Appendix 2C
Impacted Area Assessments
Buildings, Structures and Open Land Areas Outside of the RCA

Buildings and Structures

Screen-well Pump House (OMB-01)

Description: OMB-01 is a YNPS structure located on U S Gen owned property. OMB-01 is located within the bounds of survey area OOL-03, a Class 3 land survey area. OMB-01 consists of reinforced concrete that forms the intake and screen-well structure below grade and steel frame and block structure that housed the pump motors and controls above grade. The intake structure connects to Sherman Reservoir through a corrugated metal pipe. The pump discharge connects to the turbine building through 84 inch diameter concrete pipe.

History: The systems present and the processes performed in OMB-01 did not involve radioactive materials. There is no information that identifies the presence of radioactive materials in OMB-01. Access to OMB-01 is through OOL-03 a Class 3 land survey area, there is a potential that contamination may have been translocated to OMB-01 from OOL-03.

Draft NUREG/CR-5849 based surveys performed 9/2/98 identified no licensed radioactivity present.

Contamination

1. Radionuclides Potentially Present: The primary radionuclides of concern for survey area OMB-01 are Co-60, Cs-137, Sr-90 and H-3 resulting from the intake of waters and sediments at Sherman Reservoir. Sherman Reservoir receives the discharge of the circulating water system, which includes permit released liquid radioactive effluents. The East Storm Drain System also discharges to Sherman pond, which is known to contain radioactivity from surface run-off from within the RCA.
2. Media: Reinforced concrete, sub-surface soil
3. Continued Investigation: Continued investigation will evaluate below grade reinforced concrete and adjacent sub-surface soils. Potential for migration of radioactivity exists from groundwater movement along the backfill around the circulating water system piping located below the Turbine Building. This will be investigated by core bore sampling of soils adjacent to and under the circulating water system piping under the Turbine Building.

Decommissioning/Decontamination Activities

1. Performed: Decommissioning activities performed in OMB-01 include:
   - Removal of the circulating water pump motors and impellers.
   - Removal of the circulating water pipes within the structure.
   - Removal of the traveling screen equipment in the Intake Structure
   - Removal of the service water pumps and pipes within the structure.
   - Installation of the Auxiliary Service Water System (ASWS)
2. Planned: No further decommissioning activities are planned at this time.

3. Anticipated End State Configuration: OMB-01, if present, will be surveyed as it currently exists: Reinforced concrete, concrete blocks, and structural steel. This structure may be removed in its entirety, subject to FERC approval.

Classification Statement: Based upon the current/best information indicating the radiological conditions and on conditions and events identified in the HSA, survey area OMB-01 is identified as a Class 3 Area.

Security Gatehouse and Diesel Generator Building (OMB-02)

Description: OMB-02 is located on YAEC owned property. OMB-02 is bounded by OOL-02 on the north, east, south and OOL-06 on the west. OMB-02 consists of reinforced concrete and block structures. OMB-02 functions as the access control point for the YNPS site. It also now houses the YNPS control room. Survey area OMB-02 also includes the Security Diesel Generator Building that supplies emergency power to the Gatehouse and the ISFSI. A portion of the West Storm Drain System runs under OMB-02. The potable water and sanitary sewer systems connect to OMB-02.

History: The use of radioactive materials in OMB-02 involved electro-plated or sealed check sources for instrument response verification. There is information that identifies events involving radioactive material present in OMB-02 resulting from infrequent and unintentional translocation of plant related radioactivity into OMB-02 from within the RCA. Contamination monitors were operated at the gatehouse as a final check for radioactivity on personnel leaving the industrial area. When contamination was identified at the OMB-02 monitors it was cleaned-up and a post decontamination survey performed to verify no detectable residual contamination. It is anticipated that any residual contamination, if present in OMB-02, would not exceed a small fraction of the appropriate DCGLs.

Contamination

1. Radionuclides Potentially Present: The primary radionuclides of concern for survey area OMB-02 are Co-60, Cs-137, Ag-108m, Sr-90 and H-3.
2. Media: Reinforced concrete, concrete block, sub-surface soil
3. Continued Investigation: Continued investigation will evaluate below grade reinforced concrete and adjacent sub-surface soils

Decommissioning/Decontamination Activities

1. Performed: Decommissioning activities performed in OMB-02 include the relocation of the Control Room into the gatehouse.
2. Planned: No further decommissioning activities are needed at this time.
3. Anticipated End State Configuration: OMB-02 will be surveyed as it currently exists, a reinforced concrete and concrete block structure.

Classification Statement: Based upon the current/best information indicating the radiological conditions and on conditions and events identified in the HSA, survey area OMB-02 is identified as a Class 3 Area.

Administration Building (OMB-03)

Description: OMB-03 is located on YAEC owned property. OMB-03 is bounded entirely by OOL-06. OMB-03 consists of a metal frame and panel structure set on a reinforced concrete pad. OMB-03 functions as the Administration Office Building.

History: The systems present and the processes performed in OMB-03 did not involve use of radioactive materials. Over its history as a visitor center and training center, various radioactive materials were present in the building including electro-plated and sealed check sources and examples of naturally occurring radioactive materials and consumer products.

Contamination

1. Radionuclides Potentially Present: The primary radionuclides of concern for survey area OMB-03 are Co-60 and Cs-137.
2. Media: Reinforced concrete, surface soil.
3. Continued Investigation: Continued investigation will evaluate the structure as it currently exists.

Decommissioning/Decontamination Activities

1. Performed: No decommissioning activities have been performed in OMB-03.
2. Planned: No further decommissioning activities are needed at this time.
3. Anticipated End State Configuration: OMB-03 will be surveyed as is; Reinforced concrete, structural steel and generic building materials.

Classification Statement: Based upon the current/best information indicating the radiological conditions and on conditions and events identified in the operating history, survey area OMB-03 is identified as a Class 3 Area.

Warehouse and Loading Dock (OMB-04)

Description: OMB-04 is located on YAEC-owned property. OMB-04 is bounded by OOL-02 on the north and east, OOL-12 on the south and SVC-03 on the west. OMB-04 consists of a metal frame and panel structure set on a concrete pad.

History: Although a single structure now, OMB-04 previously consisted of two structures: the original warehouse and a separate two bay garage. The warehouse and garage were connected by construction of an addition that spanned the gap between the east end of the warehouse and the west end of the garage. The construction of the Service Building Annex connected to the warehouse to the Service Building. A two-inch thick layer of concrete was poured over the existing floor of the warehouse as part of a loading dock modification.

OMB-04 was used as a storage location for plant equipment and materials and was not intended for storage of radioactive materials. There were incidents where radioactively contaminated equipment was inadvertently stored in OMB-04. The contamination consisted of loose radioactive material, resulting from the unintentional translocation of contaminated equipment into OMB-04 from the RCA. When these events were identified the radioactive contamination

was cleaned-up with the results of decontamination verified through survey. It is anticipated that any residual contamination, if present in OMB-04, would not exceed a small fraction of the appropriate DCGLs.

Survey area OMB-04 is adjacent to a Class 1 open land area (OOL-12). The mode of contamination of OOL-12 was via surface water run-off from the inside the RCA. The entire surface of survey area OMB-04 is elevated above the prevailing grade of the surface water run-off pathway in survey area OOL-12. Consequently survey area OMB-04 was not impacted by this mode of contamination spread. Residual contamination in survey area OOL-12 is embedded into crevices of the rail bed and is not available for translocation by foot traffic.

Contamination

1. Radionuclides Potentially Present: The primary radionuclides of concern for survey area OMB-04 are Co-60, Cs-137, Ag-108m, Sr-90 and H-3.
2. Media: Concrete.
3. Continued Investigation: Continued investigation will evaluate the structure as is and the backfill surrounding the recently installed ASWS.

Decommissioning/Decontamination Activities

1. Performed: Decommissioning activities performed in OMB-04 included:
   - Installation of the Auxiliary Service Water System.
   - The steel frame and panel structure has been demolished and removed from site.
2. Planned: none
3. Anticipated End State Configuration: Concrete floor slab and reinforced concrete loading dock structure.

Classification Statement: Based upon the current/best information indicating the radiological conditions and on conditions and events identified in the operating history, survey area OMB-04 is identified as a Class 3 Area.

Furlon House (OMB-05)

Description: OMB-05 is located on YAEC owned property. OMB-05 is bounded entirely by OOL-16. OMB-05 is a wood frame structure set on a stone and concrete foundation and was constructed prior to construction and operation of YNPS.

History: OMB-05 was used for storage of emergency response equipment trunks containing sealed packages of radioactive material (respirators, protective clothing, etc) The trunks also contained radioactive material in the form of electro-plated and sealed check sources used to verify instrument operability. The sealed packages were surveyed prior to placement into the trunks in storage at OMB-05.

After 9/11/01 OMB-05 was designated as the shipping and receiving location for the YNPS site. Radioactive material packages to be shipped are brought to OMB-05 in a condition ready for shipment, no preparation of packaged radioactive material is performed in OMB-05. No radioactive material packages are opened in OMB-05. Radioactive material packages received at

the YNPS site are surveyed in accordance with transportation regulations to verify radioactive material package integrity prior to opening. Packages are opened inside the RCA.

Draft NUREG/CR-5849 based surveys performed in 1998 identified no licensed radioactivity detectable. Only naturally occurring radionuclides were identified during the scans of the lower walls and floors and total surface contamination measurements. No exposure rate or loose surface contamination measurements were obtained.
In August of 2003 the foundation was repaired on the south wall. Soils excavated from the work area were deposited in OOL-07.

Contamination

1. Radionuclides Potentially Present: The primary radionuclides of concern for survey area OMB-05 are Co-60 and Cs-137. This radioactivity would have been reintroduced to the area after 1998 and, if present, would be a small fraction of the DCGL.
2. Media: Generic Building Materials.
3. Continued Investigation: Continued investigation will evaluate the structure as is.

Decommissioning/Decontamination Activities

1. Performed: No decommissioning activities have been performed in OMB-05.
2. Planned: No further decommissioning activities are planned.
3. Anticipated End State Configuration: The structure will remain as is.

Classification Statement: Based upon the current/best information indicating the radiological conditions and on conditions and events identified in the operating history, survey area OMB-05 is identified as a Class 3 Area.

Seal Pit (OMB-06)

Description: OMB-06 is a YNPS structure located on U S Gen owned property. OMB-06 is bounded by survey area OOL-03 on the east south and west and by survey area OOL-01 on the north. OMB-01 consists of reinforced concrete that forms the discharge structure of the circulating water system. The discharge structure is located at the edge of Sherman Reservoir and is the terminus of the 84 inch diameter concrete pipe returning circulating system water to Sherman Reservoir.

History: The circulating water system is the ultimate discharge point for 10 CFR 20 permitted releases of liquid radioactive effluents. Access to OMB-06 is through OOL-03 a Class 3 land survey area, there is a potential that contamination may have been translocated to OMB-06 from OOL-03.

Draft NUREG/CR-5849 based surveys performed in 1998 identified licensed radioactivity present in scale built up on the circulating water pipes upstream from OMB-06 and in pond sediment samples collected in the bay of Sherman Reservoir (OOL-01) in front of OMB-06. The radioactive material concentrations detected in the pond sediment as well as sediments taken from inside the structure after the circulating water system was deactivated, is below the proposed DCGLs for soil. The circulating water piping will be surveyed as part of the continuing

characterization investigations and will either be free released or will be removed and disposed of as low-level radioactive waste. The accumulation of sediments within structure will be removed. It is expected that any residual contamination, if present in OMB-06, would not exceed a small fraction of the appropriate DCGLs.

Contamination

1. Radionuclides Potentially Present: The primary radionuclides of concern for survey area OMB-06 are Co-60, Cs-137, Sr-90 and H-3 resulting from the permitted release of liquid radioactive effluents into the circulating water system, discharge to Sherman Reservoir.
2. Media: Reinforced concrete, accumulated sediment within the structure.
3. Continued Investigation: Continued investigation will evaluate reinforced concrete and sediments. Potential for migration of radioactivity exists from groundwater movement through the backfill around the outside of the circulating water system piping located below the Turbine Building. This will be investigated by core bore sampling of soils adjacent to and under the circulating water system piping under the Turbine Building.

Decommissioning/Decontamination Activities

1. Performed: None
2. Planned: No decommissioning activities are planned at this time.
3. Anticipated End State Configuration: OMB-06 will be surveyed as is: Reinforced concrete.

Classification Statement: Based upon the current/best information indicating the radiological conditions and on conditions and events identified in the HSA, survey area OMB-06 is identified as a Class 3 Area.

Turbine Building and Portions of Service Building Outside of the RCA

Turbine Building and Offices (TBN-01)

Description: TBN-01 is bounded by OOL-02 on the north, SVC-01 on the east, NOL-06 on the south and OOL-10 and OOL-02 the west. The TBN-01 consists of a steel frame and concrete block lower structure with a steel frame and metal panel upper structure.

History: The systems present and the processes performed in TBN-01 were not intended to involve radioactive materials. There is information that identifies conditions and events where radioactive material was present in the TBN-01.

A portion of the Turbine Building became contaminated in 1967 while a main coolant pump was being refurbished on the turbine deck. At that time the area was decontaminated. The event was incorporated into plans for decommissioning activities and survey plans developed for this area.

The condensate system contained radioactive materials as a result of primary to secondary system leakage that occurred in the steam generators. Contamination from this condition was identified in the condensate piping and components, in the floor drain system and in the soil around and under the floor drains. Additional contaminated concrete surfaces and soil below the

concrete floor were identified near turbine support pedestal #4. All of these identified subsurface locations have undergone a successful mitigation process and have been backfilled to grade. The interior of the structure and slab were surveyed under NUREG/CR-5849 criteria after phase 1 decommissioning activities were complete.

The general sub-surface conditions are the subject of continuing investigation.
Contamination

1. Radionuclides Potentially Present: The primary radionuclides of concern for survey area TBN-01 are Co-60, Cs-137, Sr-90 and H-3.
2. Media: Reinforced concrete, sub-surface soil
3. Continued Investigation: Continued investigation will evaluate below-grade reinforced concrete and adjacent sub-surface soils

Decommissioning/Decontamination Activities

1. Performed: Decommissioning activities performed in TBN-01 include:
   - Removal of secondary systems.
   - Removal of equipment.
   - Removal of sub-floor systems (floor and equipment drains, service water piping).
   - Removal of soil from around the sub-floor systems.
   - Soil excavations backfilled.
2. Planned: Planned decommissioning activities for the TBN-01 include demolition of the entire structure to grade.
3. Anticipated End State Configuration: Reinforced concrete structure (floor slab), sub-floor soils, sub-grade structures.

Classification Statement: Based upon the current/best information indicating the radiological conditions and on conditions and events identified in the operating history, survey area TBN-01 is identified as a Class 3 Area.

Non-Rad Service Building (SVC-01)

Description: SVC-01 is bounded by OOL-02 on the north, by SVC-03 on the east, by SVC-02 on the south and TBN-01on the west. The SVC-01 consists of a steel frame and concrete block structure built on reinforced concrete floor slab and foundations.

History: The systems present and the processes performed in SVC-01 did not involve the use of radioactive materials other than radioactive electro-plated and sealed check sources used to test instrumentation operability. SVC-01 is adjacent to the radiation protection (RP) control point and was maintained as a clean area. There is information concerning events involving radioactive material contamination identified present in SVC-01. The contamination consisted of loose contamination, resulting from inadvertent translocation of radioactivity into SVC-01from the RCA at the control point. When these events were identified the radioactive contamination was cleaned-up and the area surveyed. It is anticipated that any residual contamination, if present in SVC-01, would not exceed a small fraction of the appropriate DCGLs.

Contamination

1. Radionuclides Potentially Present: The primary radionuclides of concern for survey area SVC-01 are Co-60, Cs-137, Ag-108m, Sr-90 and H-3.
2. Media: Reinforced concrete, sub-surface soil
3. Continued Investigation: Continued investigation will evaluate below grade reinforced concrete structures and adjacent sub-surface soils

Decommissioning/Decontamination Activities

1. Performed: Decommissioning activities performed in SVC-01 include:
   - Removal of secondary systems.
   - Removal of equipment.
2. Planned: Planned decommissioning activities for the SVC-01 include demolition of entire structure to elevation 1022'-8".
3. Anticipated End State Configuration: Reinforced concrete structure (floor slab).

Classification Statement: Based upon the current/best information indicating the radiological conditions and on conditions and events identified in the operating history, survey area SVC-01 is identified as a Class 3 Area.

Service Building Addition (SVC-03)

Description: SVC-03 is bounded by OOL-02 on the north, OOL-02 and OMB-04 on the east, SVC-02 on the south, and SVC-02 and SVC-01on the west. SVC-03 consists of a steel frame and concrete block structure. The ground floor corridor that runs north and south located in the southwest corner of the Service Building Addition and the south most room adjacent to it, are not included in SVC-03 but are included in SVC-02.

History: The systems present and the processes performed in SVC-03 did not involve use of radioactive materials. There is information that identifies inadvertent transmigration of plant-related radioactivity into SVC-03. The contamination consisted of loose radioactive material, resulting from inadvertent translocation of radioactivity into SVC-03 from the RCA. When these events were identified the radioactive contamination was cleaned-up with the results of decontamination verified through survey. It is anticipated that any residual contamination, if present in SVC-03, would not exceed a small fraction of the appropriate DCGLs.

A portion of the SVC-03 was built on top of what was a portion of the RCA from the time prior to its construction. This circumstance will be investigated as part of the continuing investigation of subsurface locations; however, it is anticipated that any residual contamination, if present beneath the poured slab, would not exceed a small fraction of the appropriate DCGLs.

Contamination:

1. Radionuclides Potentially Present: The primary radionuclides of concern for survey area SVC-03 are Co-60, Cs-137, Ag-108m, Sr-90 and H-3.
2. Media: Reinforced concrete, surface soil, subsurface soil.
3. Continued Investigation: Continued investigation will evaluate below grade reinforced concrete and adjacent sub-surface soils.

Decommissioning/Decontamination Activities

1. Performed: Decommissioning activities performed in SVC-03 include:
   - Removal of secondary systems.
   - Removal of equipment.
   - Demolition and removal of the non-RCA portion of the structure.
2. Planned: Planned decommissioning activities for the SVC-03 include demolition of walls to grade.
3. Anticipated End State Configuration: The end state configuration of WST-04 is anticipated to include:
   - Surface concrete structures (floor slab)
   - Subsurface concrete structures (foundations)
   - Subsurface soil.

Classification Statement: Based upon the current/best information indicating the radiological conditions and upon conditions and events identified in the operating history and activities performed during decommissioning, survey area SVC-03 is identified as a Class 3 Area.

Open Land Areas Outside of the RCA (OOL)

Sherman Pond Sediment (OOL-01)

Description: OOL-01 consists of the sediment layers in Sherman Pond and is bounded by the continuation of Sherman Pond on the north, OOL-15 on the east, OOL-13 and OOL-03 on the south and OOL-03 on the west. Sherman Pond is owned by US Gen.

History: OOL-01 has received surface run-off from the east end of the RCA via OOL-12 and OOL-13 and also discharge of the east storm drain system. It also received the permitted liquid waste discharge effluent that was released from the site via the circulating water system. A significant amount of sediment sampling was performed over the life of the plant under the Radiological Environmental Monitoring Program (REMP) with no impact being noted. Additional sediment sampling has been performed in OOL-01 following the cessation of power operations. Scoping samples of pond sediment indicate mean levels of radioactivity to be a small fraction of the proposed soil DCGLs (see Table 2-5).

Contamination:

1. Radionuclides Potentially Present: The primary radionuclides of concern for survey area OOL-01 are, Cs-137, Sr-90 and H-3. PCBs have also been identified in the sediments of Sherman Pond.
2. Media: Sediment
3. Continued Investigation: Continued investigation will be necessary to support possible PCB sediment removal.

Decommissioning/Decontamination Activities

1. Performed: No decommissioning activities have been performed in OOL-01
2. Planned: Future decommissioning activities may include sediment removal for non-radioactive concerns.
3. Anticipated End State Configuration: A soil surface configuration suitable for survey.

Classification Statement: Based upon the current/best information indicating the radiological conditions and on conditions and events identified in the operating history, survey area OOL-01 is identified as a Class 3 Area.

Yankee Non-Rad Yard Area (OOL-02)

Description: OOL-02 consists of the land area (owned by YAEC), in the yard area within the current industrial area of the YNPS site. Survey Area OOL-02 is bounded by the YAEC/US Gen property line on the north; OOL-12 and OOL-13 on the east, the Warehouse/Service Building/Turbine Building complex, plus OOL-10 and OOL-08 on the south and OOL-06 on the west. Subsurface systems present in OOL-02 include the east storm drain system, security lighting and video conduit runs, sanitary sewer system, fire protection water system and the circulating water system.

History: The west end of Survey Area OOL-02 received surface run-off from OOL-10, a Class 2 survey area. On the east end OOL-02 is located upslope from survey areas OOL-12 and OOL-13 and so was not subject to run-off from the RCA. OOL-02 has been the main travel path for all material, including radioactive material received at or shipped from the YNPS site. Scoping samples of various survey media in OOL-02 indicate mean levels of radioactivity to be a small fraction of the proposed soil DCGLs (see Table 2-5).

Contamination:

1. Radionuclides Potentially Present: The primary radionuclides of concern for survey area OOL-02 are Co-60, Cs-137, Sr-90 and H-3.
2. Media: Surface and subsurface soil.
3. Continued Investigation: Continued investigation will be necessary to assess subsurface structures and systems.

Decommissioning/Decontamination Activities

1. Performed: Decommissioning activities performed in OOL-02 include:
   - Removal of subsurface system components that traverse OOL-02
   - Installation of the Auxiliary Service Water system.
2. Planned: Future-decommissioning activities may include removal of certain subsurface structures and systems.
3. Anticipated End State Configuration: A soil surface configuration suitable for survey. Subsurface structures requiring survey are sufficiently exposed to allow survey.

Classification Statement: Based upon the current/best information indicating the radiological conditions and on conditions and events identified in the operating history and as a result of the

decommissioning activities performed to date, survey area OOL-02 is identified as a Class 3 Area.

Sherman Reservoir Dam and South Shoreline (OOL-03)

Description: OOL-03 consists of the land area owned by US Gen. Survey Area OOL-03 is bounded by the Deerfield River and Sherman Reservoir on the north, OOL-13 on the east, the YAEC, US Gen property line (OOL-02) on the south and OOL-04 on the west. Subsurface systems present in OOL-02 include the east storm drain system, security lighting and video conduit runs, sanitary sewer system fire protection water system and the circulating water system.

History: Survey Area OOL-03 has received surface run-off from OOL-02 a Class 3 survey area. OOL-03 has been used as a path of travel for radioactive material received at and shipped from the YNPS site. The HSA has identified that there are no contaminating events associated with OOL-03. Scoping samples of various survey media in OOL-03 indicate mean levels of radioactivity to be a small fraction of the proposed soil DCGLs (see Table 2-5).

Contamination:

1. Radionuclides Potentially Present: The primary radionuclides of concern for survey area OOL-03 are Co-60, Cs-137, Sr-90 and H-3.
2. Media: Surface and subsurface soil.
3. Continued Investigation: Continued investigation will be necessary to assess subsurface structures and systems.

Decommissioning/Decontamination Activities

1. Performed: No decommissioning activities have been performed in survey area OOL-03.
2. Planned: Future-decommissioning activities may include removal of certain subsurface structures and systems
3. Anticipated End State Configuration: A soil surface configuration suitable for survey. Subsurface structures requiring survey are sufficiently exposed to allow survey.

Classification Statement: Based upon the current/best information indicating the radiological conditions and on conditions and events identified in the operating history, survey area OOL-03 is identified as a Class 3 Area.

US Gen Sherman Station (OOL-04)

Description: OOL-04 consists of the land area owned by US Gen. Survey Area OOL-04 is bounded by the Deerfield River on the north, OOL-03 on the east, the YAEC/US Gen property line (OOL-02) on the south and OOL-05 on the west.

History: Survey Area OOL-04 has received surface run-off from the OOL-02 a Class 3 survey area. The groundwater within Survey Area OOL-04 is suspected of containing radioactivity originating from the operations at YNPS. Sherman Spring, located in Survey Area OOL-04, has been determined to contain plant related radioactivity (tritium). Scoping samples of various

survey media in OOL-04 indicate mean levels of radioactivity to be a small fraction of the proposed soil DCGLs (see Table 2-5).

Contamination:

1. Radionuclides Potentially Present: The primary radionuclides of concern for survey area OOL-04 are Co-60, Cs-137, Ag-108m, Sr-90 and H-3.
2. Media: Surface and subsurface soil, surface water and groundwater.
3. Continued Investigation: Continued investigation will be necessary to assess subsurface soil, surface water and groundwater.

Decommissioning/Decontamination Activities

1. Performed: No decommissioning activities have been performed in survey area OOL-04.
2. Planned: Future-decommissioning activities may include removal of certain soils depending upon the results of the continuing investigation.
3. Anticipated End State Configuration: A soil surface configuration suitable for survey and access to surface water and groundwater.

Classification Statement: Based upon the current/best information indicating the radiological conditions and on conditions and events identified in the operating history, survey area OOL-04 is identified as a Class 3 Area.

US Gen Deerfield River Frontage Property (OOL-05)

Description: OOL-05 consists of the land area owned by US Gen. Survey Area OOL-05 is bounded by the Deerfield River on the north, OOL-04 on the east, the YAEC, US Gen property line (OOL-06) on the south, and by non-impacted US Gen owned property on the west.

History: Survey Area OOL-05 has received surface run-off from OOL-06 and the west storm drain system of YNPS. The septic waste disposal systems associated with YNPS are located within the bounds of OOL-05. The original septic system leach field was abandoned in place after it became clogged with solids. A radiological assessment of the leach field identified the presence of low levels of Co-60. Scoping samples of various survey media in OOL-06 indicate mean levels of radioactivity to be a small fraction of the proposed soil DCGLs (see Table 2-5).

Contamination:

1. Radionuclides Potentially Present: The primary radionuclides of concern for survey area OOL-05 are Co-60, Cs-137, Sr-90 and H-3.
2. Media: Surface and subsurface soil, surface water and groundwater.
3. Continued Investigation: Continued investigation will be necessary to assess surface and subsurface soil, surface water and groundwater.

Decommissioning/Decontamination Activities

1. Performed: No decommissioning activities have been performed in survey area OOL-05.

2. Planned: Future-decommissioning activities may include removal of certain soils depending upon the results of the continuing investigation and actions required to discontinue use of or close the leach fields.
3. Anticipated End State Configuration: A soil surface configuration suitable for survey and access to surface water and groundwater.

Classification Statement: Based upon the current/best information indicating the radiological conditions and on conditions and events identified in the operating history, survey area OOL-05 is identified as a Class 3 Area.

YNPS Western Access (OOL-06)

Description: OOL-06 consists of the land area owned by YAEC and is bounded by the YAEC/US Gen property line (OOL-05) on the north, OOL-02 and OOL-08 on the east, OOL-08 on the south and non-impacted YAEC owned property on the west. OOL-06 contains within its bounds survey areas OOL-07 and OMB-03. Subsurface systems present in OOL-06 include the west storm drain system, the site electrical supply conduits and the sanitary sewer system associated with OMB-03. Adjacent to OOL-07 is the location of the YNPS trash compactor and salt/sand shed, both of which are temporary structures. The surface area of OOL-06 is indigenous soils and asphalt of the parking lots area and roadways. There are numerous temporary structures present in OOL-06.

History: Survey Area OOL-06 has received surface run-off from the OOL-02 and is the outfall of the west storm drain system. OOL-06 contains the primary access point for the YNPS site and is a travel path for material, including radioactive material received at or shipped from the YNPS site. There is an abandoned leach field as well as an active leach field both associated with the administration building located within the bounds of OOL-06. Scoping samples of various survey media in OOL-06 indicate mean levels of radioactivity to be a small fraction of the proposed soil DCGLs (see Table 2-5).

Contamination:
1. Radionuclides Potentially Present: The primary radionuclides of concern for survey area OOL-06 are Co-60, Cs-137, Sr-90 and H-3.
2. Media: Surface and subsurface soil, surface water and groundwater.
3. Continued Investigation: Continued investigation will be necessary to assess surface and subsurface soil, surface water and groundwater.

Decommissioning/Decontamination Activities
1. Performed: No decommissioning activities have been performed in survey area OOL-06.
2. Planned: Future decommissioning activities may include removal of certain soils depending upon the results of the continuing investigation.
3. Anticipated End State Configuration: A soil surface configuration suitable for survey and access to surface water and groundwater.

Classification Statement: Based upon the current/best information indicating the radiological conditions and on conditions and events identified in the operating history, survey area OOL-06 is identified as a Class 3 Area.

Spoils Deposit Area (OOL-07)

Description: OOL-07 consists of the land area owned by YAEC. OOL-07 is bounded entirely by the survey area OOL-06. Survey area OOL-07 consists of a deposit of soils excavated from the area of the ISFSI and ISFSI haul road. The soil deposited in OOL-07 partially covers the footprint of a septic system leach field that serves the Administration Building/Training Center.

History: Survey Area OOL-07 has received excavation spoils from certain YNPS site modifications performed over the history of the YNPS site. Although a majority of the spoils were assessed for radioactive material content prior to deposition in OOL-07 with a "no detectable activity" result, no location specific data has been collected in this Survey Area.

Contamination:

1. Radionuclides Potentially Present: The primary radionuclides of concern for survey area OOL-07 are Co-60, Cs-137, Sr-90 and Ag-108m.
2. Media: Surface and subsurface soil
3. Continued Investigation: Continued investigation may be necessary to assess surface and subsurface soil.

Decommissioning/Decontamination Activities

1. Performed: Decommissioning activities performed in OOL-02 include the addition of soil excavated during construction of the ISFSI haul road.
2. Planned: Future-decommissioning activities may include removal of certain soils depending upon the results of the continuing investigation.
3. Anticipated End State Configuration: A soil surface configuration suitable for survey.

Classification Statement: Based upon the current/best information indicating the radiological conditions and on conditions and events identified in the operating history and as a result of the decommissioning activities performed to date, survey area OOL-07 is identified as a Class 2 Area.

YNPS Site Impacted Perimeter Zone (OOL-08)

Description: OOL-08 consists of the land area owned by YAEC. OOL-08 is bounded by OOL-06, OOL-02, OOL-10, OOL-09, OOL-11, OOL-12, OOL-14 and OOL-15 on the north, and by the non-impacted area on the east, west and south. The surface of OOL-08 is indigenous soils.

History: Survey Area OOL-08 represents that portion of the YNPS site that may have been impacted by wind born transmigration of radioactivity from the YNPS site that is not captured within the bounds of another survey area. OOL-08 forms a wide buffer zone between the plant industrial area and that portion of the site designated as non-impacted. Scoping samples of

various survey media in OOL-08 indicate mean levels of radioactivity to be a small fraction of the proposed soil DCGLs (see Table 2-5).

Contamination:

1. Radionuclides Potentially Present: The primary radionuclides of concern for survey area OOL-08 are Co-60, Cs-137, Sr-90, Ag-108m and H-3.
2. Media: Surface soil.
3. Continued Investigation: Continued investigation may be necessary to assess surface soil.

Decommissioning/Decontamination Activities

1. Performed: No decommissioning activities have been performed in survey area OOL-08.
2. Planned: Future-decommissioning activities may include removal of certain soils depending upon the results of the continuing investigation.
3. Anticipated End State Configuration: A soil surface configuration suitable for survey.

Classification Statement: Based upon the current/best information indicating the radiological conditions and on conditions and events identified in the operating history, survey area OOL-08 is identified as a Class 3 Area.

Southeast Construction Fill Area (OOL-09)

Description: OOL-09 consists of the land area owned by YAEC. OOL-09 is bounded on the north, east and south by survey area OOL-08 and on the west by survey area OOL-10.

History: Survey Area OOL-09 has received construction spoils and certain discarded material previously used at YNPS. A comprehensive radiological assessment of this Survey Area has been performed with subsurface objects being located by ground penetrating radar. These objects were exhumed and surveyed for radioactive material, in addition numerous test pits were excavated and assessed. No radioactive material was discovered in the material, soils or groundwater obtained from this area. The area is currently operated as a landfill and ground water is being monitored. Scoping samples of various survey media in OOL-09 indicate mean levels of radioactivity to be a small fraction of the proposed soil DCGLs (see Table 2-5).

Contamination:

1. Radionuclides Potentially Present: The primary radionuclides of concern for survey area OOL-09 are Co-60, Cs-137, Sr-90, Ag-108m and H-3.
2. Media: Surface and subsurface soil, surface water and groundwater.
3. Continued Investigation: Continued investigation will be necessary to assess surface and subsurface soil, surface water and groundwater.

Decommissioning/Decontamination Activities

1. Performed: Decommissioning activities performed in OOL-09 include the addition of soil excavated during construction of the ISFSI and haul road.
2. Planned: Future decommissioning activities may include removal of certain soils and materials depending upon the results of the continuing investigation and requirements for further cleanup of the area related to non-radioactive materials.

3. Anticipated End State Configuration: A soil surface configuration suitable for survey and access to surface water and groundwater.

Classification Statement: Based upon the current/best information indicating the radiological conditions and on conditions and events identified in the operating history, survey area OOL-09 is identified as a Class 3 Area.

ISFSI Pad Access Zone (OOL-10)

Description: OOL-10 consists of the land area owned by YAEC. OOL-10 is bounded by OOL-02, NOL-06, NOL-05, NOL-04, NOL-03 and OOL-11 on the north, OOL-08 and OOL-09 on the east, OOL-08 on the south and also on the west.

History: Survey Area OOL-10 is the buffer zone around the RCA and, as such, has the potential to have become contaminated.

Contamination:
1. Radionuclides Potentially Present: The primary radionuclides of concern for survey area OOL-10 are Co-60, Cs-137, Sr-90, Ag-108m and H-3.
2. Media: Surface and subsurface soil, surface water and groundwater.
3. Continued Investigation: Continued investigation will be necessary to assess surface and subsurface soil surface water and groundwater.

Decommissioning/Decontamination Activities
1. Performed: Decommissioning activities performed in OOL-10 consist of soil removal to adjust the grade of the ISFSI fuel transfer haul road.
2. Planned: Future-decommissioning activities may include removal of certain soils and materials depending upon the results of the continuing investigation.
3. Anticipated End State Configuration: A soil surface configuration suitable for survey and access to surface water and groundwater.

Classification Statement: Based upon the current/best information indicating the radiological conditions and on conditions and events identified in the operating history, survey area OOL-10 is identified as a Class 2 Area.

East RCA Buffer Zone (OOL-11)

Description: OOL-11 consists of the land area owned by YAEC. OOL-11 is bounded by OOL-12 on the north, OOL-08 on the east, OOL-10 on the south and NOL-02 and NOL-03 on the west.

History: Survey Area OOL-11 is the buffer zone around the RCA and, as such, has the potential to have become contaminated.

Contamination:
1. Radionuclides Potentially Present: The primary radionuclides of concern for survey area OOL-11 are Co-60, Cs-137, Sr-90, Ag-108m and H-3.

2. Media: Surface and subsurface soil.
3. Continued Investigation: Continued investigation will be necessary to assess surface soil.

Decommissioning/Decontamination Activities
1. Performed: No decommissioning activities have been performed in OOL-11.
2. Planned: Future-decommissioning activities may include removal of certain soils and materials depending upon the results of the continuing investigation.
3. Anticipated End State Configuration: A soil surface configuration suitable for survey.

Classification Statement: Based upon the current/best information indicating the radiological conditions and on conditions and events identified in the operating history, survey area OOL-11 is identified as a Class 2 Area.

Warehouse Rail Spur (OOL-12)

Description: OOL-12 consists of the land area owned by YAEC, in the yard area within the current industrial area of the YNPS site extending from the east line of the RCA to the YAEC, US Gen property line. Survey Area OOL-12 is bounded by the Service Building and warehouse, OOL-02 and the YAEC, US Gen property line on the north, OOL-13 and OOL-14 on the east, OOL-08 and OOL-11 on the south and NOL-01 on the west.

History: Survey Area OOL-12 has received surface run-off from the east end of the RCA and has been a travel path for radioactive material received at or shipped from the YNPS site. Contaminated surface soil has been removed from OOL-12 during plant operations.

Contamination:
1. Radionuclides Potentially Present: The primary radionuclides of concern for survey area OOL-12 are Co-60, Cs-137, Sr-90 and H-3.
2. Media: Surface and subsurface soil.
3. Continued Investigation: Continued investigation will be necessary to assess subsurface structures and systems.

Decommissioning/Decontamination Activities
1. Performed: Decommissioning activities performed in OOL-02 include the installation of the Auxiliary Service Water system.
2. Planned: Future decommissioning activities may include removal of certain surface and subsurface structures and systems
3. Anticipated End State Configuration: A soil surface configuration suitable for survey.

Classification Statement: Based upon the current/best information indicating the radiological conditions and on conditions and events identified in the operating history, survey area OOL-12 is identified as a Class 1 Area.

US Gen Rail Spur Terminus (OOL-13)

Description: OOL-13 consists of the land area owned by US Gen. Survey Area OOL-13 is bounded by Sherman Reservoir on the north, OOL-15 on the east, the YAEC survey Area OOL-14 on the south and OOL-12 on the west.

History: Survey Area OOL-13 has received surface run-off from the OOL-12 and has been used as a path of travel for radioactive material received at and shipped from the YNPS site.

Contamination:

1. Radionuclides Potentially Present: The primary radionuclides of concern for survey area OOL-13 are Co-60, Cs-137, Sr-90 and H-3.
2. Media: Surface and subsurface soil.
3. Continued Investigation: Continued investigation will be necessary to assess surface and subsurface soil.

Decommissioning/Decontamination Activities

1. Performed: No decommissioning activities have been performed in survey area OOL-13.
2. Planned: Future-decommissioning activities may include removal of certain soils.
3. Anticipated End State Configuration: A soil surface configuration suitable for survey.

Classification Statement: Based upon the current/best information indicating the radiological conditions and on conditions and events identified in the operating history, survey area OOL-13 is identified as a Class 1 Area.

US Gen Wheeler Brook Frontage (OOL-14)

Description: OOL-14 consists of the land area owned by US Gen. Survey Area OOL-14 is bounded by OOL-13 on the north, OOL-15 and OOL-08 on the east, OOL-08 on the south and also on the west.

History: Survey Area OOL-14 at one time was included within the security fence of the YNPS site OOL-14 serves as a buffer zone between survey areas OOL-12 and OOL-13. Scoping samples of various survey media in OOL-14 indicate mean levels of radioactivity to be a small fraction of the proposed soil DCGLs (see Table 2-5).

Although OOL-14 abuts class 1 area OOL-13, the mode of contamination of OOL-13 was by surface water run-off from the RCA. OOL-14 is above the grade level of OOL-13 and was not impacted by the surface run-off transmigration vector.

Contamination:

1. Radionuclides Potentially Present: The primary radionuclides of concern for survey area OOL-14 are Co-60, Cs-137, Sr-90 and H-3.
2. Media: Surface soil.
3. Continued Investigation: Continued investigation will be necessary to assess surface soils.

Decommissioning/Decontamination Activities

1. Performed: Decommissioning activities performed in OOL-02 include placement of LP Gas storage tanks.
2. Planned: Future decommissioning activities include removal the LP Gas tanks from survey area OOL-14
3. Anticipated End State Configuration: A soil surface configuration suitable for survey.

Classification Statement: Based upon the current/best information indicating the radiological conditions and on conditions and events identified in the operating history, survey area OOL-14 is identified as a Class 3 Area.

US Gen Sherman Reservoir East Shoreline (OOL-15)

Description: OOL-15 consists of the land area owned by US Gen. Survey Area OOL-15 is bounded by Sherman Reservoir (OOL-01) on the north, US Gen owned non-impacted area on the east, OOL-08 on the south and OOL-14 and OOL-13 on the west.

History: Survey Area OOL-15 serves as a buffer zone to survey area OOL-13.

Although OOL-15 abuts class 1 area OOL-13, the mode of contamination of OOL-13 was by surface water run-off from the RCA. OOL-15 is above the grade level of OOL-13 and beyond the Wheeler Brook surface run-off terminus. OOL-15 was not impacted by the surface run-off transmigration vector that impacted OOL-13.

Contamination:

1. Radionuclides Potentially Present: The primary radionuclides of concern for survey area OOL-15 are Co-60, Cs-137, Sr-90 and H-3.
2. Media: Surface soil.
3. Continued Investigation: Continued investigation will be necessary to assess surface soils.

Decommissioning/Decontamination Activities

1. Performed: No decommissioning activities have been performed in survey area OOL-15.
2. Planned: No decommissioning activities are anticipated for survey area OOL-15
3. Anticipated End State Configuration: A soil surface configuration suitable for survey.

Classification Statement: Based upon the current/best information indicating the radiological conditions and on conditions and events identified in the operating history, survey area OOL-15 is identified as a Class 3 Area.

Yankee House Parking (OOL-16)

Description: OOL-16 consists of the land area owned by YAEC and is entirely bounded by non-impact area.

History: Survey Area OOL-16 received soil from the YNPS site for the purpose of leveling the parking area. Although the soil originated in areas that are impacted (class 3 areas), soils from these areas typically show levels of radioactivity at a small fraction of the proposed soil DCGLs.

Contamination:

1. Radionuclides Potentially Present: The primary radionuclides of concern for survey area OOL-16 are Co-60, Cs-137, Sr-90 and H-3.
2. Media: Surface soil.
3. Continued Investigation: Continued investigation will be necessary to assess surface soils.

Decommissioning/Decontamination Activities

1. Performed: No decommissioning activities have been performed in survey area OOL-16.
2. Planned: No decommissioning activities are anticipated for survey area OOL-16
3. Anticipated End State Configuration: A soil surface configuration suitable for survey.

Classification Statement: Based upon the current/best information indicating the radiological conditions and on conditions and events identified in the operating history, survey area OOL-16 is identified as a Class 3 Area.

Asphalt Brick and Concrete Storage Area (OOL-17)

Description: OOL-17 consists of the land area owned by YAEC. Survey Area OOL-17 is bounded entirely by non-impact area.

History: Survey Area OOL-17 received asphalt and concrete from the YNPS site. Materials deposited in this area were subjected to radiological survey for free release prior to being transported to OOL-17. Based on the origin of this material the area must be classified as impacted. It is anticipated that any residual radioactivity, if present would not exceed a small fraction of the proposed soil DCGLs.

Contamination:

1. Radionuclides Potentially Present: The primary radionuclides of concern for survey area OOL-17 are Co-60, Cs-137, Sr-90 and H-3.
2. Media: Surface soil.
3. Continued Investigation: Continued investigation will be necessary to assess surface soils.

Decommissioning/Decontamination Activities

1. Performed: No decommissioning activities have been performed in survey area OOL-17.
2. Planned: No decommissioning activities are anticipated for survey area OOL-17
3. Anticipated End State Configuration: A soil surface configuration suitable for survey.

Classification Statement: Based upon the current/best information indicating the radiological conditions and on conditions and events identified in the operating history, survey area OOL-17 is identified as a Class 3 Area.

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