent an issue at the solar facility from impacting the utility’s power supply to the West Valley Facility.

The evaluation described above and presented in Table 3 did not identify any impacts to the salient features to the engineering aspects of the plant from the proposed solar facility. As such, this portion of the screening evaluation shows that the proposed solar facility also does not represent a “change to the facility as described in the SAR.”

Table 2 – Plant Components, Processes, and Equipment Evaluated in the 1962-1964 NFS SAR

Column A	Column B	Column C	Column D	Column E
Area	SAR Section	Status as of November 2, 2017	Is the answer to any of the Section 4.2.1 questions “yes” relative to the installation of a solar facility on the Retained Premises?	Basis for answer in column D
Fuel Receiving and Storage (FRS)	Plant Description Section 3.6 – 3.10 Detailed Process Description Section 4.2 – 4.8 Equipment Description Section 5.3 - 5.11	Spent Nuclear Fuel has been removed, FRS pool is empty, and FRS is ready for demolition.	Q1- No Q2- No Q3- No Q4- No Q5- No Q6- No Q7- No Q8- No Q9- No Q10- No	<ul style="list-style-type: none"> • The FRS is empty, deactivated, process equipment has been removed and is ready for demolition. • There are no process or other interconnections between the proposed solar facility and the FRS. • Solar facility is 4,700 ft from the FRS.
Process Mechanical Cell (PMC)	Plant Description Section 3.11 – 3.12 Detailed Process Description – Section 4.9 – 4.20 Equipment Description Section 5.12- 5.29	PMC is deactivated, emptied, and being prepared for demolition.	Q1- No Q2- No Q3- No Q4- No Q5- No Q6- No Q7- No Q8- No Q9- No Q10- No	<ul style="list-style-type: none"> • The PMC is empty, deactivated and being prepared for demolition. • There are no process or other interconnections between the proposed solar facility and the PMC. • Solar facility is 4,700 ft from the PMC.
Dissolution (Chemical Process Cell) (CPC)	Plant Description – Section 3.13 - 3.14 Detailed Process Description – Section 4.21 – 4.33 Equipment Description Section 5.30 – 5.37	CPC dissolvers and all other equipment, vessels, and piping were removed in the 1980s. CPC has been gutted, emptied, and is being prepared for demolition.	Q1- No Q2- No Q3- No Q4- No Q5- No Q6- No Q7- No Q8- No Q9- No Q10- No	<ul style="list-style-type: none"> • The CPC was emptied and deactivated early in the WVDP and was used as the storage area for the HLW canisters. The canisters have now been relocated to the HLW Interim Storage Pad. • There are no process or other interconnections between the proposed solar facility and the CPC. • Solar facility is 4,700 ft. from the CPC.

Table 2 – Plant Components, Processes, and Equipment Evaluated in the 1962-1964 NFS SAR

Column A	Column B	Column C	Column D	Column E
Feed Adjustment (Feed Adjustment Tank)	Plant Description - n/a Detailed Process Description - Section 4.34 Equipment Description - n/a	The Feed Adjustment tank was located in the Chemical Process Cell. It was removed in the 1980s.	Q1- No Q2- No Q3- No Q4- No Q5- No Q6- No Q7- No Q8- No Q9- No Q10- No	<ul style="list-style-type: none"> The Feed Adjustment Tank was removed from the CPC in the 1980s as part of the WVDP effort to deactivate the CPC.
Solvent Extraction	Plant Description – Section 3.15 Detailed Process Description - Section 4.35-4.66 Equipment Description 5.37-5.39	The extraction columns, piping, vessels, and all other equipment have been removed from the Extraction Cells. Cells are deactivated and ready for demolition.	Q1- No Q2- No Q3- No Q4- No Q5- No Q6- No Q7- No Q8- No Q9- No Q10- No	<ul style="list-style-type: none"> The Extraction Cells are empty, deactivated and ready for demolition. There are no process or other interconnections between the proposed solar facility and the Extraction Cells. Solar facility is 4,700 ft from the Extraction Cells.
Product Purification and Concentration	Plant Description – Section 3.16 Detailed Process Description – Section 4.67-4.71 Equipment Description Section 5.41-5.46	The Product Purification Cell has been deactivated and is currently being readied for demolition.	Q1- No Q2- No Q3- No Q4- No Q5- No Q6- No Q7- No Q8- No Q9- No Q10- No	<ul style="list-style-type: none"> The Product Purification Cell is empty, deactivated, and is being prepared for demolition. There are no process or other interconnections between the proposed solar facility and the Product Purification Cell. Solar facility is 4,700 ft from the Product Purification Cell.

Table 2 – Plant Components, Processes, and Equipment Evaluated in the 1962-1964 NFS SAR

Column A	Column B	Column C	Column D	Column E
Product Packaging and Shipping	Plant Description Section 3.16 Detailed Process Description Section 4.72-4.75 Equipment Description n/a	This area of the MPPB has been deactivated and prepared for demolition.	Q1- No Q2- No Q3- No Q4- No Q5- No Q6- No Q7- No Q8- No Q9- No Q10- No	<ul style="list-style-type: none"> Area has all process piping removed, deactivated, and is ready for demolition. Solar facility is 4,700 ft away from this area of the MPPB, no process interconnection with the PPS
Solvent Washing	Plant Description n/a Detailed Process Description Section 4.76-4.79 Equipment Description Section 5.63	This activity took place in XC-2 and in its associated pump niches in the Warm Aisles. All equipment has been removed, the cell has been deactivated, and is prepared for demolition.	Q1- No Q2- No Q3- No Q4- No Q5- No Q6- No Q7- No Q8- No Q9- No Q10- No	<ul style="list-style-type: none"> XC-2 is empty, deactivated, and is prepared for demolition. Solar facility is 4,700 ft. away from this area of the XC-2, no process interconnection with XC-2.
Acid Recovery	Plant Description Section 3.17 Detailed Process Description Section 4.80-4.87 Equipment Description Section 5.47 -5.48	The Acid Recovery Cell has been deactivated and readied for demolition.	Q1- No Q2- No Q3- No Q4- No Q5- No Q6- No Q7- No Q8- No Q9- No Q10- No	<ul style="list-style-type: none"> The Acid Recovery Cell is empty, deactivated, and ready for demolition. Solar facility is 4,700 ft. from the Acid Recovery Cell. There are no process or other interconnections between the proposed solar facility and the Acid Recovery Cell.

Table 2 – Plant Components, Processes, and Equipment Evaluated in the 1962-1964 NFS SAR

Column A	Column B	Column C	Column D	Column E
Waste Handling	<p>Plant Description Section 3.17</p> <p>Detailed Process Description Section 4.88-4.91</p> <p>Equipment Description Section 5.50-5.56</p>	Waste handling is a routine activity within the WVDP. Waste is generated, sorted, and either disposed offsite or stored in a robust facility within the WVDP perimeter.	<p>Q1- No</p> <p>Q2- No</p> <p>Q3- No</p> <p>Q4- No</p> <p>Q5- No</p> <p>Q6- No</p> <p>Q7- No</p> <p>Q8- No</p> <p>Q9- No</p> <p>Q10- No</p>	<ul style="list-style-type: none"> • The proposed Solar Facility is 4,700 ft away from where waste processing and storage operations are conducted within the WVDP. • DOE's evaluation showed that there will be no impact to these operations by the establishment of a Solar Facility within the exclusion zone. In addition, the construction of the Solar Facility will not generate any radioactive waste.
Exclusion Area	<p>Plant Description Section 3.1</p> <p>Detailed Process Description n/a</p> <p>Equipment Description n/a</p>	Exclusion Area generally remains as described in the SAR. Two small, nonimpacted parcels were previously deeded to the Town of Ashford and Cattaraugus County. Low levels of contaminated soil and sediment from NFS operations are present in certain, well-defined areas, but these are well away from the proposed solar facility.	<p>Q1- No</p> <p>Q2- No</p> <p>Q3- No</p> <p>Q4- No</p> <p>Q5- No</p> <p>Q6- No</p> <p>Q7- No</p> <p>Q8- No</p> <p>Q9- No</p> <p>Q10- No</p>	<ul style="list-style-type: none"> • The proposed Solar Facility will be located in the Exclusion Area. The discussion in Section 4.2.1.1 provides the basis for answering all Section 4.2.1 questions in the negative in regard to impacts on the Exclusion Area from the Solar Facility.

Table 3 – Salient Features of the Engineering Aspects of the Plant as Described in the 1962-1964 NFS SAR

Column A	Column B	Column C	Column D	Column E
Salient Features of the Engineering Aspects of the Plant	SAR Section	Specific System	Will the construction of a solar facility on the Retained Premises have any impact on the Salient Features of the Engineering Aspects of the Plant as described in the SAR?	Basis for answer in column D
Ventilation	6.3-6.21	<ul style="list-style-type: none"> • Office Building Ventilation • Main Plant Process Building Ventilation (HEV & VEC) • Fuel Receiving and Storage Ventilation • Cold Chemical System Ventilation • Off-Gas Ventilation Systems 	No	<ul style="list-style-type: none"> • Ventilation systems are in various stages of being deactivated and removed. • The construction of a Solar Electric Generation Facility on the Retained Premises, approximately 4,700 ft to the east of the Main Plant Process Building, will not impact any aspect of the ventilation systems at the site.
Process Control Sampling and Analysis	6.22-6.36	<ul style="list-style-type: none"> • Type A Samplers • Type B Samplers • Type C Samplers • Sample Schedule and Analytical Methods 	No	<ul style="list-style-type: none"> • The Process Control Sampling and Analysis system identified in the NFS SAR is no longer needed, operational, or in existence.
Maintenance	6.37-6.58	<ul style="list-style-type: none"> • Conventional Maintenance • Contact Maintenance 	No	<ul style="list-style-type: none"> • The Main Plant Process Building and other critical facilities were transferred to DOE in 1982 to conduct the WVDP. As such, maintenance activities identified in the NFS SAR are no longer conducted since the facility is no longer

Table 3 – Salient Features of the Engineering Aspects of the Plant as Described in the 1962-1964 NFS SAR

Column A	Column B	Column C	Column D	Column E
		<ul style="list-style-type: none"> Remote Maintenance 		<p>operational and is being prepared for demolition or have been transferred to the WVDP. Maintenance activities required for WVDP systems are conducted by WVDP personnel under current site management system as required under DOE Orders.</p> <ul style="list-style-type: none"> DOE has determined that the Solar Facility will not impact the effectiveness of the WVDP Documented Safety Analysis, or DOE's ability to carry out its activities pursuant to the WVDP Act.
Shielding	6.59-6.65	<ul style="list-style-type: none"> Zone 1, Normal Access Area Zone 2 Limited Access Area Zone 3, Controlled Access Area 	No	<ul style="list-style-type: none"> The construction of a Solar Electric Generation Facility on the Retained Premises, approximately 4,700 ft to the east of the Main Plant Process Building, will not impact any aspect of shielding systems at the site.
Radiation Monitoring	6.66-6.76	<ul style="list-style-type: none"> Fixed Monitoring System Mobile Monitoring Program 	No	<ul style="list-style-type: none"> There are no radiation monitoring installations in the proposed area for the Solar Electric Generation Facility on the Retained Premises. The property proposed for the construction of the solar facility will remain under license and will continued to be restricted to members of the public. The solar facility will not impact any aspect of the radiation monitoring systems identified in the NFS SAR. All monitoring systems and programs are being conducted as part of the WVDP. DOE has determined that the Solar Facility will not impact the effectiveness of the WVDP Documented Safety Analysis, or DOE's ability to carry out its activities pursuant to the WVDP Act.
Utilities	6.93-6.102	<ul style="list-style-type: none"> Raw Water Supply Domestic Water Cooling Water Plant Steam System 	No	<ul style="list-style-type: none"> The construction of a Solar Electric Generation Facility on the Retained Premises, approximately 4,700 ft to the east of the Main Plant Process Building, will not impact any aspect of the utility systems identified in the SAR.

Table 3 – Salient Features of the Engineering Aspects of the Plant as Described in the 1962-1964 NFS SAR

Column A	Column B	Column C	Column D	Column E
		<ul style="list-style-type: none"> • Natural Gas • Diesel Fuel • Instrument and Plant Air 		<ul style="list-style-type: none"> • The electric feed into the site was not specifically evaluated in the 1962-1964 SAR. However, in regard to the solar facility causing any kind of disturbance in the electric feed to the site, the protective relay equipment used in the solar facility would include a Direct Transfer Trip, which would prevent an issue at the solar facility from impacting the utility's power supply to the West Valley Facility. In addition, the West Valley facility has power feeds from backup generators.
Criticality Control	6.103-6.167	<ul style="list-style-type: none"> • FRS • PMC & GPC • Dissolution • Concentration • Feed Adjustment • Solvent Extraction • Stripping • Plutonium Product Concentration • Uranium Product Purification and Concentration • Product Packaging and Shipping • Off-Gas Scrubbers • Solvent Washing 	No	<ul style="list-style-type: none"> • There are no process interconnections between the Solar Facility and any portion of the site with radioactive materials. No radioactive materials are used as part of the operation of the facility. • The facilities evaluated for criticality in the 1962-1964 SAR (as listed in column C) are being or have been deactivated and prepared for demolition. • As such, the construction of a Solar Electric Generation Facility on the Retained Premises, approximately 4,700 ft to the east of the Main Plant Process Building, will not impact any aspect of criticality control at the site.

Points of Loss of Radioactivity During Normal Operations

The NYSERDA evaluation of whether the construction of a solar photovoltaic facility would impact critical facility components as documented in the 1962-1964 NFS SAR considered the possible impacts to the points of loss of radioactivity from the facility as described in the 1962-1964 SAR. The SAR states that there are six ways that radioactivity can be released to the environment, all of which were analyzed in the SAR to ensure that the measures incorporated in the plant to prevent release are more than adequate to assure protection of public health and safety.

The six “points of loss of radioactivity” are:

- Stack
- Waste Storage Tanks
- Storage Lagoon
- Burial Ground
- Egress of Personnel and Material
- Product Shipment

Each of these items was evaluated by NFS, and the SAR states that the results of the analysis establish that the means for preventing release from the plant and waste storage facilities are such that, under normal operating conditions, any release of radioactivity to the environment should be well within the limits of the maximum permissible concentrations in 10 CFR 20.

As shown in Table 4, NYSERDA’s evaluation did not identify any impacts to the points of loss of radioactivity from the proposed solar facility. As such, this portion of the screening evaluation shows that the proposed solar facility does not represent a “change to the facility as described in the SAR.”

Analysis of Impacts from Abnormal Operations

NYSERDA also considered whether the construction of a solar facility on the Retained Premises could increase or worsen impacts from abnormal operations at the facility as described in the NFS SAR. The 1962-1964 SAR analyzes abnormal events to evaluate impacts from accidents beyond the worst that may be deemed credible. These include:

- Loss from High-Level Waste Tanks

- Criticality Incident Anywhere in the Plant
- Criticality Incident in the Fuel Pool
- Chemical Explosion
- Failure of Iodine Removal Equipment

The 1962-1964 NFS SAR concludes that under all conditions, both normal and abnormal, with the exception of a 10^{20} criticality incident, the release of fission products to the environment will not, at the site boundary, exceed the maximum permissible concentrations prescribed in 10 CFR 20. The SAR goes on to state that, even in the case of the 10^{20} criticality incident, the maximum concentrations “under the worst conceivable circumstance” would be less than two percent of the guides suggested in 10 CFR Part 100 for emergency conditions.

As shown in Table 5, most of the facilities and operations described in the evaluation of abnormal operations no longer exist or no longer operate because they have been eliminated or removed through the WVDP decommissioning activities conducted at the facility over the last 35 years. In addition, there is no direct system interconnection between the solar facility and most of the components of the facility analyzed in the abnormal operation evaluation. The egress of personnel and material from the Retained Premises is discussed below.

Based on the results from this portion of the screening evaluation, the proposed solar facility does not represent a “change to the facility as described in the SAR.”

Table 4 – Points of Loss of Radioactivity Evaluated in the 1962-1964 NFS SAR				
Column A	Column B	Column C	Column D	Column E
Points of Loss of Radioactivity Evaluated in the SAR	SAR Section	Status as of November 2, 2017	Will the construction of a solar facility on the Retained Premises impact the Points of Loss of Radioactivity as described in the SAR?	Basis for answer in column D
Stack	7.6 – 7.9	Stack remains functional and planning is underway for demolition in 2018.	No	<ul style="list-style-type: none"> There are no process or other interconnections between the proposed solar facility and the Main Plant Stack. Solar facility is 4,700 ft from the Main Plant Stack.
Waste Storage Tanks	7.10	8D-1, 8D-2, and 8D-3 are empty and the tanks are kept dry using a Tank Drying System. Tank 8D-4 has approximately 4,000 gallons of liquid and is being properly managed by the DOE-WVDP.	No	<ul style="list-style-type: none"> There are no process or other interconnections between the proposed solar facility and the Waste Tank Farm. Solar facility is 4,700 ft from the Waste Storage Tanks. Tanks 8D-1 and 8D-2 are empty and the tank heels are kept dry using a Tank and Vault Drying System. Tanks 8D-3 and 8D-4 were not present when this SAR was prepared. 8D-3 is empty, and 8D-4 has approximately 4,000 gallons of liquid and is being properly managed by the DOE-WVDP.
Storage Lagoon	7.11 – 7.13	Four water treatment lagoons are managed by the DOE-WVDP. Planning is underway to remove the lagoons during Phase 1b of WVDP decommissioning.	No	<ul style="list-style-type: none"> There are no process or other interconnections between the proposed solar facility and the site lagoons. Solar facility is 3,700 ft from the nearest lagoon.
Burial Ground	7.14 - 7.17	The NDA is being managed by the DOE-WVDP. No disposals have	No	<ul style="list-style-type: none"> There are no process or other interconnections between the

Table 4 – Points of Loss of Radioactivity Evaluated in the 1962-1964 NFS SAR				
Column A	Column B	Column C	Column D	Column E
		taken place since 1986. Infiltration controls were installed in 2008-09.		proposed solar facility and the Waste Burial Ground (NDA). <ul style="list-style-type: none"> Solar facility is 3,000 ft from the Waste Disposal Area (NDA).
Egress of Personnel and Material	7.18 - 7.20	DOE-WVDP is now controlling the egress of personnel and material from the "facility." NYSERDA controls the egress of personnel and material from the Retained Premises.	No	<ul style="list-style-type: none"> The Retained Premises property proposed for the Solar Facility will remain under NRC license and access will continued to be restricted to members of the public. The construction of the proposed Solar Electric generation facility will have no impact on the egress of personnel and material from the WVDP.
Product Shipment	7.21	<ul style="list-style-type: none"> There are no product shipments from the West Valley Plant. 	No	<ul style="list-style-type: none"> The reprocessing facility permanently ended operations in 1976. There are no product shipments from the West Valley facility.

Evaluation of SSCs Not Described in the SAR – The Retained Premises (Exclusion Area) of the Center

Section 4.2.1.1 of NEI-96-07 says that a facility includes many SSCs not described in the SAR. It says that these can be components, subcomponents of large components, or even entire systems. In the case of the potential construction of a solar photovoltaic facility on the Retained Premises, an important component of the safety framework for the Center is the Retained Premises itself, identified in the SAR as the “Exclusion Area.” Because the proposed Ashford solar facility may include the placement of up to 36,000 solar panels on 53.6 acres of the Exclusion Area, an analysis of the impact of the installation of the solar panels on the Exclusion Area was conducted.

In regard to the Exclusion Area, Section III, Plant Description, Section 3.1, of the NFS SAR states:

“...the exclusion area, some 3300 acres in extent, has been described in detail in Section II. This entire area is fenced with barbed-wire farm fence and is conspicuously posted. The plant site area is shown in Figure 3.1a and in more detail in Figure 3.1b. The plant is located near the center of this exclusion area which contains about 190 acres. This area is separately fenced with 7-foot chain link fence with three strands of barbed wire at the top. It too, is conspicuously posted. The Plant is about 1500 meters from the nearest site boundary” (the site boundary is the outer edge of the Exclusion Area).

SAR Section VII, Protection of the public, provides an evaluation of the radiation dose to members of the public at the site boundary from both normal and abnormal operations. Since the site boundary is considered the closest point of public access in the SAR calculations of dose impacts relative to the limits set forth in 10 CFR 20, the Exclusion Area maintains a certain distance between members of the public and the facility for the purpose of calculating dose impacts to the public and evaluating compliance of the facility with 10 CFR 20.

Under the proposal for the construction of the solar photovoltaic facility at the Center, access by the public to the Exclusion Area of the property will continue to be restricted. The only individuals entering the solar facility property will be individuals authorized to enter the property for the purpose of constructing the facility and occasionally maintaining the solar facility. The property will remain fenced and posted, and the facility will not be regularly staffed. Any additional security measures needed for the solar facility would be the responsibility of the developer and, if installed, would serve to further restrict public access to the Exclusion Area of the licensed property.

Since the Exclusion Area will continue to function exactly as described in the SAR as a buffer area to keep members of the public at a certain distance away from the facility, the installation of a 53.6-acre solar facility does not represent “a modification or addition to, or removal from, the facility that affects a design function. As such, the installation of the solar facility does not constitute “a change in the facility as described in the SAR,” meaning that the construction of the solar facility does not require a formal evaluation under 10 CFR 50.59 based on this screening test.

Table 5 –Analysis of Impacts from Abnormal Operations as Described in the 1962-1964 NFS SAR				
Column A	Column B	Column C	Column D	Column E
Abnormal Operations Evaluated in the SAR	SAR Section	Status as of November 2, 2017	Will the installation of a solar facility on the Retained Premises increase the likelihood or severity of impacts from the abnormal operation evaluated in the SAR?	Basis for answer in column D
Loss from HLW Tanks	7.24 – 7.29	8D-1, 8D-2, and 8D-3 are empty and the tanks are kept dry using a Tank Drying System. Tanks 8D-3 and 8D-4 were not present when this SAR was prepared. Tank 8D-4 has approximately 4,000 gallons of liquid and is being properly managed by the DOE-WVDP.	No	<p>There are no process or other interconnections between the proposed solar facility and the Waste Tank Farm.</p> <p>Solar facility is 4,700 ft from the Waste Storage Tanks.</p> <p>Tanks 8D-1 and 8D-2 are empty and the tank heels are kept dry using a Tank and Vault Drying System. Tanks 8D-3 and 8D-4 were not present when this SAR was prepared. 8D-3 is empty, and 8D-4 has approximately 4,000 gallons of liquid and is being properly managed by the DOE-WVDP.</p>
Criticality Incident Anywhere in the Plant	7.30 – 7.32	DOE is responsible for the day-to-day operations within the WVDP, in accordance with all applicable DOE orders. As such, the likelihood of a criticality event is extremely low.	No	<ul style="list-style-type: none"> • There are no process or other interconnections between the proposed solar facility and the Main Plant. • Solar facility is 4,700 ft from the Main Plant Process Building. • DOE is controlling all aspects of the Main Plant Process Building today. • The proposed solar facility would not impact criticality considerations for the WVDP.
Criticality Incident in the Fuel Pool	7.33 – 7.34	Spent Nuclear Fuel (SNF) has been removed, FRS pool is empty, and FRS is ready for demolition.	No	<ul style="list-style-type: none"> • The SNF has been removed from the pool and the site, the Fuel Pool is empty, deactivated, and ready for demolition.

Table 5 –Analysis of Impacts from Abnormal Operations as Described in the 1962-1964 NFS SAR				
Column A	Column B	Column C	Column D	Column E
Abnormal Operations Evaluated in the SAR	SAR Section	Status as of November 2, 2017	Will the installation of a solar facility on the Retained Premises increase the likelihood or severity of impacts from the abnormal operation evaluated in the SAR?	Basis for answer in column D
Chemical Explosion (assumes vessel with one full day's charge of fuel in solution suffers and explosion distributing the contents throughout the cell)	7.35	Fuel is no longer stored or processed on site. Upon cessation of NFS activities at the site, the process lines were decontaminated, and most have since been removed under activities carried out in support of the WVDP.	No	<ul style="list-style-type: none"> • There are no process or other interconnections between the proposed solar facility and the Main Plant. • Solar facility is 4,700 ft from the MPPB. • DOE is controlling all aspects of the MPPB today, and DOE did not identify any impacts from the proposed solar facility to WVDP operations or safety.
Failure of Iodine Removal Equipment	7.36	Iodine removal equipment has been removed from the Off-Gas Cell.	No	Iodine removal equipment has been removed from site and is not needed to support DOE's current operations.

4.2.1.2 Screening of Changes to Procedures as Described in the UFSAR

According to Section 4.2.1.2 of NEI 96-07 Rev 1, changes to procedures are screened-in (and would require a 10 CFR 50.59 evaluation) if the change adversely affects how SSC design functions are performed or controlled as described in the SAR. Changes to a procedure that do not adversely affect how SSC design functions described in the SAR are performed or controlled would screen-out.

Because the proposed activity of building a solar facility on the Retained Premises is not a change to a procedure, the activity screens-out, meaning that the construction of the solar facility does not require a formal evaluation under 10 CFR 50.59 based on this criterion.

4.2.1.3. Screening of changes to evaluations that demonstrate intended design functions will be accomplished as described in the UFSAR

As discussed in Section 3.6 of NEI-96-07 Rev 1, methods of evaluation included in the SAR to demonstrate that intended SSC design functions will be accomplished are considered part of the "facility as described in the UFSAR." The construction of a solar facility on the Retained Premises of the Center is not a change to a method of evaluation included in the SAR to demonstrate that intended SSC design functions will be accomplished. As such, the construction of a solar facility on the Retained Premises screens-out, meaning that the construction of the solar facility does not require a formal evaluation under 10 CFR 50.59 based on this criterion.

4.2.2 Is the Proposed Solar Facility “a test or experiment not described in the UFSAR”?

As discussed in Section 3.14 of NEI-96-07 Rev 1, tests or experiments not described in the SAR are activities where an SSC is utilized or controlled in a manner that is outside the reference bounds of the design for that SSC or inconsistent with analyses or description in the SAR. Tests and experiments that are described in the UFSAR may be screened-out at this step.

Tests and experiments that are not described in the SAR may be screened-out provided the test or experiment is bounded by tests and experiments that are described. Similarly, tests and experiments not described in the SAR may be screened-out provided that affected SSCs will be appropriately isolated from the facility.

Although the installation of solar panels on the Exclusion Area of the Center was not specifically addressed in the NFS SAR, public access to the Exclusion Area will continue to be restricted to keep members of the public away from the process plant. This function of the Exclusion Area will remain exactly as described in the SAR, and as such, the installation of a 53.6-acre solar facility does not represent the utilization or control of an SSC in a manner that is outside the reference bounds of the design for that SSC or inconsistent with analyses or description in the SAR.

Considering the information presented above, the installation of the solar facility does not constitute “a test or experiment not described in the UFSAR,” and as such, the project screens-out for this test.

SUMMARY AND CONCLUSIONS

The proposed “change” being considered by NYSERDA is leasing a portion of the Retained Premises of the Center in order to allow the construction of a solar photovoltaic generation facility on 53.6 acres of the Retained Premises. NYSERDA evaluated this proposed change in accordance with the guidance identified in NEI 96-07, Revision 1, *Guidelines for 10 CFR 50.59 Evaluations*.

As shown in Table 6 below, the NEI-96-7 Rev 1 applicability tests demonstrated that the 50.59 framework is the correct regulatory framework within which to evaluate the construction of the Solar facility on the Retained Premises of the Center.

Table 6 Applicability Test Summary Table			
Applicability Test	NEI-96-07 Rev 1	Y or N	50.59 Applicable?
Does the proposed activity require a change in the Technical Specifications?	4.1.1	No	Yes
Is the change controlled by other more specific requirements or regulations?	4.1.1	No	Yes
Is the change a maintenance activity subject to 10 CFR 50.65?	4.1.2	No	Yes
Is the change a modification to the USFAR?	4.1.3	No	Yes
Is the change to a procedure covering conduct of operations?	4.1.4	No	Yes
Is the change a change to an approved Fire Protection Plan?	4.1.5	No	Yes

Once the applicability tests confirmed that 50.59 was the correct framework for evaluating the proposed change, NYSERDA followed the NEI-96-07 Rev 1 guidance to screen the proposed action to determine whether a full evaluation under 10 CFR 50.59 was required. As shown in Table 7 below, all screening

tests showed that the activity screened-out of the requirement for a full evaluation relative to the eight criteria presented in 10 CFR 50.59(c)(2).

Following the guidance in Sections 4.2.1 and 4.2.2 of NEI 96-07 Rev 1, NYSERDA determined that the construction of a solar facility on the Retained Premises is neither: 1) a change to the facility or procedures as described in the UFSAR, nor 2) a test or experiment not described in the UFSAR. According to Section 4.2 of NEI 96-07 Rev 1, *“If an activity is determined to be neither, then it screens out and may be implemented without further evaluation under 10 CFR 50.59.”*²⁵

As such, NYSERDA has determined that the construction of the solar facility may be implemented without further evaluation under 10 CFR 50.59.

Table 7. Screening Test Summary Table			
Screening Test – Is the Activity a change to the facility as described in the UFSAR, based on the following?	NEI-96-07 Section	Y or N	Screen in or out of a full evaluation under 10 CFR 50.59 (c)(2)?
Plant Components, processes, and equipment	4.2.1.1	No	Screened Out
Salient Features of the Engineered Aspects of the Plant	4.2.1.1	No	Screened Out
Points of loss of radioactivity during normal operations	4.2.1.1	No	Screened Out
Analysis of impacts from abnormal operations	4.2.1.1	No	Screened Out
Evaluation of SSCs not described in the SAR – The Exclusion Area	4.2.1.1	No	Screened Out
Is the activity a change in procedure?	4.2.1.2	No	Screened Out
Is the activity a change to an evaluation that demonstrates that the intended design functions will be accomplished?	4.2.1.3	No	Screened Out
Is the activity a test or experiment not described in the UFSAR?	4.2.2	No	Screened Out

4.2.3. Screening Documentation

According to NEI 96-07, 10 CFR 50.59 recordkeeping requirements apply to 10 CFR 50.59 evaluations performed for activities that screened-in, not to screening records for activities that screened-out. The guidance document also states, however, that documentation should be maintained of screenings that

²⁵ NEI 96-07, Rev. 1, page 29. “Guidelines for 10 CFR 50-59 Evaluations.”

conclude a proposed activity had screened-out. According to NEI-96-07 Rev 1, the basis for the screening conclusion should be documented to a degree commensurate with the safety significance of the change.

Consistent with the above guidance from NEI-96-07 Rev 1, this evaluation package provides the record that the proposed solar electric generation facility has “screened out” from requiring a full 10 CFR 50.59 evaluation, and this package will be kept on file for NRC inspection.

5 Determination from DOE Stating No Objections to the Solar Project, and No Impact from the Solar Facility on the WVDP

The final item requested by NRC for their evaluation of the proposed solar photovoltaic facility on the Retained Premises of the Center property is a letter from DOE evaluating whether the project would have a negative impact on the WVDP.

Under the framework for the WVDP, there are two specific restrictions on NYSERDA’s work at the Center that are related to the conduct of the WVDP:

Section 4.02 of the Cooperative Agreement – This requirement states that “during the Project Term, the Authority shall not use, or authorize the use of, the portion of the Center not subject to the exclusive use and possession of the Department (the Retained Premises) in a manner which interferes with carrying out the Project.”

Amendment 31, Section 7.D of the Part 50 License – This requirement states that NYSERDA “shall not take or permit (to the extent it has the legal authority to do so) any other person to take, any action which in DOE’s judgment may inhibit or prevent DOE from taking any action under the atomic energy act or the Project Act:

- (1) To carry out its activities pursuant to the Project Act;
- (2) To guard against the loss or diversion of any special nuclear material located at the facility;
- (3) To prevent any use of or disposition of any special nuclear material located at the facility which DOE may determine to be inimical to the common defense and security; or
- (4) To protect health or minimize danger to life or property.”

In April 2017, NYSERDA requested DOE's input on whether the proposed solar photovoltaic facility would interfere with DOE carrying out the Project or prohibit or prevent DOE from taking any action under the AEA or WVDP Act (see Appendix G). DOE addressed these issues in a letter to NYSERDA dated August 8, 2017 (see Appendix G). In that letter, DOE states "Based on the information you have provided, EMCBC-WV sees no violation to Section 4.02 of the Cooperative Agreement." The letter also states that the Solar Facility project, as described to EMCBC-WV, "does not inhibit EMCBC-WV from taking any action under the Atomic Energy Act or the WVDP Act enumerated under NYSERDA NRC License CSF-1, Amendment 31."

DOE's August 8, 2017 letter also addresses impacts of the proposed solar facility on the evaluation in the Documented Safety Analysis for the WVDP (DOE's equivalent of a SAR). DOE's letter states that the CDG Solar Facility project, as described to EMCBC-WV, does not impact the effectiveness of the WVDP's Documented Safety Analysis.

6 Conclusions

This document evaluates the potential impacts from a 53.6-acre solar facility on the Retained Premises of the Center. This information includes a project description, documentation that the area is nonimpacted, an evaluation within the framework of 10 CFR 50.59, and a determination from DOE that the proposed facility would have no impact on the WVDP. Throughout the preparation of this information, NYSERDA has identified no information or circumstance associated with the proposed solar photovoltaic facility that would have a negative impact on the licensed facility or the WVDP. In addition, the information and evaluation provided in this document did not identify any information or circumstance associated with the proposed facility that would lessen or in any way impact public health and safety considerations related to the radioactive materials present at the Center that are subject to regulation under the 10 CFR Part 50 license.

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Appendix A – ORNL Hydrofracture Test Area

Sampling Summary, Results, and Overland Gamma Survey

ORNL Hydrofracture Test Area Sample Summary, from Dames and Moore,

<u>Sample ID</u>	<u>Collection Date</u>	<u>Description</u>	<u>Analyses Performed</u>
SFINWEL	05/17/89	Soil adjacent to main well pad.	pH, conductivity, gamma scan
SFIN\$JC	05/09/89	Soil from un-vegetated area near observation well.	pH, conductivity, gamma scan
SFIN2_6	05/09/89	2-6" depth soil from un-vegetated area near obsv. well.	pH, conductivity, gamma scan
SFINVEG	05/09/89	Soil from vegetated area near obsv. well.	pH, conductivity, gamma scan
SFBPOND	05/09/89	Sediment from reservoir.	gamma scan
SFINBKG	05/17/89	Soil 200 feet from main well pad towards plant stack.	pH, conductivity, gamma scan
WFINWEL	05/12/89	Water from main well case.	pH, conductivity, alpha/beta, gamma, tritium.
WFBPOND	05/09/89	Water from reservoir.	pH, conductivity, alpha/beta, gamma
WFINDOW	05/12/89	Water from Butter-milk creek downstream from well area.	pH, conductivity, alpha/beta, gamma
SF6NWET SF6SWET SF6EWET SF6WWET	07/31/89	Soil taken equidistantly along a six foot radius from main well.	gamma scan
SF6COMP	07/31/89	Dried composite of SF6XWET series.	gamma scan
SFGRVAL SFDNKRK	11/29/88	Background soil from Great Valley and Dunkirk, New York.	gamma scan

Table 4: Individual Sample IDs and Descriptions.

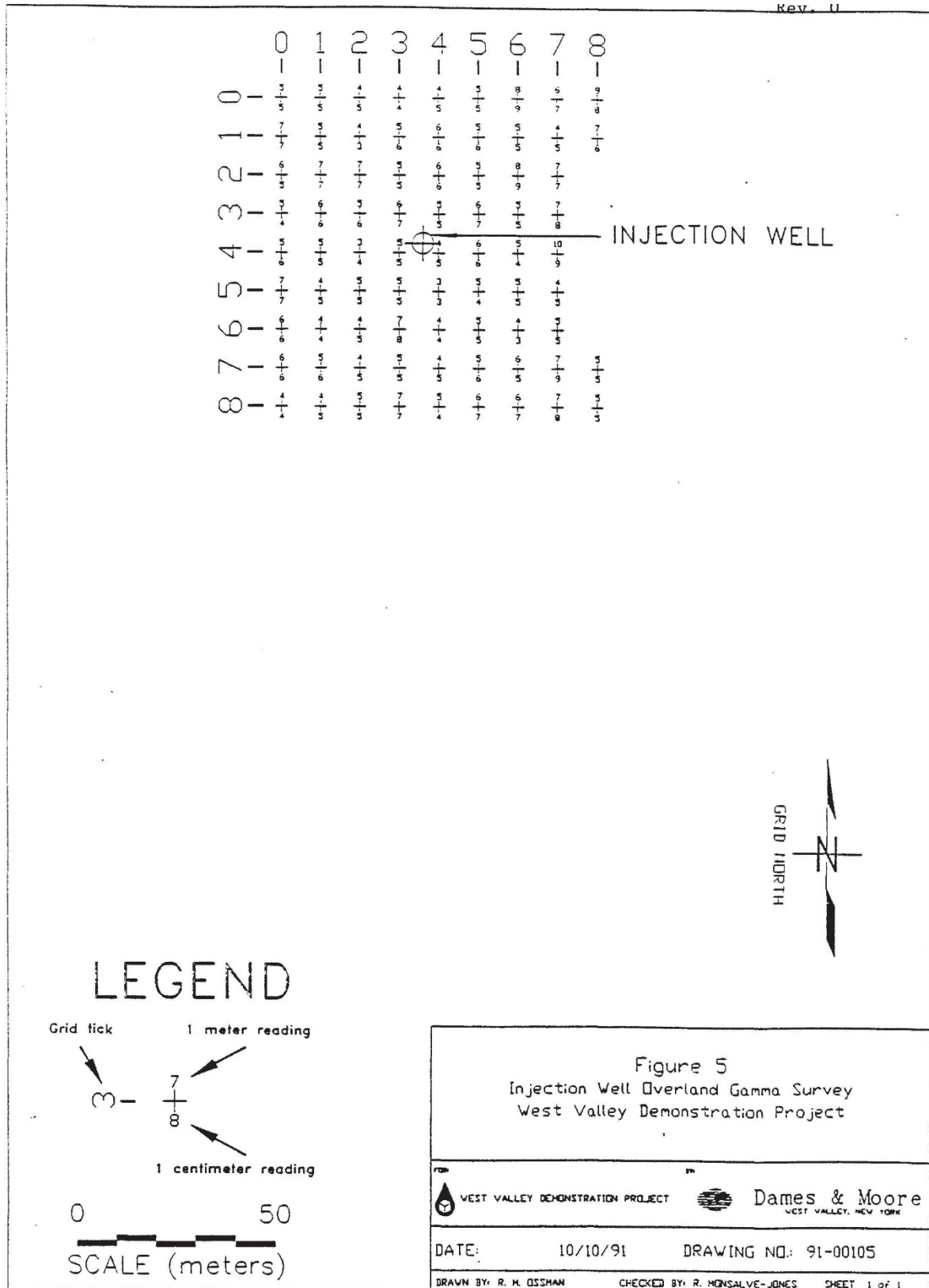
ORNL Hydrofracture Test Area Results, from Dames and Moore, 1992

ID	Date	Type	pH	Conductivity (μ hos/cm)	Activity (uCi/g)		
					K^{40}	Cs^{137}	Co^{60}
SFINWEL	05/17/89	Soil	7.26	J 405	1.31E-05 +/- 1.7E-06	2.12E-06 +/- 1.8E-07	2.90E-07 +/- 1.0E-07
SFINSJC	05/09/89	Soil	3.86	88	2.48E-05 +/- 2.1E-06	< 1.50E-07	< 1.60E-07
SFIN2_6	05/09/89	Soil	4.02	121	2.17E-05 +/- 2.2E-06	< 1.50E-07	< 1.60E-07
SFINVEG	05/09/89	Soil	5.29	37	7.17E-06 +/- 4.2E-07	7.46E-07 +/- 4.3E-08	< 4.90E-08
SFBPOND	05/09/89	Sed.	N/A	N/A	1.34E-05 +/- 5.5E-07	3.97E-07 +/- 3.9E-08	< 4.90E-08
SFINBKG	05/17/89	Soil	5.86	116	6.53E-06 +/- 4.4E-07	8.40E-07 +/- 4.3E-08	< 4.90E-08
SF6NWET	07/31/89	Soil			1.98E-05 +/- 4.3E-06	4.48E-07 +/- 2.9E-07	2.91E-07 +/- 1.4E-07
SF6SWET	07/31/89	Soil			8.54E-06 +/- 4.9E-06	3.82E-07 +/- 2.9E-07	< 4.90E-08
SF6EWET	07/31/89	Soil			1.65E-05 +/- 3.8E-06	3.15E-07 +/- 2.9E-07	< 4.90E-08
SF6WWET	07/31/89	Soil			1.90E-05 +/- 4.3E-06	6.64E-07 +/- 2.0E-07	1.91E-07 +/- 1.1E-07
SF6COMP	07/31/89	Soil			1.39E-05 +/- 7.4E-07	4.09E-07 +/- 4.6E-08	5.02E-08 +/- 3.5E-08
SFDNKRK	11/29/88	Soil			8.70E-06 +/- 7.4E-07	5.92E-07 +/- 4.4E-08	< 4.90E-08
SFGRVAL	11/29/88	Soil			7.39E-06 +/- 2.9E-07	4.17E-07 +/- 2.0E-08	< 4.90E-08
WFINWEL	05/12/89	Water	6.94	1569	* < 8.58E-08	5.35E-08 +/- 9.6E-09	1.10E-08 +/- 6.9E-09
WFBPOND	05/09/89	Water	7.15	83	< 8.15E-08	< 1.10E-08	< 1.40E-08
WFINDOW	05/12/89	Water	7.80	106	< 8.15E-08	< 1.10E-08	< 1.40E-08

* Activity of water samples in uCi/mL
J Conductivity estimated on soil samples

: Analytical results for soil and water samples. See text for key to Sample ID (s).

OVERLAND GAMMA SURVEY OF THE OAK RIDGE HYDRDROFRACTURE TEST AREA



Appendix B - License Termination Letter

Closeout of ASDA Plutonium Storage Facility at West Valley, New York Site

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

APR 4 1975

70-1156

New York State Atomic and
Space Development Authority
ATTN: Mr. James G. Kline
230 Park Avenue
New York, New York 10017

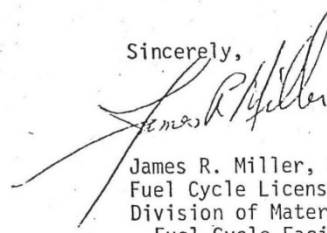
Gentlemen:

SUBJECT: Close Out of ASDA Plutonium Storage Facility at
West Valley, New York Site

Pursuant to 10 CFR Parts 70 and 71 we are terminating the
SNM-1138 license which permits storage, handling, and
delivery of special nuclear material to a carrier for
transport. SNM-1138 license is further identified as USNRC
Docket No. 70-1156 and Reporting Symbol YML.

Having complied with the staff's Guidelines for Decontamination
of Facilities and Equipment Prior to Release for Unrestricted
Use or Termination of Licenses for Byproduct Source or Special
Nuclear Material, we find that the surveys performed by ASDA,
and Nuclear Regulatory Commission - Inspection and Enforcement,
Region I confirm the acceptability for license termination.
License SNM-1138 is terminated 10 days following the date of
this letter.

Sincerely,


James R. Miller, Chief
Fuel Cycle Licensing Branch 2
Division of Materials and
Fuel Cycle Facility Licensing

Committee on Licensing
RECEIVED

APR 14 1975

New York State
Department of Commerce
ATOMIC ENERGY COUNCIL



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Appendix C

NRC Letter Free-Releasing Storage Containers and Transfer Hood for Unrestricted Use or Disposal

NYSDEC Letter Approving for Burial of Storage Containers at Bulk Storage Warehouse

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

Docket No. 70-1156

APR 09 1982

Mr. Thomas J. Cashman
Chief, Toxics and Radiation Section
Division of Air
New York State Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233

Dear Mr. Cashman:

Subject: Letter from Mr. T. K. DeBoer, Program Director, West Valley, of
the New York State Energy Research and Development Authority, dated
February 17, 1982

This responds to the subject letter which described the actions taken with respect to contamination surveys and decontamination of the seven containers, located at the former Plutonium Storage Facility in West Valley, New York, and which were identified in our letter to you dated December 17, 1981.

On the basis of the contamination survey information enclosed with the February 17, 1982 letter, we have concluded that these containers and the transfer hood may be released for unrestricted use or disposal.

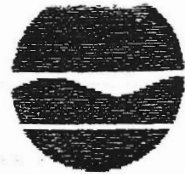
If we can be of further assistance to you, please call. Your cooperation with us is appreciated.

Sincerely,


Ronald C. Haynes
Regional Administrator

cc:
Public Document Room (PDR)
Nuclear Safety Information Center (NSIC)

New York State Department of Environmental Conservation
600 Delaware Avenue, Buffalo, New York 14202-1073



Robert F. Flacka
Commissioner

June 4, 1982

Mr. D. B. Anderson
Project Manager
New York State Energy Research and
Development Authority
2 Rockefeller Plaza
Albany, New York 12223

Dear Mr. Anderson:

Based on the data and information submitted in your application dated May 17, 1982, New York State Department of Environmental Conservation concurs with your method of disposal of the referenced material. The proposed location and procedures outlined in your letter must be strictly adhered to. This disposal location shall be used strictly for the containers and transfer hood that have met the present NRC guidelines for unrestricted use or disposal.

NYSDEC should have at least 48 hours notice so that we may have a representative of the Department present during the disposal operation. Upon completion of the disposal operation, a detailed plan showing the exact disposal location must be submitted to this office.

Should you have any questions concerning this matter, please contact the writer at 716/847-4585.

Very truly yours,

Robert A. Mitrey
Robert A. Mitrey, J.E.
Associate Sanitary Engineer

RCW:cag

cc: Mr. T. Cashman - Albany
Mr. A. Pessa - Buffalo
Mr. C. Balgas - CCED
Mr. B. Williams - Ashford (T) Supervisor

Appendix D - Bulk Storage Warehouse 2010 Sample Data

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Radionuclide	Results from November 16, 2010, Outdoor Sampling at the BSW																					Related Standards	
	Background Surface Soil ^a									Septic Tank Sludge ^b									Drain Residue (outdoor drain near truck bay)			NUREG-1757 Table H.2 Surface Soil Screening Value ^c (pCi/g)	
	BSWBKG15 (pCi/g-dry)			BSWBKG16 (pCi/g-dry)			BSWBKG17 (pCi/g-dry)			BSWST01 (pCi/g-dry)			BSWST02 (pCi/g-dry)			BSWST03 (pCi/g-dry)			BSWDR01 (pCi/g-dry)				
	Result±Unc.	Q	MDC	Result±Unc.	Q	MDC	Result±Unc.	Q	MDC	Result±Unc.	Q	MDC	Result±Unc.	Q	MDC	Result±Unc.	Q	MDC	Result±Unc.	Q	MDC		
Am-241 (Nov 2010 analysis)	0.0538±0.0474	U	0.0574	0.0139±0.0225	U	0.0285	0.0299±0.0371	U	0.0554	0.0805±0.0636	J	0.0799	0.0667±0.0498	J	0.0445				0.0107±0.0262	U	0.0583	2.1	
Am-241 (Jun 2011 analysis)										0.0813±0.0325		0.0102	0.0837±0.0405		0.0330	0.0528±0.0287	J	0.0122					
Cs-137 (Nov 2010 analysis)	0.312±0.0727		0.0718	0.949±0.129		0.0560	0.618±0.100		0.0524	0.381±0.0959		0.0691	0.374±0.118		0.108				-0.0183±0.0271	U	0.042	11	
Cs-137 (Jun 2011 analysis)																0.306±0.150		0.110					
Pu-239/240 ^d (Nov 2010 analysis)	0.003±0.0176	U	0.0369	0.0289±0.0196	J	0.0221	0.00901±0.0132	U	0.0230	0.0497±0.0254	J	0.0264	0.0816±0.0319		0.0231				-	0.00329±0.0112	U	0.0315	2.3 (Pu-239) ^e
Pu-239/240 ^d (Jun 2011 analysis)										0.0570±0.0226		0.0110	0.0731±0.0238		0.0136	0.0538±0.0196		0.0101					
Pu-241 ^f (Nov 2010 analysis)	1.62±5.15	U	8.94	1.02±5.06	U	8.84	1.81±4.88	U	8.44	1.58±4.61	U	7.98	0.671±4.65	U	8.15				-0.309±5.30	U	9.40	72	
Pu-241 ^f (Jun 2011 analysis)										0.233±0.533	U	0.903	-0.400±0.479	U	0.833	0.120±0.456	U	0.776					
Sr-90 (Nov 2010 analysis)																						1.7	
Sr-90 (Jun 2011 analysis)										0.0977±0.0626	U	0.101	0.0112±0.0535	U	0.0958	0.0741±0.0659	U	0.109					
^a The background surface soil location was selected to be outside the WNYNSC fence line at a location slightly west of the Town of Ashford Highway Department, near Fox Valley Road.																							
^b Samples BSWST01 and BSWST02 were analyzed in November 2010 and subsequently reanalyzed in June 2011 for selected parameters at NYSERDA’s request. Sample BSWST03 was held as an archived sample and not analyzed in November 2010, and was subsequently analyzed in June 2011 at NYSERDA’s request. Although six months is a commonly used holding time for radioanalytical samples, the results were not qualified as being outside of a suitable sample hold time because the analytes are not short-lived and the June 2011 analyses were performed only 1 month past the generic six-month holding time.																							
^c Source: U.S. NRC, <i>Consolidated Decommissioning Guidance; Characterization, Survey, and Determination of Radiological Criteria</i> , NUREG-1757, Volume 2, Rev. 1, September 2006. The screening values represent surface soil concentrations that would be deemed to be in compliance with the 25 mrem/year unrestricted release dose limit in 10 CFR 20.1402.																							
^d Analytical results for Pu-239 and Pu-240 are reported together as Pu-239/240 because they cannot be distinguished using the standard radioanalytical method.																							
^e NUREG-1757 Table H.2 does not have a soil screening value for Pu-240. The screening value for Pu-239 will therefore be applied to the combined Pu-239/240 result.																							
^f The detection limit for Pu-241 was lowered for the June 2011 analyses because the laboratory revealed that they could provide a better limit.																							
Key: MDC = minimum detectable concentration. pCi/g = picocuries per gram. Q = data qualifier. Unc = analytical uncertainty.																							
Qualifier Key: J = Analyte identified. Associated result is considered estimated or uncertain. [In most cases above, the “J in this table results from the uncertainty being greater than 50% of the result.] U = Not detected above MDC and/or 2σ uncertainty.																							

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Appendix E - 2004 WVDP Annual Site Environmental Report Soil Sampling Data from the Bulk Storage Warehouse

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2004 Bulk Storage Warehouse Routine Soil Sample Data

From the WVDP ASER, 2004²⁶

Analyte	Units	SFBLKST	Background Location SFGRVAL
Gross Alpha	μCi/g	1.50±0.34E-05	1.09±0.29E-05
Gross Beta	μCi/g	1.86±0.22E-05	1.61±0.19E-05
K-40	μCi/g	1.92±0.08E-05	1.17±0.10E-05
Co-60	μCi/g	-0.19±1.84E-08	-0.53±1.63E-08
Sr-90	μCi/g	1.88±2.27E-08	1.03±0.23E-07
Cs-137	μCi/g	1.44±0.33E-07	6.21±0.70E-07
Pu-238	μCi/g	0.44±1.18E-08	2.82±2.61E-08
Pu-239/240	μCi/g	0.44±1.18E-08	4.59±3.29E-08
Am-241	μCi/g	0.73±1.07E-08	0.74±1.68E-08

²⁶

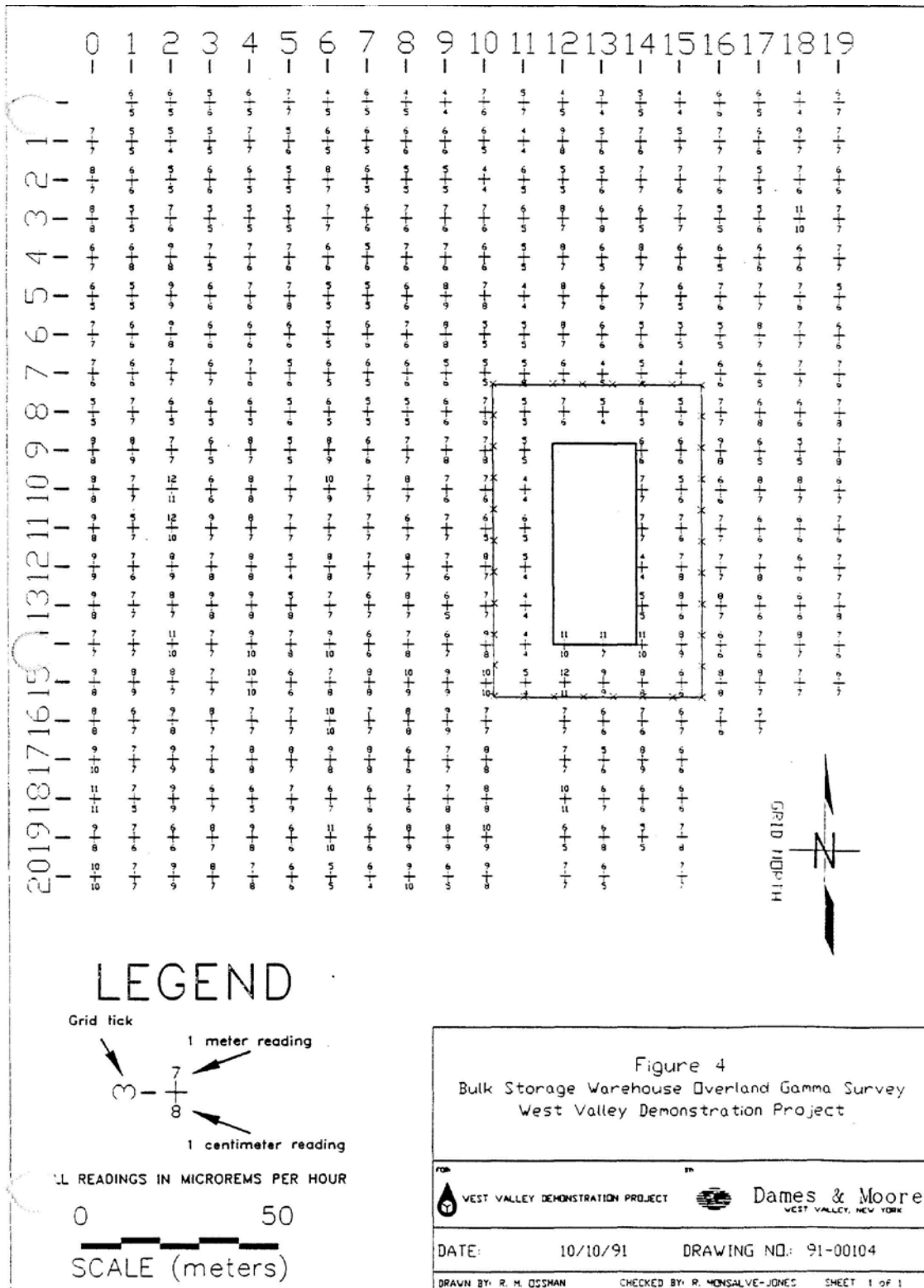
West Valley Nuclear Services Company and URS Group, Inc. August 2005. "West Valley Demonstration Project Annual Site Environmental Report Calendar Year 2004."

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Appendix F - 1991 Bulk Storage Warehouse Overland Gamma Survey

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1991 Bulk Storage Warehouse Overland Gamma Survey, from WVDP-EIS-0003



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Appendix G

NYSERDA April 13, 2017 Letter requesting DOE Input on the Proposed Solar Facility

DOE August 8, 2017 Response to the NYSERDA Letter

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NYSERDA

ANDREW M. CUOMO
Governor

RICHARD L. KAUFFMAN
Chair

ALICIA BARTON
President and CEO

April 13, 2017

Mr. Bryan C. Bower, Director
U.S. Department of Energy
West Valley Demonstration Project
10282 Rock Springs Road
West Valley NY 14171
Bryan.Bower@wv.doe.gov

Dear Mr. Bower:

SUBJECT: Proposed Solar Facility on the Western New York Nuclear Service Center (Center)
The Town of Ashford has requested that the New York State Energy Research and Development Authority (NYSERDA) consider entering into an agreement with the Town to allow the placement of a 2 MW Community Distributed Generation (CDG) Solar facility on Center. This project aims to provide lower electricity rates to town residents and businesses who elect to participate, and would contribute to the furtherance of New York State's goal of obtaining 50 percent of the State's electric power from renewable sources by 2030.

The area of the Center being considered for the placement of the CDG Solar facility is shown on Attachment 1. NYSERDA's current concept for establishing this facility would include a legal arrangement with the Town for the long-term use of the property, but the property would remain under NYSERDA ownership and under the regulatory framework of the 10 CFR Part 50 License. In consideration of entering into an agreement for the placement of the CDG Solar facility on Center property, NYSERDA identified two potential limitations on NYSERDA's use of the Retained Premises that are part of the legal framework for the conduct of the West Valley Demonstration Project (WVDP) at the Center. These are:

- 1) Section 4.02 of the Cooperative Agreement, which states that, during the term of the WVDP, NYSERDA shall not use, or authorize the use of, the Retained Premises in a manner that interferes with carrying out the Project;
- 2) Amendment 31 to License CSF-1, which states that NYSERDA is not authorized to take or permit any action which in the U.S. Department of Energy's (DOE) judgement may inhibit or prevent DOE from taking any action under the Atomic Energy Act or the West Valley Demonstration Project Act (WVDPA):
 - (i) to carry out its activities pursuant to the Project Act;
 - (ii) to guard against the loss or diversion of any special nuclear material located at the facility;
 - (iii) to prevent any use or disposition of any special nuclear material located at the facility which DOE may determine to be inimical to the common defense and security; or
 - (iv) to protect health or minimize danger to life or property.

PJB/17amd011.pjb

New York State Energy Research and Development Authority

Albany
17 Columbia Circle, Albany, NY 12203-6399
(P) 1-866-NYSERDA | (F) 518-862-1091
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New York, NY
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**West Valley Site
Management Program**
9030-B Route 219
West Valley, NY
14171-9500
(P) 716-942-9960
(F) 716-942-9961

Bryan C. Bower

Page 2

April 13, 2017

In addition, as part of assembling a package of information for the U.S. Nuclear Regulatory Commission's consideration, NYSERDA is preparing a 10 CFR 50.59 analysis to formally determine whether a license amendment is needed for this activity. As part of that 50.59 analysis, NYSERDA must identify whether the Solar Facility would impact the effectiveness of safety-significant Structures, Systems, and Components (SSCs) at the Center, including the WVDP SSCs documented in the most recent Documented Safety Analysis (DSA).

In consideration of the information provided above, NYSERDA requests DOE's input as to whether the placement of the CDG Solar facility on the Center property in the area shown in Attachment 1 would:

- 1) Interfere with DOE carrying out the project, as stated in Section 4.02 of the Cooperative Agreement;
- 2) Inhibit or prevent DOE from taking any action under the AEA or the WVDP act in regard to DOE's ability to take any action under the AEA or WVDPA to: (i) carry out its activities pursuant to the Project Act; (ii) guard against the loss or diversion of any special nuclear material located at the facility; (iii) prevent any use or disposition of any special nuclear material located at the facility which DOE may determine to be inimical to the common defense and security; (iv) protect health or minimize danger to life or property, as identified in Amendment 31 to License CSF-1; or
- 3) Impact the effectiveness of the WVDP safety significant Structures, Systems or Components documented in the most recent WVDP Documented Safety Analysis (DSA).

Thank you for your assistance in providing this information, and please contact me if you have any questions.

Sincerely,



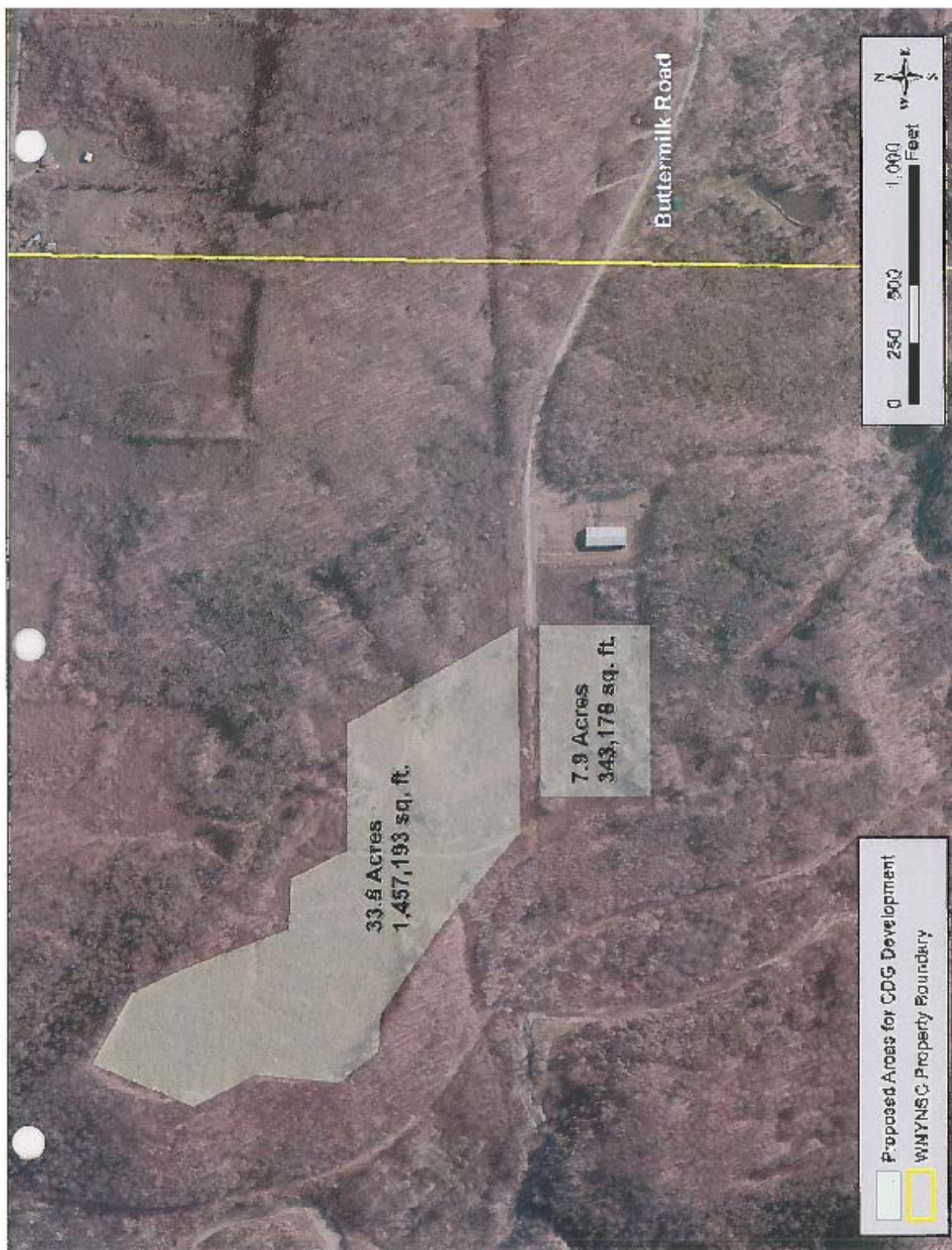
Paul J. Bembia, Director

PJB/amd

Attachment:

1. Map of Proposed Areas for CDG Development

ec: J.A. Dean, NYSERDA-Albany (w/att.) Janice.Dean@nyserda.ny.gov
Emily Chessin, mc Group (w/att.) emily.chessin@mc-group.com
Ryan Cook, mc Group (w/att.) ryan.cook@mc-group.com
Charlie Davis, Town of Ashford (w/att.) toasupervisor@yahoo.com
DOEsupportstaff@wv.doe.gov (w/att.)



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Department of Energy
West Valley Demonstration Project
10282 Rock Springs Road
West Valley, NY 14171-9799

August 8, 2017

Mr. Paul J. Bembia, Director
New York State Energy Research
and Development Authority
West Valley Site Management Program
9030-B Route 219
West Valley, NY 14171-9500

SUBJECT: U.S. Department of Energy (DOE) Response to Inquiry of Whether Proposed MW
Community Distributed Generation Solar Facility (CDG Solar Facility) Interferes
with Conducting West Valley Demonstration Project (WVDP)

REFERENCE: Letter (371723), P. J. Bembia to B. C. Bower, "Proposed Solar Facility on the
Western New York Nuclear Service Center (Center)," dated April 13, 2017

Dear Mr. Bembia:

Please allow this correspondence to serve as the DOE Environmental Management Consolidated Business Center, WVDP's (EMCBC-WV) response to the New York State Energy Research and Development Authority's (NYSERDA) inquiry to EMCBC-WV relative to NYSERDA's consideration to enter into an agreement with the Town of Ashford (Town) whereby the Town would place a CDG Solar Facility on a portion of the Retained Premises.¹ It is EMCBC-WV's understanding that the CDG Solar Facility under consideration would not transfer title of that portion of the Retained Premises where the CDG Solar Facility will be constructed. Rather, NYSERDA would retain title to the real property and enter into an appropriate arrangement with the Town for long-term use. It is EMCBC-WV's further understanding that no specific written plan exists for the CDG Solar Facility yet general elements as to what a solar facility consists of where provided for review.

NYSERDA must consider the regulatory framework of the 10 CFR Part 50 License. It is EMCBC-WV's understanding that NYSERDA is currently undergoing the appropriate regulatory analysis to ascertain whether a license amendment is required. To this end, NYSERDA's correspondence partially seeks EMCBC-WV's input to conduct this regulatory analysis. The remainder of NYSERDA's correspondence seeks EMCBC-WV's viewpoint as to whether this project is in keeping with Section 4.02 of the Cooperative Agreement.

Based on the information you have provided, EMCBC-WV sees no violation to Section 4.02 of the Cooperative Agreement. EMCBC-WV expressly reserves its right to re-evaluate its position if a fully detailed design package for the CDG Solar Facility project becomes available. Please

¹ The portion of the Retained Premises is identified in Attachment 1 of NYSERDA's letter dated April 13, 2017, and incorporated by reference herein as if set forth in full.

August 8, 2017

allow this letter to serve as a standing request for a copy of that fully detailed design package for the CDG Solar Facility project, if and when it is created.

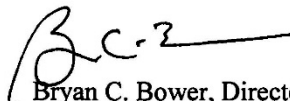
In addition, NYSERDA sought specific information from EMCBC-WV to complete the appropriate regulatory analysis under the license with the Nuclear Regulatory Commission (NRC). In response to NYSERDA's inquiry, the CDG Solar Facility project, as described to EMCBC-WV, does not impact the effectiveness of the WVDP's Documented Safety Analysis. Further, the CDG Solar Facility project, as described to EMCBC-WV, does not inhibit EMCBC-WV from taking any action under the Atomic Energy Act or the WVDP Act enumerated under NYSERDA NRC License CSF-1, Amendment 31.

Also, based upon the information EMCBC-WV has to date with respect to the CDG Solar Facility project, the project does not appear to inhibit or prevent EMCBC-WV from taking action under the Atomic Energy Act or WVDP Act with respect to the four activities enumerated in Amendment 31 to License CSF-1.

EMCBC-WV's response to NYSERDA's inquiry is only intended to provide a response to information sought for NYSERDA to perform its regulatory analysis and is expressly not intended to provide any opinion by EMCBC-WV whether a license amendment is needed for the CDG Solar Facility project. Also, please know that this response is not an action, opinion, or decision by EMCBC-WV on the CDG Solar Facility project.

Thank you for reaching out to us on this matter and do not hesitate to contact me at Extension 4368 with any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'B.C. Bower', with a long horizontal stroke extending to the right.

Bryan C. Bower, Director
West Valley Demonstration Project

BCB:373241 – 531