
SUBAREA 5D-NORTH FSP ADDENDUM
SANTA SUSANA FIELD LABORATORY SITE
AREA IV RADIOLOGICAL STUDY

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INTRODUCTION

HydroGeoLogic, Inc. (HGL) has been tasked by the U.S. Environmental Protection Agency (USEPA) to conduct a radiological characterization study of Area IV and the Northern Buffer Zone at the Santa Susana Field Laboratory (SSFL) site in Ventura County, California. This work is being executed under USEPA Region 7 Architect and Engineering Services Contract EP-S7-05-05, Task Order 0038. The technical lead on the project is USEPA Region 9.

This document supports the field implementation of the overall soil sampling program and is an addendum to the master Field Sampling Plan (FSP) for Soil Sampling (HGL, 2010). A description of the overall project goals; data quality objectives; sampling strategy; laboratory analytical suites; sample depth interval selection; data quality control; and data evaluation are described in the FSP.

PURPOSE

This addendum documents the rationale used to determine the location and depth of soil samples to be collected during the first phase (Round 1) of soil sampling within Subarea 5D-North. Sample locations are summarized in Table 1 (Attachment 1) and illustrated on the figures provided in Attachment 2. This addendum also documents the laboratory analyses that will be performed for each soil sample, derived from the default suite from Table 2.4 of the FSP for Soil Sampling (HGL, 2010) and adding site-specific analytes to that list by location as appropriate.

It should be noted that the specific sample locations presented herein were discussed during a technical review meeting held on April 20, 2011, with members of USEPA's SSFL Technical Stakeholder group consisting of representatives of U.S. Department of Energy (DOE), the State of California Department of Toxic Substances Control (DTSC), The Boeing Company, USEPA, and the community. Recommendations and action items identified at the technical

review meeting, including those on the topic of “likely chemical remediation” (LCR) zones and “likely Decontamination and Decommissioning” (D&D) zones have been incorporated into this FSP Addendum. In 5D-North there is one LCR zone (north of former Building 4020) and one likely D&D zone (Building 4055). USEPA understands that most, if not all, surface soil and infrastructure (building structures, concrete slabs, above-ground pipelines and underground pipelines etc.) may be excavated and removed from areas identified as LCR zones or likely D&D zones. Therefore, USEPA did not include soil samples within the zone's interior, but did locate some surface/subsurface samples around the zone's perimeter to better define the potential extent of contamination associated with such zones. In accordance with our role under the December 2010 DTSC/DOE cleanup agreement for the SSFL site, USEPA will conduct verification soil sampling post excavation to evaluate the attainment of site soil cleanup levels at all such remediation zones.

All soil samples will be analyzed for the default suite analytes presented in Table 2.4 of the soil sampling FSP (HGL, 2010). In addition to the default analytes soil samples collected at select locations will be tested for site-specific analytes based on the process knowledge of the area. The site-specific analytes were determined in accordance with Table 2.4 of the FSP for Soil Sampling (HGL, 2010).

Parking Lot 4509 is located directly south of Building 4009 which has housed an organic moderated reactor, a sodium graphite reactor, and a Van de Graaff accelerator. The parking lot may have been used as a staging area for material excavated during the removal of underground tanks and leach field associated with Building 4009. Therefore, soil samples associated with Parking Lot 4509 will be tested for the same site-specific analytes that were tested in soil samples collected around Building 4009 during the Subarea 8-North investigation (Am-243, C-14, H-3, Ni-59, Ni-63 and Tc-99).

During D&D activities at former Building 4020, a 1 foot sand layer was placed in the bottom of the building excavation. At select sampling locations within the footprint of former Building 4020 a targeted subsurface sample of native soil will be collected below the 1 foot sand layer, at the soil/bedrock interface, if possible. If refusal is encountered before bedrock is reached, a soil sample will be collected just above the depth refusal was encountered. In addition to this subsurface sample, soil samples will be collected based on the results of the borehole gamma logging in accordance with the FSP for Soil Sampling (HGL, 2010). If borehole gamma logging results show no elevated gamma reading then a composite soil sample will be collected from the 1-5 foot interval. A minimum of two subsurface soil samples will be collected from each subsurface boring location.

At select soil sampling locations outside the footprint of former Building 4020 a targeted subsurface sample of native soil will be collected at the soil/bedrock interface, if possible. If refusal is encountered before bedrock is reached, a soil sample will be collected just above the depth refusal was encountered. Only one subsurface soil sample will be collected unless the borehole gamma logging results show elevated gamma readings, then subsurface soil samples

will be collected at each contaminated zone in accordance with the FSP for Soil Sampling (HGL, 2010).

Former Building 4020, also known as the “Hot Lab”, processed, handled, and disassembled fuel and reactor test assemblies for radiological and chemical analyses. These items had the potential of a relatively large number of fission and activation products; therefore, soil samples associated with former Building 4020 will be tested for the site-specific analytes I-129, Ni-63, Ni-59, Pm-147, and Tc-99.

The drainage ditch north of former Building 4020 receives surface water from the areas around Building 4009 and former Building 4020. Therefore, sediment and subsurface soil samples collected from the ditch will be tested for the site-specific analytes associated with both Building 4009 and former Building 4020 (Am-243, C-14, H-3, I-129, Ni-59, Ni-63, Pm-147 and Tc-99).

Former Building 4373 was the first Systems for Nuclear Auxiliary Power critical facility at SSFL. Therefore, soil samples associated with former Building 4373 will be tested for the site-specific analytes H-3, Ni-59, Ni-63 and Tc-99, in accordance with Table 2.4 of the FSP for Soil Sampling (HGL, 2010).

Table 1 provides the location for each soil sample that will be collected in Subarea 5D-North during Round 1 of the soil sampling investigation as well as the technical justification and rationale for the selection of each sample location. Also summarized in this table is the suite of radiological analyses that will be performed on every sample, as well as other field-pertinent information including sample identification number, type, and general proximity to radiological facilities.

Figure 1 provides a base map that shows the location of each subgroup within Subarea 5D-North. The location and type (e.g. surface, subsurface, drainage) of each sample within each of the three Subarea 5D-North groupings are shown in Figures 2 through 4 in Attachment 2. Table 2 provides a summary of sample numbers by subarea group.

Table 2
Summary of Sample Numbers by Subarea Group

Group	Drainage	Surface	Subsurface	Total
1	1	4	6	11
2	7	106	140	253
3	5	65	74	144
Total	13	175	220	408

Attachment 3 provides key technical information that led to the selection of sample locations, sample interval selection, and the laboratory analysis that will be performed for each sample collected. The key information includes results of geophysical surveys, gamma surface

radiation surveys, results of past soil radiological investigations, and the findings summarized in the Technical Memorandum Subarea HSA-5D Historical Site Assessment (HGL, 2011).

SCHEDULE

Round 1 soil sampling within Subarea 5D-North will commence in mid May 2011, and be completed by mid July 2011. USEPA will provide periodic updates to SSFL Stakeholders regarding the status of the soil sampling program as well as the laboratory analysis and data interpretation.

REFERENCES

HydroGeoLogic, Inc., 2010. Field Sampling Plan for Soil Sampling, Area IV Radiological Study, Santa Susana Field Laboratory Ventura County, California. October 4, 2010.

HydroGeoLogic, Inc., 2011. Draft, Technical Memorandum, Subarea HSA-5D, Historical Site Assessment, Santa Susana Field Laboratory Area IV Radiological Study, Ventura County, California. April 8, 2011.

LIST OF ATTACHMENTS

Attachment 1	Tables
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ATTACHMENT 1

Table 1 Summary of Soil Sample Locations in Subarea 5D-North

Table 1
Summary of Soil Sample Locations in Subarea 5D-North

Group	Sample Type	Sample ID	Location Description	Technical Justification	Analytical Suite
Group 1	Surface	1	Southwest edge of Parking Lot 4509.	Characterize potential radiological contamination from historical spills from containers stored on parking lot.	Default, Ni-63, Ni-59, Tc-99, C-14, H-3, Am-243
Group 1	Subsurface	1	Southwest edge of Parking Lot 4509.	Characterize potential radiological contamination from historical spills from containers stored on parking lot.	Default, Ni-63, Ni-59, Tc-99, C-14, H-3, Am-243
Group 1	Surface	2	Southeast edge of Parking Lot 4509.	Characterize potential radiological contamination from historical spills from containers stored on parking lot.	Default, Ni-63, Ni-59, Tc-99, C-14, H-3, Am-243
Group 1	Subsurface	2	Southeast edge of Parking Lot 4509.	Characterize potential radiological contamination from historical spills from containers stored on parking lot.	Default, Ni-63, Ni-59, Tc-99, C-14, H-3, Am-243
Group 1	Subsurface	3	Northeast side of Parking Lot 4509.	Characterize potential radiological contamination from historical spills from containers stored on parking lot.	Default, Ni-63, Ni-59, Tc-99, C-14, H-3, Am-243
Group 1	Surface	4	Northwest edge of Parking Lot 4509.	Characterize potential radiological contamination from historical spills from containers stored on parking lot.	Default, Ni-63, Ni-59, Tc-99, C-14, H-3, Am-243
Group 1	Subsurface	4	Northwest edge of Parking Lot 4509.	Characterize potential radiological contamination from historical spills from containers stored on parking lot.	Default, Ni-63, Ni-59, Tc-99, C-14, H-3, Am-243
Group 1	Surface	5	Southwest of Parking Lot 4509.	Aerial photo feature, "Excavation".	Default, Ni-63, Ni-59, Tc-99, C-14, H-3, Am-243
Group 1	Subsurface	5	Southwest of Parking Lot 4509.	Aerial photo feature, "Excavation".	Default, Ni-63, Ni-59, Tc-99, C-14, H-3, Am-243
Group 1	Drainage	6	Northeast of Parking Lot 4509, in ditch on the south side of G Street.	Potential radiological contamination in soil/sediment originating from former Building 4020.	Default, Ni-63, Ni-59, Tc-99, C-14, H-3, Am-243
Group 1	Subsurface	6	Northeast of Parking Lot 4509, in ditch on the south side of G Street.	Potential radiological contamination in soil/sediment originating from former Building 4020.	Default, Ni-63, Ni-59, Tc-99, C-14, H-3, Am-243
Group 2	Drainage	7	East of Parking Lot 4509, in ditch west side of Water Tower Rd.	Characterize potential radiological contamination in soil/sediment originating from Parking Lot 4509.	Default, Ni-63, Ni-59, Tc-99, C-14, H-3, Am-243
Group 2	Subsurface	7	East of Parking Lot 4509, in ditch west side of Water Tower Rd.	Characterize potential radiological contamination in soil/sediment originating from Parking Lot 4509.	Default, Ni-63, Ni-59, Tc-99, C-14, H-3, Am-243
Group 2	Surface	8	North of former Building 4020, in former parking lot.	Aerial photo feature, "Possible Open Storage" and proximity to former Building 4020.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface	8	North of former Building 4020, in former parking lot.	Aerial photo feature, "Possible Open Storage" and proximity to former Building 4020.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Drainage	9	Ditch on the south side of G Street, north of the former Building 4020.	Characterize surface water run-off from activities associated with former Building 4020 and parking lot.	Default, Ni-63, Ni-59, Tc-99, C-14, H-3 Am-243, I-129, Pm-147
Group 2	Subsurface	9	Ditch on the south side of G Street, north of the former Building 4020.	Characterize surface water run-off from activities associated with former Building 4020 and parking lot.	Default, Ni-63, Ni-59, Tc-99, C-14, H-3 Am-243, I-129, Pm-147
Group 2	Surface	10	North of former Building 4020.	Aerial photo feature, "Possible Open Storage".	Default, Ni-63, Ni-59, Tc-99, C-14, H-3 Am-243, I-129, Pm-147
Group 2	Subsurface	10	North of former Building 4020.	Aerial photo feature, "Possible Open Storage".	Default, Ni-63, Ni-59, Tc-99, C-14, H-3 Am-243, I-129, Pm-147
Group 2	Drainage	11	North of former Building 4020, in ditch on the south side of G Street.	Characterize potential radiological contamination in soil/sediment originating from former Building 4020.	Default, Ni-63, Ni-59, Tc-99, C-14, H-3 Am-243, I-129, Pm-147
Group 2	Subsurface	11	North of former Building 4020, in ditch on the south side of G Street.	Characterize potential radiological contamination in soil/sediment originating from former Building 4020.	Default, Ni-63, Ni-59, Tc-99, C-14, H-3 Am-243, I-129, Pm-147
Group 2	Drainage	12	In ditch south side of G Street, northwest of former Building 4020.	Investigate potential residual contamination associated with surface spill of radioactive wastewater during transfer, "Incident A0016".	Default, Ni-63, Ni-59, Tc-99, C-14, H-3 Am-243, I-129, Pm-147
Group 2	Subsurface	12	In ditch south side of G Street, northwest of former Building 4020.	Investigate potential residual contamination associated with surface spill of radioactive wastewater during transfer, "Incident A0016".	Default, Ni-63, Ni-59, Tc-99, C-14, H-3 Am-243, I-129, Pm-147
Group 2	Surface	13	North of former Building 4020.	Investigate potential residual contamination associated with surface spill of radioactive wastewater during transfer, "Incident A0016".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface	13	North of former Building 4020.	Investigate potential residual contamination associated with surface spill of radioactive wastewater during transfer, "Incident A0016".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	14	North of former Building 4020.	Investigate potential residual contamination associated with surface spill of radioactive wastewater during transfer, "Incident A0016".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface	14	North of former Building 4020.	Investigate potential residual contamination associated with surface spill of radioactive wastewater during transfer, "Incident A0016".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	15	North side of former Building 4020.	Former location of three hold-up tanks for storage of gaseous fission products ventilation effluent.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147

Table 1
Summary of Soil Sample Locations in Subarea 5D-North

Group	Sample Type	Sample ID	Location Description	Technical Justification	Analytical Suite
Group 2	Subsurface	15	North side of former Building 4020.	Former location of three hold-up tanks for storage of gaseous fission products ventilation effluent.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	16	North side of former Building 4020.	Former location of three hold-up tanks for storage of gaseous fission products ventilation effluent.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface	16	North side of former Building 4020.	Former location of three hold-up tanks for storage of gaseous fission products ventilation effluent.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	17	North of former Building 4020.	Potential residual soil contamination from the former gaseous fission product hold-up tanks.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface	17	North of former Building 4020.	Potential residual soil contamination from the former gaseous fission product hold-up tanks.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	18	North side of former Building 4020.	Downgradient of the gaseous fission product hold-up tank excavation pit. Geophysical anomaly, "Conductivity".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface	18	North side of former Building 4020.	Downgradient of the gaseous fission product hold-up tank excavation pit. Geophysical anomaly, "Conductivity".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	19	West of former Building 4020 'Hot Lab' footprint.	Geophysical anomaly, "Conductivity". Aerial photo feature, "Possible Open Storage".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface	19	West of former Building 4020 'Hot Lab' footprint.	Geophysical anomaly, "Conductivity". Aerial photo feature, "Possible Open Storage".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	20	West of former Building 4020 'Hot Lab' footprint.	Geophysical anomaly, "Conductivity". Aerial photo feature, "Possible Open Storage".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface	20	West of former Building 4020 'Hot Lab' footprint.	Geophysical anomaly, "Conductivity". Aerial photo feature, "Possible Open Storage".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	21	Northwest corner of former Building 4020 'Hot Lab' footprint.	Investigate the potential for radiological release through cracks in the foundation of former Building 4020 "Hot Lab".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ¹	21	Northwest corner of former Building 4020 'Hot Lab' footprint.	Investigate the potential for radiological release through cracks in the foundation of former Building 4020 "Hot Lab".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ¹	21	Northwest corner of former Building 4020 'Hot Lab' footprint.	Investigate the potential for radiological release through cracks in the foundation of former Building 4020 "Hot Lab".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	22	Northeast corner of former Building 4020 'Hot Lab' footprint.	Location of former 500 gallon radioactive waste holdup tanks in the basement of former Building 4020.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ¹	22	Northeast corner of former Building 4020 'Hot Lab' footprint.	Location of former 500 gallon radioactive waste holdup tanks in the basement of former Building 4020.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ¹	22	Northeast corner of former Building 4020 'Hot Lab' footprint.	Location of former 500 gallon radioactive waste holdup tanks in the basement of former Building 4020.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	23	North central portion of former Building 4020 'Hot Lab' footprint.	Geophysical anomaly, "Magnetometer". Possible residual contamination from former radioactive waste holdup tanks in the basement.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ¹	23	North central portion of former Building 4020 'Hot Lab' footprint.	Geophysical anomaly, "Magnetometer". Possible residual contamination from former radioactive waste holdup tanks in the basement.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ¹	23	North central portion of former Building 4020 'Hot Lab' footprint.	Geophysical anomaly, "Magnetometer". Possible residual contamination from former radioactive waste holdup tanks in the basement.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	24	Northeast corner of former Building 4020 'Hot Lab' footprint.	Possible residual contamination from former radioactive waste holdup tanks in the basement. Geophysical anomaly, "Conductivity".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ¹	24	Northeast corner of former Building 4020 'Hot Lab' footprint.	Possible residual contamination from former radioactive waste holdup tanks in the basement. Geophysical anomaly, "Conductivity".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ¹	24	Northeast corner of former Building 4020 'Hot Lab' footprint.	Possible residual contamination from former radioactive waste holdup tanks in the basement. Geophysical anomaly, "Conductivity".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	25	Northeast corner of former Building 4020 'Hot Lab' footprint.	Possible residual contamination from former 500 gallon radioactive waste holdup tanks in the basement.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ¹	25	Northeast corner of former Building 4020 'Hot Lab' footprint.	Possible residual contamination from former 500 gallon radioactive waste holdup tanks in the basement.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ¹	25	Northeast corner of former Building 4020 'Hot Lab' footprint.	Possible residual contamination from former 500 gallon radioactive waste holdup tanks in the basement.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	26	North central portion of former Building 4020 'Hot Lab' footprint.	Location of former sump underneath Hot Cell #4. Geophysical anomaly, "Magnetometer".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ¹	26	North central portion of former Building 4020 'Hot Lab' footprint.	Location of former sump underneath Hot Cell #4. Geophysical anomaly, "Magnetometer".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ¹	26	North central portion of former Building 4020 'Hot Lab' footprint.	Location of former sump underneath Hot Cell #4. Geophysical anomaly, "Magnetometer".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	27	North central portion of former Building 4020 'Hot Lab' footprint.	Geophysical anomaly, "Conductivity and Magnetometer".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ¹	27	North central portion of former Building 4020 'Hot Lab' footprint.	Geophysical anomaly, "Conductivity and Magnetometer".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ¹	27	North central portion of former Building 4020 'Hot Lab' footprint.	Geophysical anomaly, "Conductivity and Magnetometer".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	28	Central portion of former Building 4020 footprint.	Historical data showed slightly elevated concentrations of man made radionuclides, Am-241, Pu-239/240 and U-235.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147

Table 1
Summary of Soil Sample Locations in Subarea 5D-North

Group	Sample Type	Sample ID	Location Description	Technical Justification	Analytical Suite
Group 2	Subsurface ¹	28	Central portion of former Building 4020 footprint.	Historical data showed slightly elevated concentrations of man made radionuclides, Am-241, Pu-239/240 and U-235.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ¹	28	Central portion of former Building 4020 footprint.	Historical data showed slightly elevated concentrations of man made radionuclides, Am-241, Pu-239/240 and U-235.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	29	West portion of former Building 4020 footprint	Investigate the potential for radiological release through cracks in the foundation of former Building 4020 "Hot Lab".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ¹	29	West portion of former Building 4020 footprint	Investigate the potential for radiological release through cracks in the foundation of former Building 4020 "Hot Lab".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ¹	29	West portion of former Building 4020 footprint	Investigate the potential for radiological release through cracks in the foundation of former Building 4020 "Hot Lab".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	30	Southwest portion of former Building 4020 footprint.	Loading dock area of former Building 4020.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface	30	Southwest portion of former Building 4020 footprint.	Loading dock area of former Building 4020.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	31	Southwest portion of former Building 4020 footprint.	Loading dock area of former Building 4020.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface	31	Southwest portion of former Building 4020 footprint.	Loading dock area of former Building 4020.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	32	Southeast portion of former Building 4020 footprint.	Geophysical anomaly, "Magnetometer". Footprint of former Building 4020.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ¹	32	Southeast portion of former Building 4020 footprint.	Geophysical anomaly, "Magnetometer". Footprint of former Building 4020.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ¹	32	Southeast portion of former Building 4020 footprint.	Geophysical anomaly, "Magnetometer". Footprint of former Building 4020.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	33	Southern portion of former Building 4020 footprint.	Location of basement sump under Hot Cell #1.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ¹	33	Southern portion of former Building 4020 footprint.	Location of basement sump under Hot Cell #1.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ¹	33	Southern portion of former Building 4020 footprint.	Location of basement sump under Hot Cell #1.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	34	Southwest corner of former Building 4020.	Investigate the potential for radiological release through cracks in the foundation of former Building 4020 "Hot Lab".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ¹	34	Southwest corner of former Building 4020.	Investigate the potential for radiological release through cracks in the foundation of former Building 4020 "Hot Lab".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ¹	34	Southwest corner of former Building 4020.	Investigate the potential for radiological release through cracks in the foundation of former Building 4020 "Hot Lab".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	35	Southeast corner of former Building 4020 footprint.	Investigate the potential for radiological release through cracks in the foundation of former Building 4020 "Hot Lab".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ¹	35	Southeast corner of former Building 4020 footprint.	Investigate the potential for radiological release through cracks in the foundation of former Building 4020 "Hot Lab".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ¹	35	Southeast corner of former Building 4020 footprint.	Investigate the potential for radiological release through cracks in the foundation of former Building 4020 "Hot Lab".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	36	East of former Building 4020 footprint.	Potential migration of contamination from the 3000 gallon holdup tank.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface	36	East of former Building 4020 footprint.	Potential migration of contamination from the 3000 gallon holdup tank.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	37	East side of former Building 4020 footprint.	Former location of a radioactive waste pipeline to the 3000 gallon holdup tank.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface	37	East side of former Building 4020 footprint.	Former location of a radioactive waste pipeline to the 3000 gallon holdup tank.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	38	East side of former Building 4020 footprint.	Former location of a radioactive waste pipeline to the 3000 gallon holdup tank.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ²	38	East side of former Building 4020 footprint.	Former location of a radioactive waste pipeline to the 3000 gallon holdup tank.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	39	East side of former Building 4020 footprint.	Former location of a radioactive waste 3000 gallon holdup tank.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface	39	East side of former Building 4020 footprint.	Former location of a radioactive waste 3000 gallon holdup tank.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	40	East side of former Building 4020 footprint.	Former location of a radioactive waste 3000 gallon holdup tank.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface	40	East side of former Building 4020 footprint.	Former location of a radioactive waste 3000 gallon holdup tank.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	41	East side of former Building 4020 footprint.	Location of former leach pits and leach field. Aerial photo feature, "Open Storage".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface	41	East side of former Building 4020 footprint.	Location of former leach pits and leach field. Aerial photo feature, "Open Storage".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	42	East side of former Building 4020 footprint.	Location of former leach pits and leach field. Aerial photo feature, "Open Storage".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface	42	East side of former Building 4020 footprint.	Location of former leach pits and leach field, "Drawing 303-020-C1". Aerial photo feature, "Open Storage".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147

Table 1
Summary of Soil Sample Locations in Subarea 5D-North

Group	Sample Type	Sample ID	Location Description	Technical Justification	Analytical Suite
Group 2	Surface	43	East side of former Building 4020 footprint.	Location of former leach pits and leach field, "Drawing 303-020-C1". Aerial photo feature, "Open Storage".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface	43	East side of former Building 4020 footprint.	Location of former leach pits and leach field, "Drawing 303-020-C1". Aerial photo feature, "Open Storage".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	44	Center portion of former Building 4020 footprint.	Geophysical anomaly, "Magnetometer". Potential for radiological release through cracks in the foundation of former Building 4020.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ¹	44	Center portion of former Building 4020 footprint.	Geophysical anomaly, "Magnetometer". Potential for radiological release through cracks in the foundation of former Building 4020.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ¹	44	Center portion of former Building 4020 footprint.	Geophysical anomaly, "Magnetometer". Potential for radiological release through cracks in the foundation of former Building 4020.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	45	East of former Building 4020 footprint.	Historical data showed slightly elevated concentrations of man made radionuclides, Cs-137, Eu-155 and U-235.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface	45	East of former Building 4020 footprint.	Historical data showed slightly elevated concentrations of man made radionuclides, Cs-137, Eu-155 and U-235.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	46	East of former Building 4020 footprint.	Drain line from former leach pits and septic tank to ditch, "Drawing 303-020-P17".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface	46	East of former Building 4020 footprint.	Drain line from former leach pits and septic tank to ditch, "Drawing 303-020-P17".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	47	East of former Building 4020 footprint.	Drain line from former leach pits and septic tank to ditch, "Drawing 303-020-P17".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ²	47	East of former Building 4020 footprint.	Drain line from former leach pits and septic tank to ditch, "Drawing 303-020-P17".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	48	East of former Building 4020 footprint, along former 24th Street.	Potential contamination associated with former Building 4020 leach pit and leach field may have accumulated in former ditch along 24th Street.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ²	48	East of former Building 4020 footprint, along former 24th Street.	Potential contamination associated with former Building 4020 leach pit and leach field may have accumulated in former ditch along 24th Street.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	49	East of former Building 4020 footprint, along former 24th Street.	Potential contamination associated with former Building 4020 leach pit and leach field may have accumulated in former ditch along 24th Street.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ²	49	East of former Building 4020 footprint, along former 24th Street.	Potential contamination associated with former Building 4020 leach pit and leach field may have accumulated in former ditch along 24th Street.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	50	East of former Building 4020 footprint, along former 24th Street.	Potential contamination associated with the former 3000 gallon holdup tank may have accumulated in the former ditch along 24th Street.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ²	50	East of former Building 4020 footprint, along former 24th Street.	Potential contamination associated with the former 3000 gallon holdup tank may have accumulated in the former ditch along 24th Street.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	51	East of former Building 4020 footprint, along former 24th Street.	Potential contamination associated with the former 3000 gallon holdup tank may have accumulated in the former ditch along 24th Street.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ²	51	East of former Building 4020 footprint, along former 24th Street.	Potential contamination associated with the former 3000 gallon holdup tank may have accumulated in the former ditch along 24th Street.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	52	Northeast of former Building 4020 footprint.	Geophysical anomaly, "Conductivity".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface	52	Northeast of former Building 4020 footprint.	Geophysical anomaly, "Conductivity".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	53	East of former Building 4020 footprint, along former 24th Street.	Potential contamination in the former ditch. Slightly elevated gamma survey readings.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface ²	53	East of former Building 4020 footprint, along former 24th Street.	Potential contamination in the former ditch. Slightly elevated gamma survey readings.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	54	Northeast corner of former Parking Lot 4520.	Staging area for the D&D of former Building 4020.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface	54	Northeast corner of former Parking Lot 4520.	Staging area for the D&D of former Building 4020.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	55	Northwest portion of former Parking Lot 4520.	Staging area for the D&D of former Building 4020.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface	55	Northwest portion of former Parking Lot 4520.	Staging area for the D&D of former Building 4020.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	56	West side of former Parking Lot 4520.	Staging area for the D&D of former Building 4020.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface	56	West side of former Parking Lot 4520.	Staging area for the D&D of former Building 4020.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	57	Southwest corner of the 4020 Parking Lot	Stakeholder Request - Staging area for the D&D of former Building 4020.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface	57	Southwest corner of the 4020 Parking Lot	Stakeholder Request - Staging area for the D&D of former Building 4020.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	58	South edge of former Parking Lot 4520.	Staging area for the D&D of former Building 4020.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface	58	South edge of former Parking Lot 4520.	Staging area for the D&D of former Building 4020.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147

Table 1
Summary of Soil Sample Locations in Subarea 5D-North

Group	Sample Type	Sample ID	Location Description	Technical Justification	Analytical Suite
Group 2	Surface	59	Center portion of former Parking Lot 4520.	Staging area for the D&D of former Building 4020. Geophysical anomaly, "Conductivity".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface	59	Center portion of former Parking Lot 4520.	Staging area for the D&D of former Building 4020. Geophysical anomaly, "Conductivity".	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Surface	60	Drainage ditch southeast of former Building 4020.	The ditch received surface water from former Building 4020 and from former Parking Lot 4520.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface	60	Drainage ditch southeast of former Building 4020.	The ditch received surface water from former Building 4020 and from former Parking Lot 4520.	Default, Ni-63, Ni-59, Tc-99, I-129, Pm-147
Group 2	Subsurface	61	South of Building 4055.	Potential radiological contamination from activities associated with Building 4055.	Default
Group 2	Subsurface	62	South of Building 4055.	Potential radiological contamination from activities associated with Building 4055.	Default
Group 2	Subsurface	63	Southeast of Building 4055.	Potential migration of radiological contamination from the Building 4055 waste holdup system.	Default
Group 2	Surface	64	Southeast of Building 4055.	Potential migration of radiological contamination from the Building 4055 waste holdup system.	Default
Group 2	Subsurface	64	Southeast of Building 4055.	Potential migration of radiological contamination from the Building 4055 waste holdup system.	Default
Group 2	Surface	65	East of Building 4055.	Potential migration of radiological contamination from the 4055 waste holdup tank system and pipeline.	Default
Group 2	Subsurface	65	East of Building 4055.	Potential migration of radiological contamination from the 4055 waste holdup tank system and pipeline.	Default
Group 2	Surface	66	East of Building 4055.	Potential migration of radiological contamination from the 4055 waste holdup tank system and pipeline.	Default
Group 2	Subsurface	66	East of Building 4055.	Potential migration of radiological contamination from the 4055 waste holdup tank system and pipeline.	Default
Group 2	Surface	67	East of Building 4055.	Potential migration of radiological contamination from the 4055 waste holdup tank system and pipeline.	Default
Group 2	Subsurface	67	East of Building 4055.	Potential migration of radiological contamination from the 4055 waste holdup tank system and pipeline.	Default
Group 2	Subsurface	68	Parking Lot on the north side of Building 4055.	Potential radiologic contamination from activities associated with Building 4055.	Default
Group 2	Subsurface	69	Parking Lot on the north side of Building 4055.	Potential radiological contamination associated with activities conducted within Building 4055.	Default
Group 2	Subsurface	70	Parking Lot on the north side of Building 4055.	Potential radiological contamination associated with activities conducted within Building 4055.	Default
Group 2	Drainage	71	North of Building 4055.	Characterize potential radiological contaminated sediment and soil from activities associated with Building 4055.	Default
Group 2	Subsurface	71	North of Building 4055.	Characterize potential radiological contaminated sediment and soil from activities associated with Building 4055.	Default
Group 2	Drainage	72	Northeast of Building 4055, in ditch south side of G Street.	Characterize potential radiological contaminated sediment and soil from activities associated with Building 4055.	Default
Group 2	Subsurface	72	Northeast of Building 4055, in ditch south side of G Street.	Characterize potential radiological contaminated sediment and soil from activities associated with Building 4055.	Default
Group 2	Subsurface	73	Parking Lot on the north side of Building 4055.	Potential radiological contamination associated with activities conducted within Building 4055.	Default
Group 2	Surface	74	East of Building 4055.	Potential radiological contamination from drainage ditch and elevated gamma survey readings.	Default
Group 2	Subsurface	74	East of Building 4055.	Potential radiological contamination from drainage ditch and elevated gamma survey readings.	Default
Group 2	Drainage	75	Drainage north of former Buildings 4373/4374 and east of Building 4055.	Potential radiological contamination from drainage ditch to the west and to the south.	Default, Ni-63, Ni-59, Tc-99, H-3
Group 2	Subsurface	75	Drainage north of former Buildings 4373/4374 and east of Building 4055.	Potential radiological contamination from drainage ditch to the west and to the south.	Default, Ni-63, Ni-59, Tc-99, H-3
Group 2	Surface	76	North of former Buildings 4373/4374 and east of Building 4055.	Historical data showed slightly elevated concentrations of man made radionuclide, Pu-239/240.	Default
Group 2	Subsurface	76	North of former Buildings 4373/4374 and east of Building 4055.	Historical data showed slightly elevated concentrations of man made radionuclide, Pu-239/240.	Default
Group 2	Subsurface	77	Ditch east of former Building 4373.	Potential radiological contamination migration from activities associated with Building 4373.	Default, Ni-63, Ni-59, Tc-99, H-3
Group 2	Subsurface	78	Ditch east of former Building 4373.	Potential contamination associated with discharge from former pipe excavated from trench emanating from former Building 4373.	Default, Ni-63, Ni-59, Tc-99, H-3
Group 2	Surface	79	Former Building 4374 footprint.	Investigate potential radiological contamination from activities associated with former Building 4374 and 4373.	Default, Ni-63, Ni-59, Tc-99, H-3
Group 2	Subsurface	79	Former Building 4374 footprint.	Investigate potential radiological contamination from activities associated with former Building 4374 and 4373.	Default, Ni-63, Ni-59, Tc-99, H-3
Group 2	Surface	80	Former Building 4373 footprint.	Investigate potential radiological contamination from activities associated with former Building 4374.	Default, Ni-63, Ni-59, Tc-99, H-3
Group 2	Subsurface	80	Former Building 4373 footprint.	Investigate potential radiological contamination from activities associated with former Building 4374.	Default, Ni-63, Ni-59, Tc-99, H-3

Table 1
Summary of Soil Sample Locations in Subarea 5D-North

Group	Sample Type	Sample ID	Location Description	Technical Justification	Analytical Suite
Group 2	Surface	81	Northwest of Building 4373.	Potential radioactive contamination associated with Geophysical anomaly (trench) emanating from former Building 4373 footprint.	Default, Ni-63, Ni-59, Tc-99, H-3
Group 2	Subsurface	81	Northwest of Building 4373.	Potential radioactive contamination associated with Geophysical anomaly (trench) emanating from former Building 4373 footprint.	Default, Ni-63, Ni-59, Tc-99, H-3
Group 2	Surface	82	Former Building 4373 footprint	Inside the footprint of former Building 4373, elevated gamma readings, magnetometer anomaly.	Default, Ni-63, Ni-59, Tc-99, H-3
Group 2	Subsurface	82	Former Building 4373 footprint	Inside the footprint print of former Building 4373, elevated gamma readings, magnetometer anomaly.	Default, Ni-63, Ni-59, Tc-99, H-3
Group 2	Surface	83	Former Building 4373 footprint.	Investigate potential radiological contamination from activities associated with former Building 4374.	Default, Ni-63, Ni-59, Tc-99, H-3
Group 2	Subsurface	83	Former Building 4373 footprint	Investigate potential radiological contamination from activities associated with former Building 4374.	Default, Ni-63, Ni-59, Tc-99, H-3
Group 2	Surface	84	Former Building 4373 footprint.	Investigate potential radiological contamination from activities associated with former Building 4374.	Default, Ni-63, Ni-59, Tc-99, H-3
Group 2	Subsurface	84	Former Building 4373 footprint.	Investigate potential radiological contamination from activities associated with former Building 4374.	Default, Ni-63, Ni-59, Tc-99, H-3
Group 2	Subsurface	85	Southwest of former Building 4373.	Potentially contaminated soil in ditch from activities associated with former Building 4373 and Building 4374.	Default, Ni-63, Ni-59, Tc-99, H-3
Group 2	Surface	86	South of former Building 4373.	Characterize Geophysical anomaly (underground pipe) emanating from the footprint of former Building 4373.	Default, Ni-63, Ni-59, Tc-99, H-3
Group 2	Subsurface	86	South of former Building 4373.	Characterize Geophysical anomaly (underground pipe) emanating from the footprint of former Building 4373.	Default, Ni-63, Ni-59, Tc-99, H-3
Group 2	Surface	87	South of former Building 4373.	Characterize potential radiological contamination associated with leach field at former Building 4373.	Default, Ni-63, Ni-59, Tc-99, H-3
Group 2	Subsurface	87	South of former Building 4373.	Characterize potential radiological contamination associated with leach field at former Building 4373.	Default, Ni-63, Ni-59, Tc-99, H-3
Group 2	Surface	88	South of former Building 4373.	Geophysical anomaly, "Magnetometer".	Default, Ni-63, Ni-59, Tc-99, H-3
Group 2	Subsurface	88	South of former Building 4373.	Geophysical anomaly, "Magnetometer".	Default, Ni-63, Ni-59, Tc-99, H-3
Group 2	Surface	89	South of former Building 4373.	Characterize potential radiological contamination associated with leach field former Building 4373.	Default, Ni-63, Ni-59, Tc-99, H-3
Group 2	Subsurface	89	South of former Building 4373.	Characterize potential radiological contamination associated with leach field former Building 4373.	Default, Ni-63, Ni-59, Tc-99, H-3
Group 2	Surface	90	Northwest corner of the intersection of 22nd and J Street.	Characterize potential radioactive contamination in soil/sediment associated with activities in former Building 4373 and Building 4055.	Default, Ni-63, Ni-59, Tc-99, H-3
Group 2	Subsurface	90	Northwest corner of the intersection of 22nd and J Street.	Potential radioactive contamination in soil/sediment associated with activities in former Building 4373 and Building 4055.	Default, Ni-63, Ni-59, Tc-99, H-3
Group 3	Surface	91	Ditch on south side of J Street, North of former Building 4874.	Potential radiological contamination in soil/sediment south side of J Street. Possible open storage in parking lot former Building 4363.	Default
Group 3	Subsurface	91	Ditch on south side of J Street, North of former Building 4874.	Potential radiological contamination in soil/sediment south side of J Street. Possible open storage in parking lot former Building 4363.	Default
Group 3	Surface	92	Northwest of former Buildings 4874/4375/4875.	Potential radiological contamination in soil/sediment along east side of 24th Street. Possible open storage former Building 4363.	Default
Group 3	Subsurface	92	Northwest of former Buildings 4874/4375/4875.	Potential radiological contamination in soil/sediment along east side of 24th Street. Possible open storage former Building 4363.	Default
Group 3	Surface	93	West of former Buildings 4874/4375/4875.	Potential radiological contamination in soil/sediment along east side of 24th Street. Possible open storage former Building 4363.	Default
Group 3	Subsurface	93	West of former Buildings 4874/4375/4875.	Potential radiological contamination in soil/sediment along east side of 24th Street. Possible open storage former Building 4363.	Default
Group 3	Surface	94	West of former Buildings 4874/4375/4875.	Potential radiological contamination in soil/sediment along east side of 24th Street. Possible open storage former Building 4363.	Default
Group 3	Subsurface	94	West of former Buildings 4874/4375/4875.	Potential radiological contamination in soil/sediment along east side of 24th Street. Possible open storage former Building 4363.	Default
Group 3	Surface	95	Southwest corner of former Building 4363.	Historical data showed slightly elevated concentrations of man made radionuclides Eu-154 and U-235.	Default
Group 3	Subsurface	95	Southwest corner of former Building 4363.	Historical data showed slightly elevated concentrations of man made radionuclides Eu-154 and U-235.	Default
Group 3	Surface	96	Southwest corner of former Building 4363.	Historical data showed slightly elevated concentrations of man made radionuclides Eu-154.	Default
Group 3	Subsurface	96	Southwest corner of former Building 4363.	Historical data showed slightly elevated concentrations of man made radionuclides Eu-154.	Default
Group 3	Surface	97	West of former Building 4363 footprint.	Historical data showed slightly elevated concentrations of man made radionuclides Eu-154.	Default

Table 1
Summary of Soil Sample Locations in Subarea 5D-North

Group	Sample Type	Sample ID	Location Description	Technical Justification	Analytical Suite
Group 3	Subsurface	97	West of former Building 4363 footprint.	Historical data showed slightly elevated concentrations of man made radionuclides Eu-154.	Default
Group 3	Surface	98	Northwest of former Building 4363 footprint.	Historical data showed slightly elevated concentrations of man made radionuclides Eu-154.	Default
Group 3	Subsurface	98	Northwest of former Building 4363 footprint.	Historical data showed slightly elevated concentrations of man made radionuclides Eu-154.	Default
Group 3	Surface	99	North of former Building 4363 footprint.	Potential radiological contamination from pipeline associated with the leach field at former Building 4363.	Default
Group 3	Subsurface	99	North of former Building 4363 footprint.	Potential radiological contamination from pipeline associated with the leach field at former Building 4363.	Default
Group 3	Surface	100	Southeast corner of former Building 4363.	Aerial photo feature, "Possible Open Storage".	Default
Group 3	Subsurface	100	Southeast corner of former Building 4363.	Aerial photo feature, "Possible Open Storage".	Default
Group 3	Drainage	101	South side of former L Street, south of former Building 4363.	Potential accumulation of radiological contamination in soil and sediment.	Default
Group 3	Subsurface	101	South side of former L Street, south of former Building 4363.	Potential accumulation of radiological contamination in soil and sediment.	Default
Group 3	Surface	102	Northeast corner of former Building 4363.	Historical data showed slightly elevated concentrations of man made radionuclides Eu-154 and U-235.	Default
Group 3	Subsurface	102	Northeast corner of former Building 4363.	Historical data showed slightly elevated concentrations of man made radionuclides Eu-154 and U-235.	Default
Group 3	Surface	103	Northeast corner of former Building 4363.	Potential radiological contamination associated with former leach field at former Building 4363.	Default
Group 3	Subsurface	103	Northeast corner of former Building 4363.	Potential radiological contamination associated with former leach field at former Building 4363.	Default
Group 3	Surface	104	Northeast corner of former Building 4363.	Historical data showed slightly elevated concentrations of man made radionuclides U-235.	Default
Group 3	Subsurface	104	Northeast corner of former Building 4363.	Historical data showed slightly elevated concentrations of man made radionuclides U-235.	Default
Group 3	Surface	105	Northeast of former Building 4363.	Characterize potential radiological contamination associated with the former Building 4363 leach field.	Default
Group 3	Subsurface	105	Northeast of former Building 4363.	Characterize potential radiological contamination associated with the former Building 4363 leach field.	Default
Group 3	Surface	106	Northeast of former Building 4363.	Characterize potential radiological contamination associated with the former Building 4363 leach field.	Default
Group 3	Subsurface	106	Northeast of former Building 4363.	Characterize potential radiological contamination associated with the former Building 4363 leach field.	Default
Group 3	Surface	107	Northeast of former Building 4363.	Characterize potential radiological contamination associated with the former Building 4363 leach field.	Default
Group 3	Subsurface	107	Northeast of former Building 4363.	Characterize potential radiological contamination associated with the former Building 4363 leach field.	Default
Group 3	Surface	108	East of former Building 4363.	Aerial photo feature, "Possible Open Storage".	Default
Group 3	Subsurface	108	East of former Building 4363.	Aerial photo feature, "Possible Open Storage".	Default
Group 3	Surface	109	East of former Building 4363.	Aerial photo feature, "Possible Open Storage".	Default
Group 3	Subsurface	109	East of former Building 4363.	Aerial photo feature, "Possible Open Storage".	Default
Group 3	Surface	110	Former Building 4363 footprint.	Historical data showed slightly elevated concentrations of man made radionuclide U-235.	Default
Group 3	Subsurface	110	Former Building 4363 footprint.	Historical data showed slightly elevated concentrations of man made radionuclide U-235.	Default
Group 3	Surface	111	Former Building 4363 footprint.	Historical data showed slightly elevated concentrations of man made radionuclide Eu-154.	Default
Group 3	Subsurface	111	Former Building 4363 footprint.	Historical data showed slightly elevated concentrations of man made radionuclide Eu-154.	Default
Group 3	Surface	112	Former Building 4363 footprint.	Historical data showed slightly elevated concentrations of man made radionuclide Cs-137.	Default
Group 3	Subsurface	112	Former Building 4363 footprint.	Historical data showed slightly elevated concentrations of man made radionuclide Cs-137.	Default
Group 3	Surface	113	Former Building 4363 footprint.	Historical data showed slightly elevated concentrations of man made radionuclide U-235.	Default
Group 3	Subsurface	113	Former Building 4363 footprint.	Historical data showed slightly elevated concentrations of man made radionuclide U-235.	Default
Group 3	Surface	114	Southwest of former Building 4363.	Historical data showed slightly elevated concentrations of man made radionuclide Eu-154. Aerial photo feature, "Possible Open Storage".	Default
Group 3	Subsurface	114	Southwest of former Building 4363.	Historical data showed slightly elevated concentrations of man made radionuclide Eu-154. Aerial photo feature, "Possible Open Storage".	Default
Group 3	Subsurface	115	North side of L Street, south of former Building 4363.	Investigate potential radiological contamination in sediment/soil in ditch on the south side of former L Street.	Default
Group 3	Subsurface	116	North side of L Street, southeast of former Building 4363.	Investigate potential radiological contamination in sediment/soil in ditch on the south side of former L Street.	Default
Group 3	Surface	117	Former Building 4875 footprint.	Potential radiological contamination associated with activities at former Building 4875.	Default
Group 3	Subsurface	117	Former Building 4875 footprint.	Potential radiological contamination associated with activities at former Building 4875.	Default

Table 1
Summary of Soil Sample Locations in Subarea 5D-North

Group	Sample Type	Sample ID	Location Description	Technical Justification	Analytical Suite
Group 3	Surface	118	Former Building 4375 footprint.	Potential radiological contamination associated with activities at former Building 4375.	Default
Group 3	Subsurface	118	Former Building 4375 footprint.	Potential radiological contamination associated with activities at former Building 4375.	Default
Group 3	Surface	119	East side of former Building 4375.	Potential radiological contamination associated with former pit tank - Drawing 303-GEN. C-42	Default
Group 3	Subsurface	119	East side of former Building 4375.	Potential radiological contamination associated with former pit tank - Drawing 303-GEN. C-43	Default
Group 3	Surface	120	East side of former Building 4375.	Potential radiological contamination associated with former pit tank drain line - Drawing 303-GEN. C-42	Default
Group 3	Subsurface	120	East side of former Building 4375.	Potential radiological contamination associated with former pit tank drain line - Drawing 303-GEN. C-43	Default
Group 3	Surface	121	North of former Building 4873.	Aerial photo feature, "Possible Open Storage".	Default
Group 3	Subsurface	121	North of former Building 4873.	Aerial photo feature, "Possible Open Storage".	Default
Group 3	Surface	122	North of former Building 4874.	Aerial photo feature, "Possible open storage area".	Default
Group 3	Subsurface	122	North of former Building 4874.	Aerial photo feature, "Possible open storage area".	Default
Group 3	Surface	123	Northwest of former Building 4363.	Aerial photo feature, "Ground Scar". Possible location of former 6 inch vitrified clay pipe. Drawing 303-GEN. C-42	Default
Group 3	Subsurface	123	Northwest of former Building 4363.	Aerial photo feature, "Ground Scar". Possible location of former 6 inch vitrified clay pipe. Drawing 303-GEN. C-42	Default
Group 3	Surface	124	North of former Building 4863.	Aerial photo feature, "Drainage".	Default
Group 3	Subsurface	124	North of former Building 4863.	Aerial photo feature, "Drainage".	Default
Group 3	Surface	125	Northwest of former Building 4863.	Aerial photo feature, "Drainage".	Default
Group 3	Subsurface	125	Northwest of former Building 4863.	Aerial photo feature, "Drainage".	Default
Group 3	Surface	126	Northwest of former Building 4863.	Aerial photo feature, "Drainage".	Default
Group 3	Subsurface	126	Northwest of former Building 4863.	Aerial photo feature, "Drainage".	Default
Group 3	Drainage	127	Ditch south side of J Street, northwest of former Building 4863.	Potential contamination from effluent of former 6 inch vitrified clay pipe. Drawing 303-GEN. C-42	Default
Group 3	Subsurface	127	Ditch south side of J Street, northwest of former Building 4863.	Potential contamination from effluent of former 6 inch vitrified clay pipe. Drawing 303-GEN. C-42	Default
Group 3	Drainage	128	Ditch south side of J Street at the boundary of 5D-North.	Potential radiological contamination from activities associated with former Buildings 4353/4854.	Default
Group 3	Subsurface	128	Ditch south side of J Street at the boundary of 5D-North.	Potential radiological contamination from activities associated with former Buildings 4353/4854.	Default
Group 3	Surface	129	North of former Buildings 4353/4854.	Potential radiological contamination from activities associated with former Buildings 4353/4854.	Default
Group 3	Subsurface	129	North of former Buildings 4353/4854.	Potential radiological contamination from activities associated with former Buildings 4353/4854.	Default
Group 3	Surface	130	North of former Buildings 4353/4854.	Aerial photo feature, "Drainage".	Default
Group 3	Subsurface	130	North of former Buildings 4353/4854.	Aerial photo feature, "Drainage".	Default
Group 3	Surface	131	East of former Buildings 4353/4854.	Former Building 4353/4854 leach field. Geophysical, "Magnetometer". Aerial photo feature, "Mounded Material/Drainage Channel".	Default
Group 3	Subsurface	131	East of former Buildings 4353/4854.	Former Building 4353/4854 leach field. Geophysical, "Magnetometer". Aerial photo feature, "Mounded Material/Drainage Channel".	Default
Group 3	Surface	132	Northeast of former Building 4854.	Location of former leach field associated with former Building 4353/4854. Geophysical anomaly, "Magnetometer".	Default
Group 3	Subsurface	132	Northeast of former Building 4854.	Location of former leach field associated with former Building 4353/4854. Geophysical anomaly, "Magnetometer".	Default
Group 3	Surface	133	Northeast of former Building 4854.	Location of former leach field associated with former Building 4353/4854.	Default
Group 3	Subsurface	133	Northeast of former Building 4854.	Location of former leach field associated with former Building 4353/4854.	Default
Group 3	Surface	134	North side of Former Building 4353.	Location of pipeline leading to the leach field. Geophysical anomaly, "Magnetometer".	Default
Group 3	Subsurface	134	North side of Former Building 4353.	Location of pipeline leading to the leach field. Geophysical anomaly, "Magnetometer".	Default
Group 3	Surface	135	Former Building 4353 footprint.	Potential radiological contamination from activities associated with former Building 4353.	Default
Group 3	Subsurface	135	Former Building 4353 footprint.	Potential radiological contamination from activities associated with former Building 4353.	Default
Group 3	Surface	136	Former Building 4353 footprint.	Potential radiological contamination from activities associated with former Building 4353.	Default

Table 1
Summary of Soil Sample Locations in Subarea 5D-North

Group	Sample Type	Sample ID	Location Description	Technical Justification	Analytical Suite
Group 3	Subsurface	136	Former Building 4353 footprint.	Potential radiological contamination from activities associated with former Building 4353.	Default
Group 3	Surface	137	South side of former Building 4353 footprint.	Potential radiological contamination from activities associated with former Building 4353.	Default
Group 3	Subsurface	137	South side of former Building 4353 footprint.	Potential radiological contamination from activities associated with former Building 4353.	Default
Group 3	Surface	138	South of former Building 4353.	Aerial photo feature, "Possible open storage associated with former Building 4353".	Default
Group 3	Subsurface	138	South of former Building 4353.	Aerial photo feature, "Possible open storage associated with former Building 4353".	Default
Group 3	Surface	139	Southeast of former Building 4353.	Aerial photo feature, "Possible open storage associated with former Building 4353".	Default
Group 3	Subsurface	139	Southeast of former Building 4353.	Aerial photo feature, "Possible open storage associated with former Building 4353".	Default
Group 3	Surface	140	Southeast of former Building 4854.	Aerial photo feature, "Drainage". Geophysical anomaly, "Magnetometer".	Default
Group 3	Subsurface	140	Southeast of former Building 4854.	Aerial photo feature, "Drainage". Geophysical anomaly, "Magnetometer".	Default
Group 3	Surface	141	Southeast of former Building 4854.	Historical data showed slightly elevated concentrations of man made radionuclide Pu-239/240.	Default
Group 3	Subsurface	141	Southeast of former Building 4854.	Historical data showed slightly elevated concentrations of man made radionuclide Pu-239/240.	Default
Group 3	Surface	142	South of former Building 4854.	Historical data showed slightly elevated concentrations of man made radionuclide Pu-239/240 and U-235.	Default
Group 3	Subsurface	142	South of former Building 4854.	Historical data showed slightly elevated concentrations of man made radionuclide Pu-239/240 and U-235.	Default
Group 3	Drainage	143	Southeast of former Building 4854.	Aerial photo feature, "Drainage". Geophysical anomaly, "Conductivity".	Default
Group 3	Subsurface	143	Southeast of former Building 4854.	Aerial photo feature, "Drainage". Geophysical anomaly, "Conductivity".	Default
Group 3	Surface	144	South of former Building 4854.	Aerial photo feature, "Possible Open Storage".	Default
Group 3	Subsurface	144	South of former Building 4854.	Aerial photo feature, "Possible Open Storage".	Default
Group 3	Surface	145	South of former Buildings 4353/4854.	Aerial photo feature, "Possible Open Storage".	Default
Group 3	Subsurface	145	South of former Buildings 4353/4854.	Aerial photo feature, "Possible Open Storage".	Default
Group 3	Subsurface	146	South side of L Street, south of former Building 4353.	Characterize subsurface soil in ditch on the south side of former L Street.	Default
Group 3	Subsurface	147	North side of L Street, south of former Building 4353.	Investigate potential radiological contamination in sediment/soil in ditch on the south side of former L Street.	Default
Group 3	Drainage	148	In ditch on the south side of former L Street.	Historical data showed slightly elevated concentrations of man made radionuclide U-235.	Default
Group 3	Subsurface	148	In ditch on the south side of former L Street.	Historical data showed slightly elevated concentrations of man made radionuclide U-235.	Default
Group 3	Surface	149	South of former Buildings 4353/4854.	Aerial photo feature, "Possible Open Storage".	Default
Group 3	Subsurface	149	South of former Buildings 4353/4854.	Aerial photo feature, "Possible Open Storage".	Default
Group 3	Surface	150	South of former Building 4353/4854.	Aerial photo feature, "Possible Open Storage". Geophysical Feature, "Magnetometer".	Default
Group 3	Subsurface	150	South of former Building 4353/4854.	Aerial photo feature, "Possible Open Storage". Geophysical Feature, "Magnetometer".	Default
Group 3	Surface	151	South of former Building 4353/4854.	Elevated gamma survey readings, "GRAY 5". Geophysical anomaly, "Conductivity". Berm and soil disturbance area.	Default
Group 3	Subsurface	151	South of former Building 4353/4854.	Elevated gamma survey readings, "GRAY 5". Geophysical anomaly, "Conductivity". Berm and soil disturbance area.	Default
Group 3	Surface	152	South of former Building 4353/4854.	Elevated gamma survey readings, "GRAY 6". Geophysical anomaly, "Conductivity". Berm and soil disturbance area.	Default
Group 3	Subsurface	152	South of former Building 4353/4854.	Elevated gamma survey readings, "GRAY 6". Geophysical anomaly, "Conductivity". Berm and soil disturbance area.	Default
Group 3	Surface	153	South of former Building 4353/4854.	Geophysical anomaly, "Conductivity". Elevated gamma survey readings.	Default
Group 3	Subsurface	153	South of former Building 4353/4854.	Geophysical anomaly, "Conductivity". Elevated gamma survey readings.	Default
Group 3	Surface	154	South of former Building 4353/4854.	Aerial photo feature, "Ground Scar".	Default
Group 3	Subsurface	154	South of former Building 4353/4854.	Aerial photo feature, "Ground Scar".	Default
Group 3	Surface	155	South of former Building 4353/4854.	Aerial photo feature, "Medium Toned Mounded Material".	Default
Group 3	Subsurface	155	South of former Building 4353/4854.	Aerial photo feature, "Medium Toned Mounded Material".	Default
Group 3	Surface	156	South of former Building 4353/4854.	Aerial photo feature, "Medium Toned Mounded Material".	Default

Table 1
Summary of Soil Sample Locations in Subarea 5D-North

Group	Sample Type	Sample ID	Location Description	Technical Justification	Analytical Suite
Group 3	Subsurface	156	South of former Building 4353/4854.	Aerial photo feature, "Medium Toned Mounded Material".	Default
Group 3	Surface	157	Southeast portion of Subarea 5D-North.	Historical data showed slightly elevated concentrations of man made radionuclides Pu-239/240 and U-235. Aerial photo feature, "Mounded Material" Historical Data.	Default
Group 3	Subsurface	157	Southeast portion of Subarea 5D-North.	Historical data showed slightly elevated concentrations of man made radionuclide Pu-239/240 and U-235. Aerial photo feature, "Mounded Material" Historical Data.	Default
Group 3	Surface	158	Southeast portion of Subarea 5D-North.	Historical data showed slightly elevated concentrations of man made radionuclides Pu-239/240 and U-235.	Default
Group 3	Subsurface	158	Southeast portion of Subarea 5D-North.	Historical data showed slightly elevated concentrations of man made radionuclides Pu-239/240 and U-235.	Default
Group 3	Surface	159	South east corner of Subarea 5D-North.	Elevated gamma survey readings.	Default
Group 3	Subsurface	159	South east corner of Subarea 5D-North.	Elevated gamma survey readings.	Default
Group 3	Surface	160	South east corner of Subarea 5D-North.	Elevated gamma survey readings.	Default
Group 3	Subsurface	160	South east corner of Subarea 5D-North.	Elevated gamma survey readings.	Default
Group 3	Surface	161	South east corner of Subarea 5D-North.	Aerial photo feature, "Trench".	Default
Group 3	Subsurface	161	South east corner of Subarea 5D-North.	Aerial photo feature, "Trench".	Default
Group 3	Surface	162	Southeast of former Building 4865.	Aerial photo feature, "Ground Scar".	Default
Group 3	Subsurface	162	Southeast of former Building 4865.	Aerial photo feature, "Ground Scar".	Default
Group 3	Surface	163	Southeast of former Building 4865.	Aerial photo feature, "Ground Scar".	Default
Group 3	Subsurface	163	Southeast of former Building 4865.	Aerial photo feature, "Ground Scar".	Default
Group 2	Surface	164	Northeast of former Building 4865.	Downgradient of former Building 4865.	Default
Group 2	Subsurface	164	Northeast of former Building 4865.	Downgradient of former Building 4865.	Default
Group 2	Surface	165	Former Building 4865.	Historical use of Co-60 with a depleted uranium collimator in the former building.	Default
Group 2	Subsurface	165	Former Building 4865.	Historical use of Co-60 with a depleted uranium collimator in the former building.	Default
Group 3	Surface	166	North of former Building 4865.	Approx location of unknown site activities noted in 1992 aerial photo.	Default
Group 3	Subsurface	166	North of former Building 4865.	Approx location of unknown site activities noted in 1992 aerial photo.	Default
Group 2	Subsurface	167	North of former Building 4865.	Potential radiological contamination in ditch along the west side of 24th Street.	Default
Group 2	Subsurface	168	West of former Building 4363.	Potential radiological contamination in ditch along the west side of 24th Street.	Default
Group 2	Subsurface	169	South of former Building 4020.	Downgradient of the former Parking Lot 4520.	Default
Group 2	Surface	170	North portion of Fill Area 13.	Aerial photo feature, "Mounded Material". Geophysical anomaly, "Conductivity".	Default
Group 2	Subsurface	170	North portion of Fill Area 13.	Aerial photo feature, "Mounded Material". Geophysical anomaly, "Conductivity".	Default
Group 2	Surface	171	North portion of Fill Area 13.	Elevated gamma survey readings. Geophysical anomaly, "Magnetometer". Aerial photo feature, "Mounded Material".	Default
Group 2	Subsurface	171	North portion of Fill Area 13.	Elevated gamma survey readings. Geophysical anomaly, "Magnetometer". Aerial photo feature, "Mounded Material".	Default
Group 2	Surface	172	Fill Area 13, south of former Building 4020, west of 24th Street.	Geophysical anomaly, "Conductivity and Magnetometer".	Default
Group 2	Subsurface	172	Fill Area 13, south of former Building 4020, west of 24th Street.	Geophysical anomaly, "Conductivity and Magnetometer".	Default
Group 2	Surface	173	North portion of Fill Area 13.	Elevated gamma survey readings, "PGRAY 2". Geophysical anomaly, "Magnetometer". Aerial photo feature, "Excavation".	Default
Group 2	Subsurface	173	North portion of Fill Area 13.	Elevated gamma survey readings, "PGRAY 2". Geophysical anomaly, "Magnetometer". Aerial photo feature, "Excavation".	Default
Group 2	Surface	174	North portion of Fill Area 13.	Elevated gamma survey readings. Geophysical anomaly, "Magnetometer".	Default
Group 2	Subsurface	174	North portion of Fill Area 13.	Elevated gamma survey readings. Geophysical anomaly, "Magnetometer".	Default
Group 2	Surface	175	North portion of Fill Area 13.	Geophysical anomaly, "Magnetometer and Conductivity". Aerial photo feature, "Trench".	Default
Group 2	Subsurface	175	North portion of Fill Area 13.	Geophysical anomaly, "Magnetometer and Conductivity". Aerial photo feature, "Trench".	Default
Group 2	Surface	176	West portion of Fill Area 13.	Elevated gamma survey reading, "PGRAY 1". Aerial photo feature, "Ground Scar".	Default
Group 2	Subsurface	176	West portion of Fill Area 13.	Elevated gamma survey reading, "PGRAY 1". Aerial photo feature, "Ground Scar".	Default

Table 1
Summary of Soil Sample Locations in Subarea 5D-North

Group	Sample Type	Sample ID	Location Description	Technical Justification	Analytical Suite
Group 2	Surface	177	West portion of Fill Area 13.	Geophysical anomaly, "Conductivity". Elevated gamma survey readings.	Default
Group 2	Subsurface	177	West portion of Fill Area 13.	Geophysical anomaly, "Conductivity". Elevated gamma survey readings.	Default
Group 2	Surface	178	East portion of Fill Area 13.	Geophysical anomaly, "Conductivity". Aerial photo feature, "Mounded Material". Elevated gamma survey readings.	Default
Group 2	Subsurface	178	East portion of Fill Area 13.	Geophysical anomaly, "Conductivity". Aerial photo feature, "Mounded Material". Elevated gamma survey readings.	Default
Group 2	Surface	179	East portion of Fill Area 13.	Geophysical anomaly, "Conductivity". Aerial photo feature, "Mounded Material". Elevated gamma survey readings.	Default
Group 2	Subsurface	179	East portion of Fill Area 13.	Geophysical anomaly, "Conductivity". Aerial photo feature, "Mounded Material". Elevated gamma survey readings.	Default
Group 2	Surface	180	Northwest of former Building 4865.	Aerial photo feature, "Excavation". Geophysical anomaly, "Magnetometer and Conductivity".	Default
Group 2	Subsurface	180	Northwest of former Building 4865.	Aerial photo feature, "Excavation". Geophysical anomaly, "Magnetometer and Conductivity".	Default
Group 2	Surface	181	Northwest of former Building 4865.	Aerial photo feature, "Ground Scar". Geophysical anomaly, "Magnetometer and Conductivity".	Default
Group 2	Subsurface	181	Northwest of former Building 4865.	Aerial photo feature, "Ground Scar". Geophysical anomaly, "Magnetometer and Conductivity".	Default
Group 2	Surface	182	Southeast portion of Fill Area 13.	Aerial photo feature, "Mounded Material". Geophysical anomaly, "Conductivity".	Default
Group 2	Subsurface	182	Southeast portion of Fill Area 13.	Aerial photo feature, "Mounded Material". Geophysical anomaly, "Conductivity".	Default
Group 2	Surface	183	Southeast portion of Fill Area 13.	Geophysical anomaly, "Magnetometer". Aerial photo feature, "Mounded Material". Elevated gamma survey readings.	Default
Group 2	Subsurface	183	Southeast portion of Fill Area 13.	Geophysical anomaly, "Magnetometer". Aerial photo feature, "Mounded Material". Elevated gamma survey readings.	Default
Group 2	Surface	184	Southeast portion of Fill Area 13.	Aerial photo feature, "Mounded Material". Geophysical anomaly, "Conductivity".	Default
Group 2	Subsurface	184	Southeast portion of Fill Area 13.	Aerial photo feature, "Mounded Material". Geophysical anomaly, "Conductivity".	Default
Group 2	Surface	185	Pond Dredge Area - Southeast portion of Fill Area 14.	Geophysical anomaly, "Conductivity".	Default
Group 2	Subsurface	185	Pond Dredge Area - Southeast portion of Fill Area 14.	Geophysical anomaly, "Conductivity".	Default
Group 2	Surface	186	Pond Dredge Area - Southeast portion of Fill Area 14.	Aerial photo feature, "Light Toned Material".	Default
Group 2	Subsurface	186	Pond Dredge Area - Southeast portion of Fill Area 14.	Aerial photo feature, "Light Toned Material".	Default
Group 2	Surface	187	Pond Dredge Area - Southeast portion of Fill Area 14.	Aerial photo feature, "Light Toned Material".	Default
Group 2	Subsurface	187	Pond Dredge Area - Southeast portion of Fill Area 14.	Aerial photo feature, "Light Toned Material".	Default
Group 2	Surface	188	Pond Dredge Area - Southeast portion of Fill Area 14.	Geophysical anomaly, "Conductivity".	Default
Group 2	Subsurface	188	Pond Dredge Area - Southeast portion of Fill Area 14.	Geophysical anomaly, "Conductivity".	Default
Group 2	Surface	189	Pond Dredge Area - Southern portion of Fill Area 14.	Historical data showed slightly elevated concentrations of man made radionuclide U-235.	Default
Group 2	Subsurface	189	Pond Dredge Area - Southern portion of Fill Area 14.	Historical data showed slightly elevated concentrations of man made radionuclide U-235.	Default
Group 2	Surface	190	Pond Dredge Area - Southwest portion of Fill Area 14.	Geophysical anomaly, "Conductivity and Magnetometer".	Default
Group 2	Subsurface	190	Pond Dredge Area - Southwest portion of Fill Area 14.	Geophysical anomaly, "Conductivity and Magnetometer".	Default
Group 2	Surface	191	Pond Dredge Area - Southwest portion of Fill Area 14.	Geophysical anomaly, "Conductivity and Magnetometer". Slightly elevated gamma readings.	Default
Group 2	Subsurface	191	Pond Dredge Area - Southwest portion of Fill Area 14.	Geophysical anomaly, "Conductivity and Magnetometer". Slightly elevated gamma readings.	Default
Group 2	Surface	192	Pond Dredge Area - South central portion of Fill Area 14.	Historical data showed slightly elevated concentrations of man made radionuclide U-235.	Default
Group 2	Subsurface	192	Pond Dredge Area - South central portion of Fill Area 14.	Historical data showed slightly elevated concentrations of man made radionuclide U-235.	Default
Group 2	Surface	193	Pond Dredge Area - South central portion of Fill Area 14.	Geophysical anomaly, "Conductivity and Magnetometer". Aerial photo feature, "Fill".	Default
Group 2	Subsurface	193	Pond Dredge Area - South central portion of Fill Area 14.	Geophysical anomaly, "Conductivity and Magnetometer". Aerial photo feature, "Fill".	Default
Group 2	Surface	194	Pond Dredge Area - Southeast portion of Fill Area 14.	Geophysical anomaly, "Conductivity and Magnetometer". Aerial photo feature, "Fill".	Default
Group 2	Subsurface	194	Pond Dredge Area - Southeast portion of Fill Area 14.	Geophysical anomaly, "Conductivity and Magnetometer". Aerial photo feature, "Fill".	Default
Group 2	Surface	195	Pond Dredge Area - South central portion of Fill Area 14.	Geophysical anomaly, "Conductivity and Magnetometer". Aerial photo feature, "Fill".	Default
Group 2	Subsurface	195	Pond Dredge Area - South central portion of Fill Area 14.	Geophysical anomaly, "Conductivity and Magnetometer". Aerial photo feature, "Fill".	Default
Group 2	Surface	196	Pond Dredge Area - Central portion of Fill Area 14.	Geophysical anomaly, "Conductivity". Aerial photo feature, "Fill".	Default

Table 1
Summary of Soil Sample Locations in Subarea 5D-North

Group	Sample Type	Sample ID	Location Description	Technical Justification	Analytical Suite
Group 2	Subsurface	196	Pond Dredge Area - Central portion of Fill Area 14.	Geophysical anomaly, "Conductivity ". Aerial photo feature, "Fill".	Default
Group 2	Surface	197	Pond Dredge Area - Central portion of Fill Area 14.	Geophysical anomaly, "Conductivity and Magnetometer". Aerial photo feature, "Fill".	Default
Group 2	Subsurface	197	Pond Dredge Area - Central portion of Fill Area 14.	Geophysical anomaly, "Conductivity and Magnetometer". Aerial photo feature, "Fill".	Default
Group 2	Surface	198	Pond Dredge Area - North portion of Fill Area 14.	Geophysical anomaly, "Conductivity and Magnetometer". Aerial photo feature, "Fill".	Default
Group 2	Subsurface	198	Pond Dredge Area - North portion of Fill Area 14.	Geophysical anomaly, "Conductivity and Magnetometer". Aerial photo feature, "Fill".	Default
Group 2	Surface	199	Pond Dredge Area - West portion of Fill Area 14.	Slightly elevated gamma survey readings.	Default
Group 2	Subsurface	199	Pond Dredge Area - West portion of Fill Area 14.	Slightly elevated gamma survey readings.	Default
Group 2	Surface	200	Southwest corner of Subarea 5D-North.	Geophysical anomaly, "Conductivity".	Default
Group 2	Subsurface	200	Southwest corner of Subarea 5D-North.	Geophysical anomaly, "Conductivity".	Default
Group 2	Surface	201	Southwest corner of Subarea 5D-North.	Aerial photo feature, "Trench".	Default
Group 2	Subsurface	201	Southwest corner of Subarea 5D-North.	Aerial photo feature, "Trench".	Default
Group 2	Surface	202	Northeast corner of former Parking Lot 4520	Stakeholder requested sample location on April 20, 2011. Staging area for the D&D of former Building 4020.	Default
Group 2	Subsurface	202	Northeast corner of former Parking Lot 4521	Stakeholder requested sample location on April 20, 2011. Staging area for the D&D of former Building 4020.	Default
Group 2	Surface	203	Pond Dredge Area - East portion of Fill Area 14.	Aerial photo feature, "Fill Area".	Default
Group 2	Subsurface	203	Pond Dredge Area - East portion of Fill Area 14.	Aerial photo feature, "Fill Area".	Default
Group 2	Surface	204	Pond Dredge - West portion of Fill Area 14.	Stakeholder requested location on April 20, 2011. Geophysical anomaly, "Conductivity and Magnetometer". Aerial photo feature, "Fill".	Default
Group 2	Subsurface	204	Pond Dredge - West portion of Fill Area 14.	Stakeholder requested location on April 20, 2011. Geophysical anomaly, "Conductivity and Magnetometer". Aerial photo feature, "Fill".	Default
Group 2	Surface	205	Southwest corner of Subarea 5D-North.	Stakeholder requested sample location on April 20, 2011. Aerial photo feature, "Possible open storage".	Default
Group 2	Subsurface	205	Southwest corner of Subarea 5D-North.	Stakeholder requested sample location on April 20, 2011. Aerial photo feature, "Possible open storage".	Default
Group 2	Surface	206	West side of former Building 4373.	Stakeholder requested sample location on April 20, 2011. Entry way to former Building 4373.	Default
Group 2	Subsurface	206	West side of former Building 4373.	Stakeholder requested sample location on April 20, 2011. Entry way to former Building 4373.	Default

Notes:

¹ During D&D activities at former Building 4020 a 1 foot sand layer was placed in the bottom of the building excavation. A targeted subsurface sample of native soil will be collected below the 1 foot sand layer, at the soil/bedrock interface, if possible. If refusal is encountered before bedrock is reached, a soil sample will be collected just above the depth refusal was encountered. In addition to this subsurface sample, soil samples will be collected based on the results of the borehole gamma logging in accordance with the Master Soil Sampling Field Sampling Plan (FSP). If borehole gamma logging results show no elevated gamma reading then a composite soil sample will be collected from the 1-5 foot interval. A minimum of two subsurface soil samples will be collected from each subsurface boring location.

² A targeted subsurface sample of native soil will be collected at the soil/bedrock interface, if possible. If refusal is encountered before bedrock is reached, a soil sample will be collected just above the depth refusal was encountered. Only one subsurface soil sample will be collected unless the borehole gamma logging results show elevated gamma readings, then subsurface soil samples will be collected at each contaminated zone in accordance with the Master Soil Sampling FSP.

D&D - decontamination and decommissioning

FSP - Field Sampling Plan

PGRAY - potential gamma radiation anomaly

ATTACHMENT 2

Figure 1	Subarea 5D-North Base Map
Figure 2	Subarea 5D-North Group 1 Sample Locations
Figure 3	Subarea 5D-North Group 2 Sample Locations
Figure 4	Subarea 5D-North Group 3 Sample Locations

Figure 1
Subarea 5D North Base Map
Santa Susana Field Laboratory

U.S. EPA Region 9



Legend

Buildings:

 Demolished

 Existing

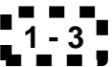
 1-3 Subarea 5D North Groups



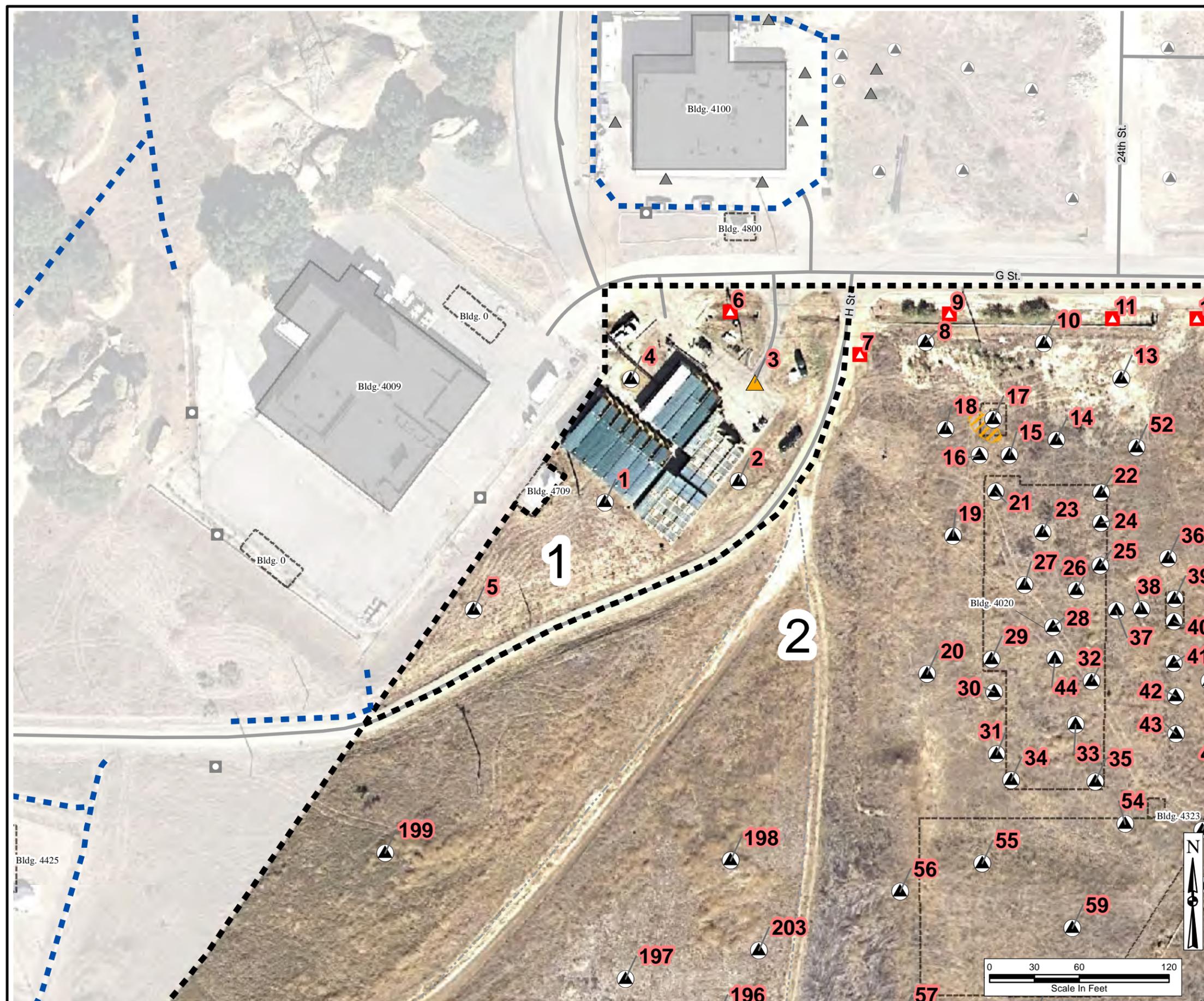
Figure 2
Subarea 5D North Group 1 Sample Locations
Santa Susana Field Laboratory

U.S. EPA Region 9



Legend

- Demolished Buildings
- Existing Buildings
- Subarea 5D North Groups
- Drainage and Subsurface Sample
- Subsurface Sample
- Surface and Subsurface Sample
(Grayed Symbols Represent Soil Samples from Previous Subareas)
- Likely Remediation Areas**
 - Chemical



Y:\Santa_Susana\EP9038\Soil_Sampling\SubArea5D\
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5/4/2011 sdrallos-kopecky
Source:HGL 2010, CIRGIS 2007



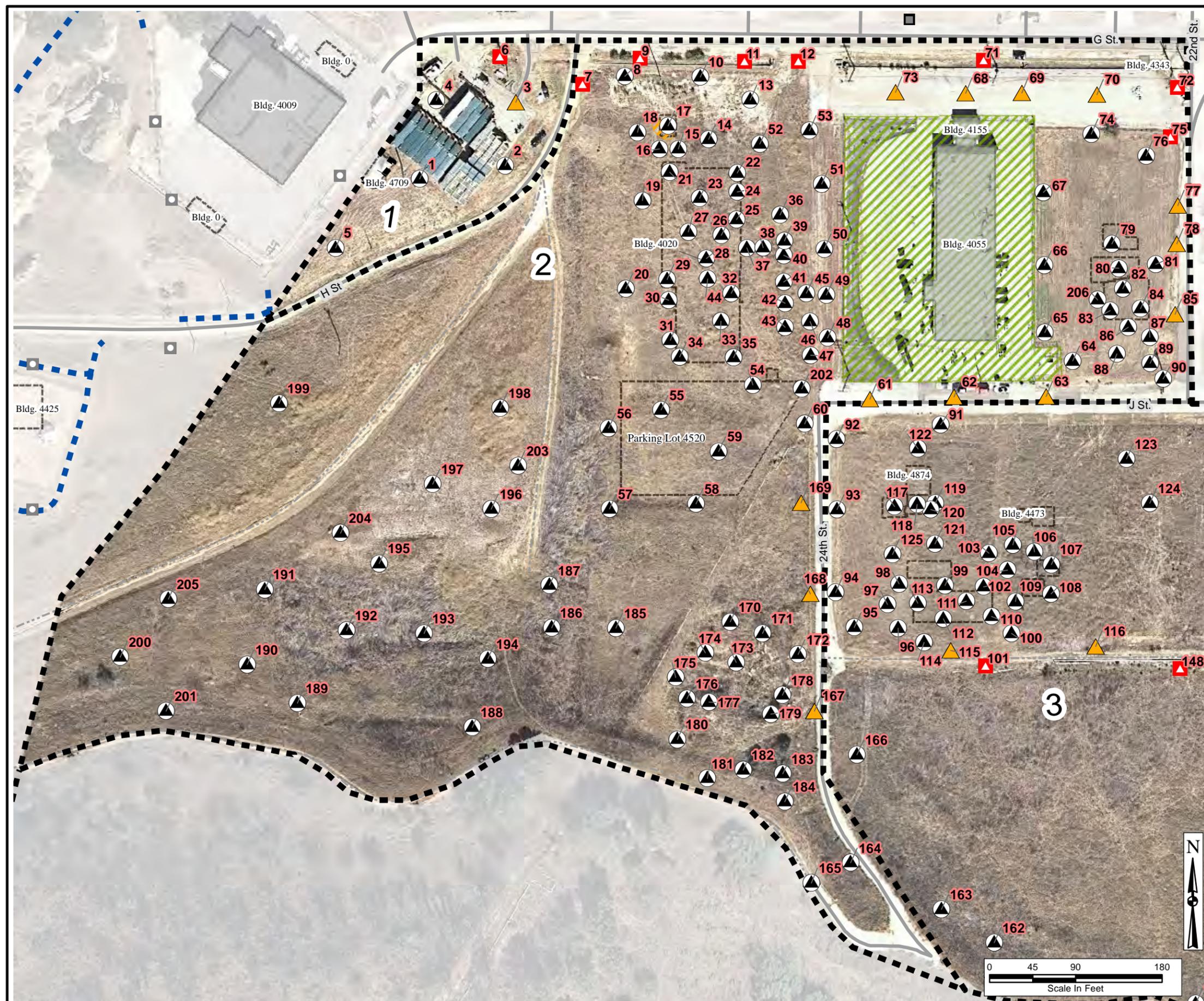
Figure 3
Subarea 5D North Group 2 Sample Locations
Santa Susana Field Laboratory

U.S. EPA Region 9



Legend

- Demolished Buildings
- Existing Buildings
- Subarea 5D North Groups
- Drainage and Subsurface Sample
- Subsurface Sample
- Surface and Subsurface Sample
(Grayed Symbols Represent Soil Samples from Previous Subareas)
- Likely Remediation Areas**
- Chemical
- Decontamination & Decommissioning



Y:\Santa_Susana\EP9038\Soil_Sampling\SubArea5D\
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 5/4/2011 sdrallos-kopecky
 Source:HGL 2010, CIRGIS 2007

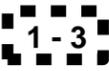


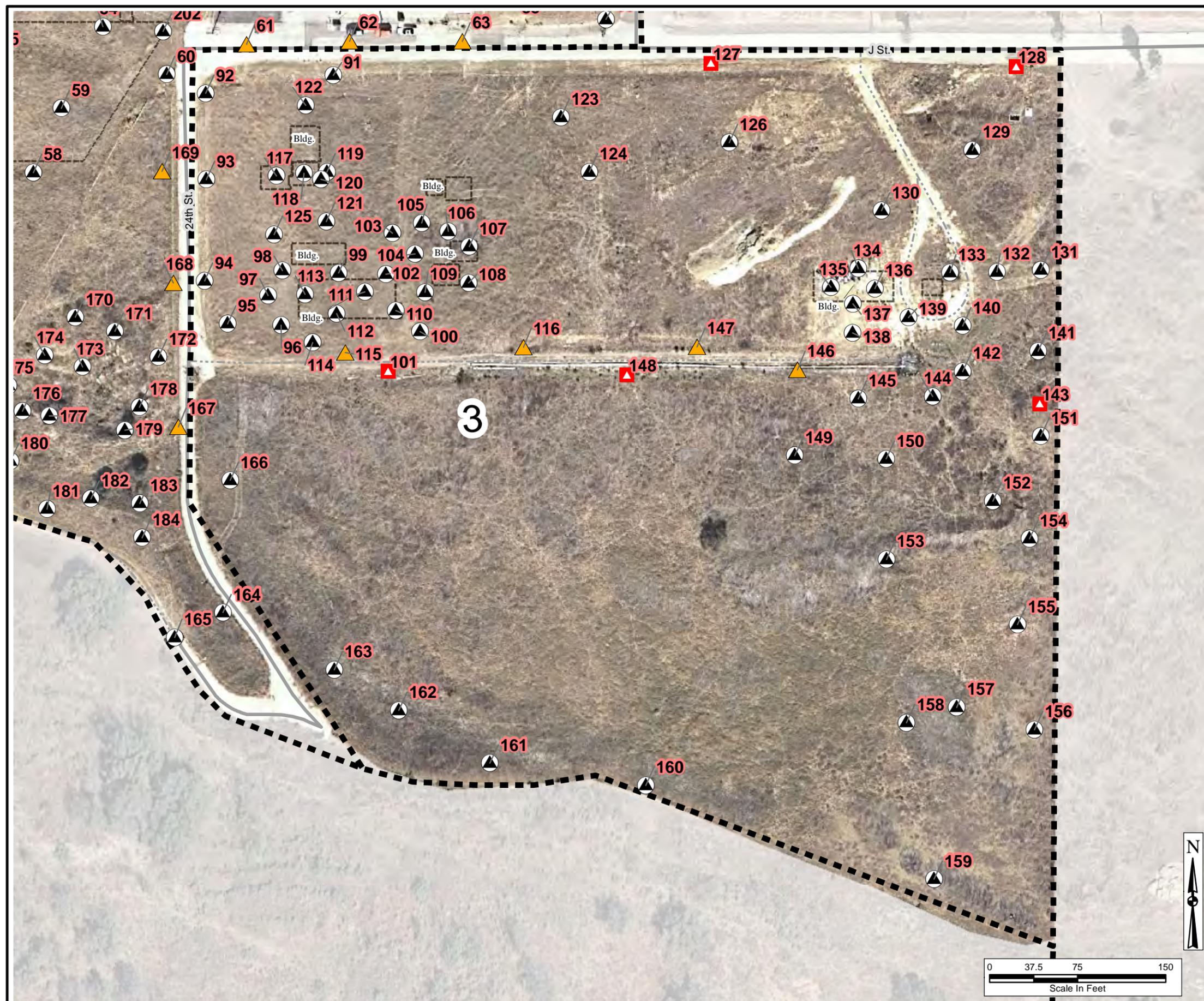
Figure 4
Subarea 5D North Group 3 Sample Locations
Santa Susana Field Laboratory

U.S. EPA Region 9



Legend

-  Demolished Buildings
-  Existing Buildings
-  Subarea 5D North Groups
-  Drainage and Subsurface Sample
-  Subsurface Sample
-  Surface and Subsurface Sample
(Grayed Symbols Represent Soil Samples from Previous Subareas)



Y:\Santa_Susana\EP9038\Soil_Sampling\SubArea5D\
(4)Group3ProposedSampleLocations_11x17_5DN.mxd
5/4/2011 sdrallos-kopecky
Source:HGL 2010, CIRGIS 2007



ATTACHMENT 3

Gamma Scanning Results Subarea 5D-North
Geophysical Anomalies Subarea 5D-North
Past Radiological Soil Investigations Subarea 5D-North – Map 1
Past Radiological Soil Investigations Subarea 5D-North – Map 2
Aerial Photo Features Subarea 5D
Process Knowledge Subarea 5D



Legend

Subarea 5D North Groups

Centerline Roads
 Primary Roads
 Secondary Roads
 Tertiary Roads

Buildings
 Demolished
 Existing

Geophysical Anomalies

- Magnetometer Point Features
- Terrain Conductivity Point Features
- Geophysical Anomaly Linear
- - - Interpreted Drain Remnants
- ▨ Magnetometer
- ▨ Terrain Conductivity
- ▨ Cut and Fill
- ▨ Cut and Fill

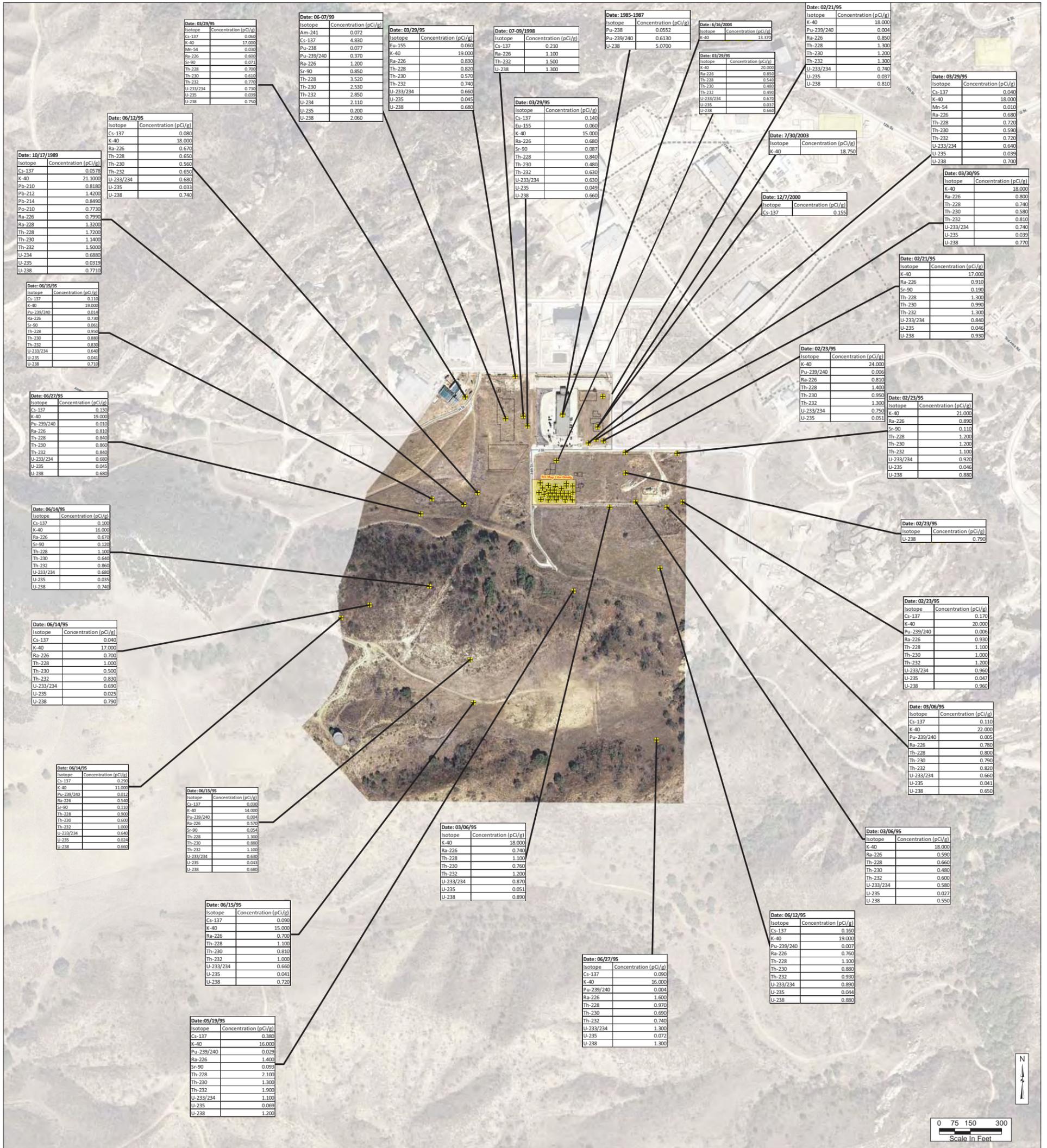
**Geophysical Anomalies
 Subarea 5D North
 Santa Susana Field Laboratory**

U.S. EPA Region 9



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 5/4/2011 subarea5dn.mxd
 Source:HGL 2010, CIRGIS 2007





Legend

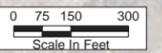
- ▲ Above NDA
- Below NDA
- Subarea 5D Groups
- Map Frame
- Primary Roads
- Secondary Roads
- Tertiary Roads
- Demolished
- Existing

**Past Radiological Soil Investigations
Subarea 5D - Map 1
Santa Susana Field Laboratory**

U.S. EPA Region 9



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4/18/2011 adallos-lopecky
Source:HGL 2010, CIRGIS 2007





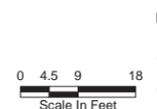
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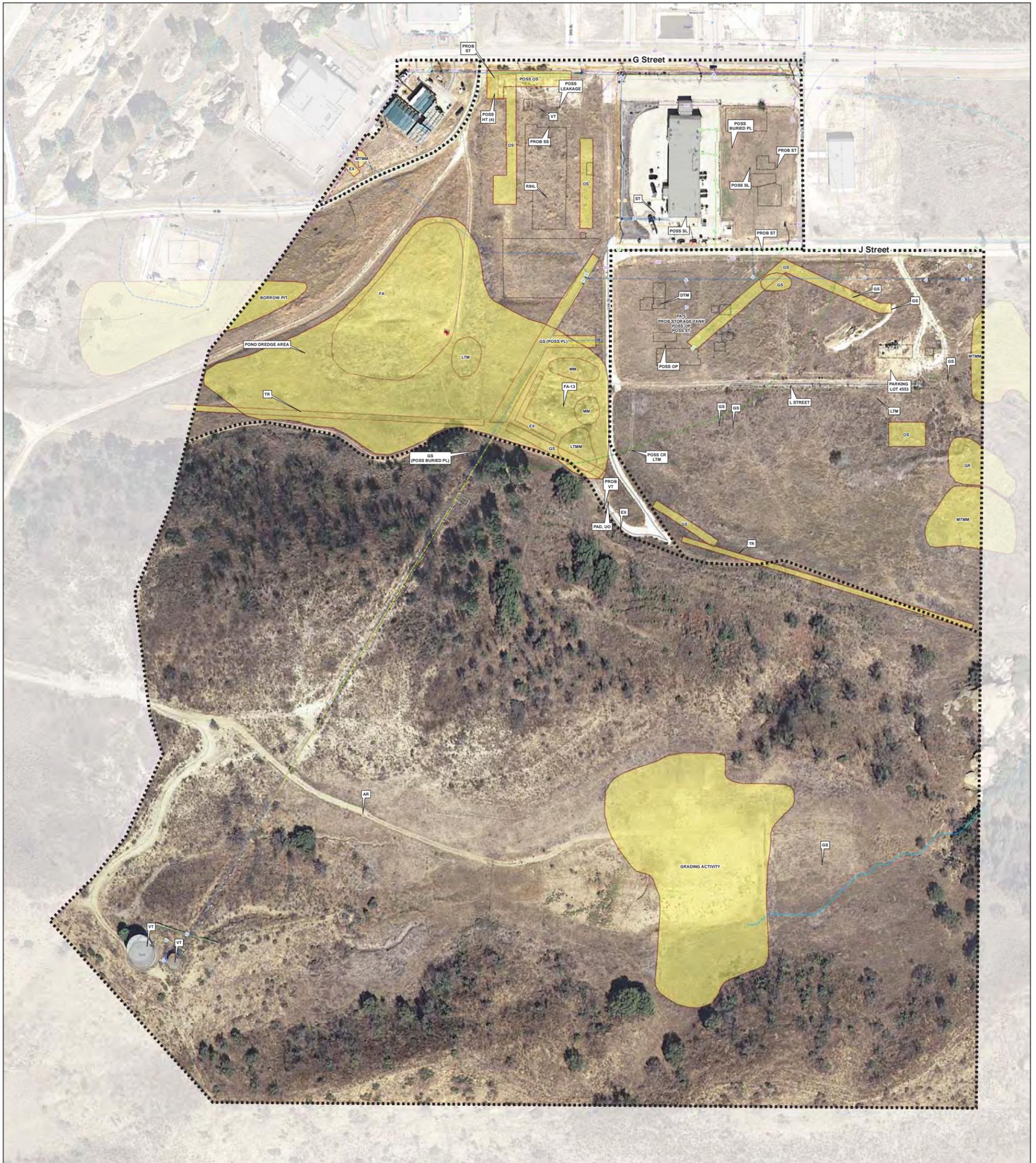
**Past Radiological Soil Investigations
Subarea 5D - Map 2
Santa Susana Field Laboratory**

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Subarea5D_RadSoil_Map2.mxd
4/18/2011 adallos-lopecky
Source:HGL 2010, CIRGIS 2007





Legend

- Subarea 5D Groups
- Centerline Roads**
 - Primary Roads
 - Secondary Roads
 - Tertiary Roads
- Buildings**
 - Demolished
 - Existing
 - Parking Lots
- Surface Water**
 - Intermittent Stream
 - Permanent Stream
 - Surface Water
 - Lined Channel

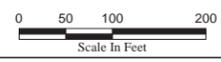
- Tanks**
 - Above ground Storage Tank
 - Underground Storage Tank
 - Unknown Tank Type
 - French Drain Holding Tank
 - Sump
 - Dry Well
 - Tank Footprint
 - Drain
 - Well
 - French Drain
 - Drainage
 - Leach Field
 - Septic System

- Aerial Photography Data**
 - Aerial Photography Features
- Utilities**
 - Gas
 - Storm Drain
 - Sanitary Sewer
 - Sanitary Waste
 - Water
 - Water (Removed)

- Surface Features**
 - Channel
 - Drain
 - Drain
 - Drainage Divide
 - Gutter
 - Tank
 - Tank
 - Vault
 - Well

- Aerial Photography Descriptors**

Type	Description
B	Building
CONT	Container
CR	Crates
DB	Debris
DG	Disturbed Ground
DTM	Dark Tone Material
EX	Excavation
FA	Fill Area
GS	Ground Scar
HT	Horizontal Tank
IM	Impoundment
LTMM	Light Toned Mounded Material
MTMM	Medium Toned Mounded Material
OS	Open Storage
PA	Processing Area
PL	Pipeline
POSS	Possible
PROB	Probable
SS	Smoke Stack
ST	Stain
S-T	Storage Tank
UO	Unidentified Object
VT	Vertical Tank
WDA	Waste Disposal Area



Historical Site Assessment
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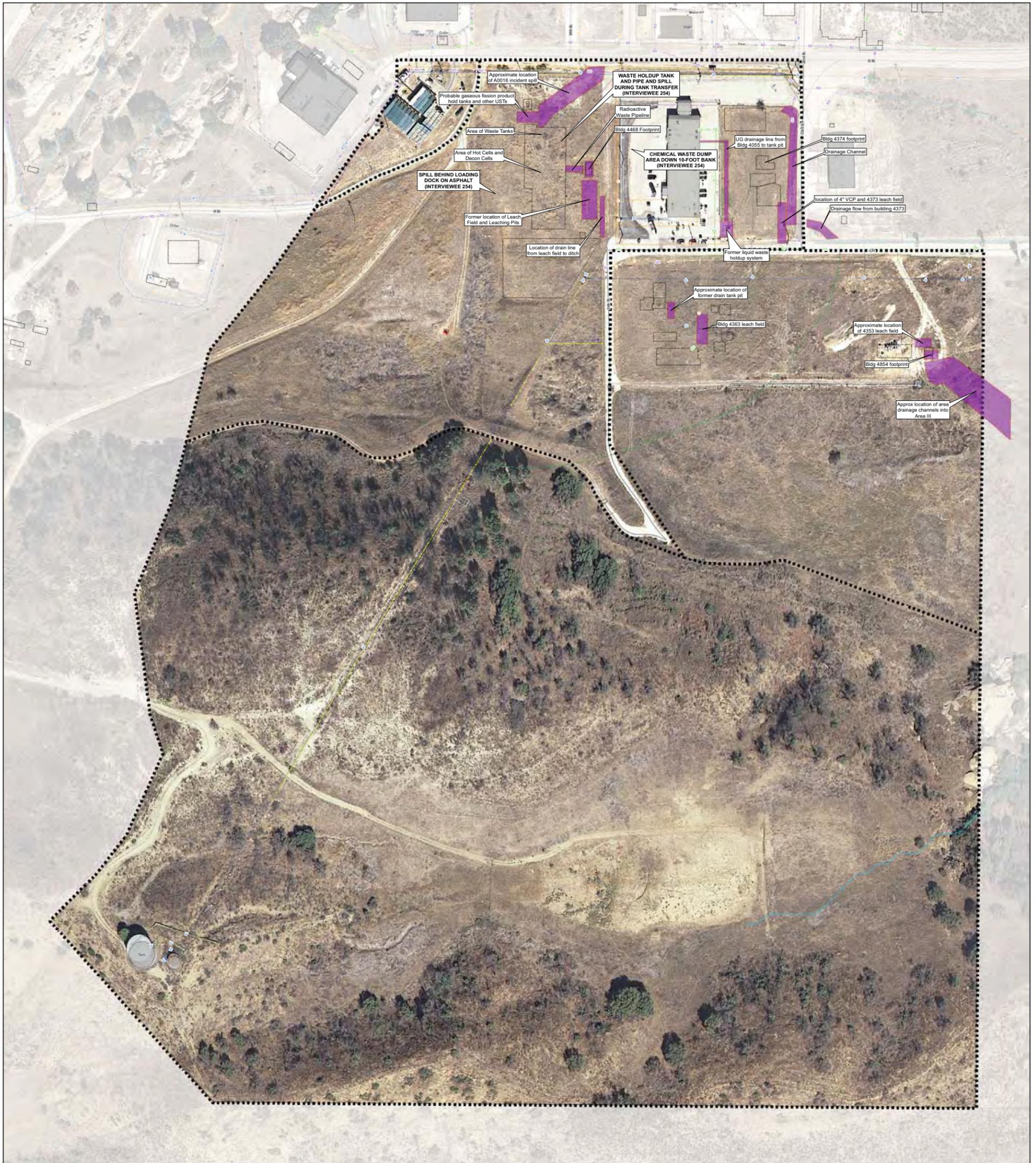
**Aerial Photo Features
Subarea HSA-5D
Santa Susana Field Laboratory**

U.S. EPA Region 9



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Subarea-5D_AerialPhotoFeatures_20110415.mxd
4/18/2011 adrallos-kopeccky





Legend

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Historical Site Assessment
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**Process Knowledge
Subarea HSA-5D
Santa Susana Field Laboratory**

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