
SUBAREA 5B FSP ADDENDUM
REVISION 1
SANTA SUSANA FIELD LABORATORY SITE
AREA IV RADIOLOGICAL STUDY

TO: Craig Cooper, USEPA Region 9 RPM
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DATE: March 2, 2011
SUBJECT: FSP Addendum for Subarea 5B Revision 1
CONTRACT NO: EP-S7-05-05
TASK ORDER NO: 0038

INTRODUCTION

HydroGeoLogic, Inc. (HGL) has been tasked by the U. S. Environmental Protection Agency (USEPA) to conduct a radiological characterization study at Area IV and the Northern Buffer Zone of 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.

The Subarea 5B Field Sampling Plan (FSP) Addendum supports the field implementation of the overall soil sampling program and is an addendum to the master FSP for Soil Sampling (HGL, 2010).

PURPOSE

The purpose of this document is to implement Revision 1 of the Subarea 5B FSP Addendum. The scope of Revision 1 is to document the rationale for Round 1 soil sample locations in Group 8 of Subarea 5B that are located within or near the 17th Street drainage area.

The 17th Street drainage area is a “Likely Remediation Zone” as identified by the California Department of Toxic Substances Control (DTSC) and Department of Energy (DOE). Based on existing chemical test results, USEPA understands that most, if not all, surface soil may be excavated and removed from the area identified as the 17th Street drainage “Likely Remediation Zone” shown on Figure 9, Revision 1. Therefore, USEPA reduced the density of surface soil samples in the zone's interior, maintained two subsurface only soil samples to define potential contamination at depth and maintained several surface/subsurface samples at the zone's perimeter to better define the potential extent of contamination associated with this

zone. To illustrate this change, Table 1, Table 2 and Figure 9 of the 5B FSP Addendum were revised to reflect this change and are presented below.

It should also be noted that 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.

Table 2
Revised Summary of Sample Numbers in Subarea 5B by Group

Group	Surface	Subsurface	Total
1	55	71	126
2	14	23	37
3	12	15	27
4	9	14	23
5	4	8	12
6	28	25	53
7	12	18	30
8	56	67	123
Total	190	239	431

SCHEDULE

Round 1 soil sampling within Subarea 5B is anticipated to commence on December 8, 2010, and be completed by late March 2011. The 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.

LIST OF ATTACHMENTS

- Attachment 1 Table 1 (Revision 1)
- Attachment 2 Figure 9 (Revision 1)

ATTACHMENT 1

Table 1 Summary of Soil Sample Locations in Subarea 5B, Revision 1

Table 1, Revision 1
Summary of Soil Sample Locations in Subarea 5B

Group	Sample Type	Location ID	Location Description	Technical Justification	Analytical Suite ^{5,6}
Group 1	Surface	1	Northwest of Building 4010 footprint (SNAP 2 Experimental Reactor Building)	This location was used as the site for operation of an experimental nuclear reactor.	Default + SS + Tritium
Group 1	Subsurface ¹	1	Northwest of Building 4010 footprint (SNAP 2 Experimental Reactor Building)	This location was used as the site for operation of an experimental nuclear reactor.	Default + SS + Tritium
Group 1	Surface	2	Northeast of Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of a gas hold-up tank (Dwg 303-010-M6).	Default + SS + Tritium
Group 1	Subsurface ²	2	Northeast of Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of a gas hold-up tank (Dwg 303-010-M6).	Default + SS + Tritium
Group 1	Surface	3	Northeast of Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of the pipe well sump (Dwg 303-010-S5).	Default + SS + Tritium
Group 1	Subsurface ²	3	Northeast of Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of the pipe well sump (Dwg 303-010-S5).	Default + SS + Tritium
Group 1	Surface	311	Northeast of Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of the pipe well sump (Dwg 303-010-S5).	Default + SS + Tritium
Group 1	Subsurface ²	311	Northeast of Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of the pipe well sump (Dwg 303-010-S5).	Default + SS + Tritium
Group 1	Surface	312	Northeast of Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of the pipe well sump (Dwg 303-010-S5).	Default + SS + Tritium
Group 1	Subsurface ²	312	Northeast of Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of the pipe well sump (Dwg 303-010-S5).	Default + SS + Tritium
Group 1	Surface	4	Northeast of Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of NaK storage tanks T1, T4, and T5 (Dwg 303-010-E18).	Default + SS + Tritium
Group 1	Subsurface	4	Northeast of Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of NaK storage tanks T1, T4, and T5 (Dwg 303-010-E18).	Default + SS + Tritium
Group 1	Surface	5	Inside Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of reactor pit and location of Co-60 concentration (48 pCi/g) measured in 1981 in subsurface soil.	Default + SS + Tritium
Group 1	Subsurface ¹	5	Inside Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of reactor pit and location of Co-60 concentration (48 pCi/g) measured in 1981 in subsurface soil.	Default + SS + Tritium
Group 1	Surface	6	Southeast of Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of NaK storage tanks T1, T4, and T5 (Dwg 303-010-E18).	Default + SS + Tritium
Group 1	Subsurface	6	Southeast of Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of NaK storage tanks T1, T4, and T5 (Dwg 303-010-E18).	Default + SS + Tritium
Group 1	Surface	291	Inside Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of reactor pit and location of Co-60 concentration (48 pCi/g) measured in 1981 in subsurface soil.	Default + SS + Tritium
Group 1	Subsurface ¹	291	Inside Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of reactor pit and location of Co-60 concentration (48 pCi/g) measured in 1981 in subsurface soil.	Default + SS + Tritium
Group 1	Surface	7	Inside Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of reactor pit and location of Co-60 concentration (48 pCi/g) measured in 1981 in subsurface soil.	Default + SS + Tritium
Group 1	Subsurface ¹	7	Inside Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of reactor pit and location of Co-60 concentration (48 pCi/g) measured in 1981 in subsurface soil.	Default + SS + Tritium
Group 1	Surface	8	Inside Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of reactor pit and location of Co-60 concentration (48 pCi/g) measured in 1981 in subsurface soil.	Default + SS + Tritium
Group 1	Subsurface ¹	8	Inside Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of reactor pit and location of Co-60 concentration (48 pCi/g) measured in 1981 in subsurface soil.	Default + SS + Tritium
Group 1	Surface	9	Northwest Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of reactor pit and location of Co-60 concentration (48 pCi/g) measured in 1981 in subsurface soil.	Default + SS + Tritium
Group 1	Subsurface ¹	9	Northwest of Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of reactor pit and location of Co-60 concentration (48 pCi/g) measured in 1981 in subsurface soil.	Default + SS + Tritium
Group 1	Surface	10	Northwest of Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of reactor pit and location of Co-60 concentration (48 pCi/g) measured in 1981 in subsurface soil.	Default + SS + Tritium
Group 1	Subsurface ¹	10	Northwest of Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of reactor pit and location of Co-60 concentration (48 pCi/g) measured in 1981 in subsurface soil.	Default + SS + Tritium
Group 1	Surface	11	Northwest of Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of abandoned septic tank discharge line	Default + SS + Tritium
Group 1	Subsurface ³	11	Northwest of Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of abandoned septic tank discharge line	Default + SS + Tritium
Group 1	Surface	306	Northwest of Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of abandoned septic tank discharge line	Default + SS + Tritium
Group 1	Subsurface ³	306	Northwest of Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of abandoned septic tank discharge line	Default + SS + Tritium
Group 1	Surface	12	Inside Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of reactor pit and location of Co-60 concentration (48 pCi/g) measured in 1981 in subsurface soil.	Default + SS + Tritium

Table 1, Revision 1
Summary of Soil Sample Locations in Subarea 5B

Group	Sample Type	Location ID	Location Description	Technical Justification	Analytical Suite ^{5,6}
Group 1	Subsurface ¹	12	Inside Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of reactor pit and location of Co-60 concentration (48 pCi/g) measured in 1981 in subsurface soil.	Default + SS + Tritium
Group 1	Surface	292	Inside Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of reactor pit and location of Co-60 concentration (48 pCi/g) measured in 1981 in subsurface soil.	Default + SS + Tritium
Group 1	Subsurface ¹	292	Inside Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of reactor pit and location of Co-60 concentration (48 pCi/g) measured in 1981 in subsurface soil.	Default + SS + Tritium
Group 1	Surface	13	Southeast of Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of NaK storage tanks T1, T4, and T5 (Dwg 303-010-E18).	Default + SS + Tritium
Group 1	Subsurface	13	Southeast of Building 4010 footprint (SNAP 2 Experimental Reactor Building)	Location of NaK storage tanks T1, T4, and T5 (Dwg 303-010-E18).	Default + SS + Tritium
Group 1	Surface	14	Southeast of Building 4012 footprint (SNAP Critical Test Facility)	Location of abandoned septic tank discharge line.	Default + SS + Tritium
Group 1	Subsurface ³	14	Southeast of Building 4012 footprint (SNAP Critical Test Facility)	Location of abandoned septic tank discharge line.	Default + SS + Tritium
Group 1	Subsurface ³	15	Southeast of Building 4012 footprint (SNAP Critical Test Facility)	Location of abandoned septic tank discharge line.	Default + SS + Tritium
Group 1	Subsurface ³	16	Inside footprint of Building 4012 footprint (SNAP Critical Test Facility)	Location of abandoned septic system leach field.	Default + SS + Tritium
Group 1	Surface	17	Southeast of Building 4012 footprint (SNAP Critical Test Facility)	Location of abandoned septic system leach field.	Default + SS + Tritium
Group 1	Subsurface ³	17	Southeast of Building 4012 footprint (SNAP Critical Test Facility)	Location of abandoned septic system leach field.	Default + SS + Tritium
Group 1	Surface	18	Southeast of Building 4012 footprint (SNAP Critical Test Facility)	Location of abandoned septic system leach field.	Default + SS + Tritium
Group 1	Subsurface ³	18	Southeast of Building 4012 footprint (SNAP Critical Test Facility)	Location of abandoned septic system leach field.	Default + SS + Tritium
Group 1	Subsurface ³	19	East of Building 4010 and along septic tank discharge line	Location of abandoned septic tank.	Default + SS + Tritium
Group 1	Surface	20	East of Building 4010 and along septic tank discharge line	Location of abandoned septic tank.	Default + SS + Tritium
Group 1	Subsurface ³	20	East of Building 4010 and along septic tank discharge line	Location of abandoned septic tank.	Default + SS + Tritium
Group 1	Subsurface ³	21	Southeast of Building 4012 footprint (SNAP Critical Test Facility)	Location of abandoned septic system leach field.	Default + SS + Tritium
Group 1	Surface	22	Along Group 1 north fence	Aerial photo analysis show possible WDA-6.	Default + SS + Tritium
Group 1	Subsurface	22	Along Group 1 north fence	Aerial photo analysis show possible WDA-6.	Default + SS + Tritium
Group 1	Subsurface	23	Along Group 1 north fence	Aerial photo analysis show possible WDA-6.	Default + SS + Tritium
Group 1	Surface	24	Along Group 1 north fence	Aerial photo analysis show possible OS-7.	Default + SS + Tritium
Group 1	Subsurface	24	Along Group 1 north fence	Aerial photo analysis show possible OS-7.	Default + SS + Tritium
Group 1	Subsurface	25	Along Group 1 north fence	Aerial photo analysis show probable stain.	Default + SS + Tritium
Group 1	Surface	26	Along Group 1 north fence	Aerial photo analysis show OS.	Default + SS + Tritium
Group 1	Subsurface	26	Along Group 1 north fence	Aerial photo analysis show OS.	Default + SS + Tritium
Group 1	Surface	27	North of Building 4019	Aerial photo analysis show OS-10 and probable stain.	Default + SS + Tritium
Group 1	Subsurface	27	North of Building 4019	Aerial photo analysis show OS-10 and probable stain.	Default + SS + Tritium
Group 1	Subsurface	28	North of Building 4019	Aerial photo analysis show OS-10 and probable stain.	Default + SS + Tritium
Group 1	Surface	294	Inside Building 4012 footprint in area of critical cell (room 110)	Location of SNAP critical cell and assembly room (Dwg 303-012-A1).	Default + SS + Tritium
Group 1	Subsurface	294	Inside Building 4012 footprint in area of critical cell (room 110)	Location of SNAP critical cell and assembly room (Dwg 303-012-A1).	Default + SS + Tritium
Group 1	Surface	29	Inside Building 4012 footprint in area of critical cell (room 110)	Location of SNAP critical cell and assembly room (Dwg 303-012-A1).	Default + SS + Tritium
Group 1	Subsurface	29	Inside Building 4012 footprint in area of critical cell (room 110)	Location of SNAP critical cell and assembly room (Dwg 303-012-A1).	Default + SS + Tritium
Group 1	Subsurface	30	Inside Building 4012 footprint in area of critical cell (room 110)	Location of SNAP critical cell and assembly room (Dwg 303-012-A1).	Default + SS + Tritium
Group 1	Surface	31	North of Building 4012 footprint in area of critical cell (room 110)	Location of SNAP critical cell and assembly room (Dwg 303-012-A1).	Default + SS + Tritium
Group 1	Subsurface	31	North of Building 4012 footprint in area of critical cell (room 110)	Location of SNAP critical cell and assembly room (Dwg 303-012-A1).	Default + SS + Tritium
Group 1	Surface	32	Southwest of Building 4012 footprint (outside of room 104)	Location of radioactive liquid waste tank aka "survey tank" (Dwg 303-012-A1).	Default + SS + Tritium
Group 1	Subsurface ⁴	32	Southwest of Building 4012 footprint (outside of room 104)	Location of radioactive liquid waste tank aka "survey tank" (Dwg 303-012-A1).	Default + SS + Tritium
Group 1	Subsurface ⁴	33	Southwest of Building 4012 footprint (outside of room 104)	Location of radioactive liquid waste tank aka "survey tank" (Dwg 303-012-A1).	Default + SS + Tritium

Table 1, Revision 1
Summary of Soil Sample Locations in Subarea 5B

Group	Sample Type	Location ID	Location Description	Technical Justification	Analytical Suite ^{5,6}
Group 1	Surface	307	Southwest of Building 4012 footprint (outside of room 104)	Location of radioactive liquid waste tank aka "survey tank" (Dwg 303-012-A1).	Default + SS + Tritium
Group 1	Subsurface ⁴	307	Southwest of Building 4012 footprint (outside of room 104)	Location of radioactive liquid waste tank aka "survey tank" (Dwg 303-012-A1).	Default + SS + Tritium
Group 1	Surface	308	Southwest of Building 4012 footprint (outside of room 104)	Location of radioactive liquid waste tank aka "survey tank" (Dwg 303-012-A1).	Default + SS + Tritium
Group 1	Subsurface ⁴	308	Southwest of Building 4012 footprint (outside of room 104)	Location of radioactive liquid waste tank aka "survey tank" (Dwg 303-012-A1).	Default + SS + Tritium
Group 1	Surface	34	Inside Building 4012 footprint in area of critical cell (room 110)	Location of south of SNAP critical cell and assembly room (Dwg 303-012-A1).	Default + SS + Tritium
Group 1	Subsurface	34	Inside Building 4012 footprint in area of critical cell (room 110)	Location of south of SNAP critical cell and assembly room (Dwg 303-012-A1).	Default + SS + Tritium
Group 1	Surface	35	Area between Buildings 4010 and 4012 footprints	Geophysical survey indicates potential underground anomaly and location is along septic sys. discharge line.	Default + SS + Tritium
Group 1	Subsurface	35	Area between Buildings 4010 and 4012 footprints	Geophysical survey indicates potential underground anomaly and location is along septic sys. discharge line.	Default + SS + Tritium
Group 1	Surface	36	Area between Buildings 4010 and 4012 footprints	Geophysical survey indicates potential underground anomalies.	Default + SS + Tritium
Group 1	Subsurface	36	Area between Buildings 4010 and 4012 footprints	Geophysical survey indicates potential underground anomalies.	Default + SS + Tritium
Group 1	Subsurface	37	Area between Buildings 4010 and 4012 footprints	Geophysical survey indicates potential underground anomalies; ground-penetrating radar shows potential buried metal.	Default + SS + Tritium
Group 1	Surface	295	Within footprint of Building 4013	Location of potential gamma anomaly and geophysical anomaly.	Default + SS + Tritium
Group 1	Subsurface	295	Within footprint of Building 4013	Location of potential gamma anomaly and geophysical anomaly.	Default + SS + Tritium
Group 1	Surface	296	Within footprint of Building 4013	Location of potential gamma anomaly and geophysical anomaly.	Default + SS + Tritium
Group 1	Subsurface	296	Within footprint of Building 4013	Location of potential gamma anomaly and geophysical anomaly.	Default + SS + Tritium
Group 1	Surface	280	Within footprint of Building 4013	Location of potential gamma anomaly and geophysical anomaly.	Default + SS + Tritium
Group 1	Subsurface	280	Within footprint of Building 4013	Location of potential gamma anomaly and geophysical anomaly.	Default + SS + Tritium
Group 1	Surface	281	Within footprint of Building 4013	Location of potential gamma anomaly and geophysical anomaly.	Default + SS + Tritium
Group 1	Subsurface	281	Within footprint of Building 4013	Location of potential gamma anomaly and geophysical anomaly.	Default + SS + Tritium
Group 1	Surface	282	Within footprint of Building 4013	Location of potential gamma anomaly and geophysical anomaly.	Default + SS + Tritium
Group 1	Subsurface	282	Within footprint of Building 4013	Location of potential gamma anomaly and geophysical anomaly.	Default + SS + Tritium
Group 1	Surface	283	Within footprint of Building 4013	Location of potential gamma anomaly and geophysical anomaly.	Default + SS + Tritium
Group 1	Subsurface	283	Within footprint of Building 4013	Location of potential gamma anomaly and geophysical anomaly.	Default + SS + Tritium
Group 1	Surface	297	Area north of Building 4013	Geophysical survey indicates potential underground anomalies.	Default + SS + Tritium
Group 1	Subsurface	297	Area north of Building 4013	Geophysical survey indicates potential underground anomalies.	Default + SS + Tritium
Group 1	Surface	298	Area north of Building 4013	Geophysical survey indicates potential underground anomalies.	Default + SS + Tritium
Group 1	Subsurface	298	Area north of Building 4013	Geophysical survey indicates potential underground anomalies.	Default + SS + Tritium
Group 1	Surface	39	Area north of Building 4013	Geophysical survey indicates potential underground anomalies.	Default + SS + Tritium
Group 1	Subsurface	39	Area north of Building 4013	Geophysical survey indicates potential underground anomalies.	Default + SS + Tritium
Group 1	Subsurface	40	Northeast of Building 4019 (SNAP Flight System Nuclear Qual. Test Building)	Geophysical survey indicates potential underground anomalies; staining noted in aerial photo analysis.	Default + SS + Tritium
Group 1	Subsurface	41	Northeast of Building 4019	Geophysical survey indicates potential underground anomalies.	Default + SS + Tritium
Group 1	Subsurface	42	Northeast of Building 4019	Along the length of a sanitary sewage line.	Default + SS + Tritium
Group 1	Subsurface	43	Northeast of Building 4019	Along the length of a sanitary sewage line.	Default + SS + Tritium
Group 1	Subsurface	44	South of Building 4019	Location of radioactive liquid waste hold tank outside of room 107.	Default + SS + Tritium
Group 1	Subsurface	45	South of Building 4013	Along the length of a sanitary sewage line.	Default + SS + Tritium
Group 1	Subsurface	46	South of Building 4013	Along the length of a sanitary sewage line.	Default + SS + Tritium
Group 1	Subsurface	47	South of Building 4012	Along the length of a sanitary sewage line.	Default + SS + Tritium
Group 1	Surface	287	Immediately east of Building 4025	Area south of location of a ground scar shown in the aerial photo analysis.	Default + SS + Tritium

Table 1, Revision 1
Summary of Soil Sample Locations in Subarea 5B

Group	Sample Type	Location ID	Location Description	Technical Justification	Analytical Suite ^{5,6}
Group 1	Subsurface	287	Immediately east of Building 4025	Area south of location of a ground scar shown in the aerial photo analysis.	Default + SS + Tritium
Group 1	Surface	48	East of Building 4025 (Remote Handling Mock-up Building)	Location of a ground scar shown in the aerial photo analysis.	Default + SS + Tritium
Group 1	Subsurface	48	East of Building 4025 (Remote Handling Mock-up Building)	Location of a ground scar shown in the aerial photo analysis.	Default + SS + Tritium
Group 1	Surface	49	Inside footprint of Building 4025	Location of a pit on the south end of the Building footprint.	Default + SS + Tritium
Group 1	Subsurface	49	Inside footprint of Building 4025	Location of a pit on the south end of the Building footprint.	Default + SS + Tritium
Group 1	Surface	229	East of Building 4010	Southeast of location of SNAP 2 ER.	Default + SS + Tritium
Group 1	Subsurface ¹	229	East of Building 4010	Southeast of location of SNAP 2 ER.	Default + SS + Tritium
Group 1	Surface	230	East of Building 4010	Southeast of location of SNAP 2 ER.	Default + SS + Tritium
Group 1	Subsurface ¹	230	East of Building 4010	Southeast of location of SNAP 2 ER.	Default + SS + Tritium
Group 1	Surface	231	East of Building 4010	Location of gas hold-up tank (Dwg 303-010-M6).	Default + SS + Tritium
Group 1	Subsurface ²	231	East of Building 4010	Location of gas hold-up tank (Dwg 303-010-M6).	Default + SS + Tritium
Group 1	Subsurface	309	East of Building 4010	Location of gas hold-up tank (Dwg 303-010-M6).	Default + SS + Tritium
Group 1	Subsurface ²	309	East of Building 4010	Location of gas hold-up tank (Dwg 303-010-M6).	Default + SS + Tritium
Group 1	Surface	310	East of Building 4010	Location of gas hold-up tank (Dwg 303-010-M6).	Default + SS + Tritium
Group 1	Subsurface ²	310	East of Building 4010	Location of gas hold-up tank (Dwg 303-010-M6).	Default + SS + Tritium
Group 1	Drainage	289	Storm channel along 17th street and south of PZ-121	Potential surface migration through storm water runoff.	Default
Group 1	Drainage	290	Storm channel along 17th street and southwest of PZ-121	Potential surface migration through storm water runoff.	Default
Group 1	Drainage	137	Storm grate along 17th street and southeast of PZ-121	Potential surface migration through storm water runoff.	Default
Group 2	Subsurface	50	South of Building 4355 footprint (Control Center for SCTI)	Location probable leakage noted in aerial photos.	Default
Group 2	Surface	51	South of Building 4355 footprint	Location probable leakage noted in aerial photos.	Default
Group 2	Subsurface	51	South of Building 4355 footprint	Location probable leakage noted in aerial photos.	Default
Group 2	Subsurface	52	Far lower west side of Group 2 in area of Building 4335 footprint	Location of stain noted in aerial photos.	Default
Group 2	Subsurface	53	Far lower west side of Group 2 in area of Building 4335 footprint	Location of stain noted in aerial photos.	Default
Group 2	Surface	54	Far lower west side of Group 2 in area of Building 4335 footprint	Location of stain noted in aerial photos.	Default
Group 2	Subsurface	54	Far lower west side of Group 2 in area of Building 4335 footprint	Location of stain noted in aerial photos.	Default
Group 2	Subsurface	55	Area over Building 4356 (Sodium Component Test Ins. High Bay) footprint	Geophysical survey indicates potential underground anomalies.	Default
Group 2	Subsurface	56	Area over Building 4356 footprint	Geophysical survey indicates potential underground anomalies.	Default
Group 2	Surface	57	Area of northwest corner of Building 4356 footprint	Geophysical survey indicates potential underground anomalies.	Default
Group 2	Subsurface	57	Area of northwest corner of Building 4356 footprint	Geophysical survey indicates potential underground anomalies.	Default
Group 2	Surface	299	Area east of concrete pad	Geophysical survey indicates potential underground anomalies.	Default
Group 2	Subsurface	299	Area east of concrete pad	Geophysical survey indicates potential underground anomalies.	Default
Group 2	Subsurface	58	Area west of Building 4356 footprint	Geophysical survey indicates potential underground anomalies.	Default
Group 2	Surface	59	Area over Building 4356 footprint	Geophysical survey indicates potential underground anomalies.	Default
Group 2	Subsurface	59	Area over Building 4356 footprint	Geophysical survey indicates potential underground anomalies.	Default
Group 2	Subsurface	60	Area over Building 4356 footprint	Geophysical survey indicates potential underground anomalies.	Default
Group 2	Surface	61	Area over Building 4356 footprint	Geophysical survey indicates potential underground anomalies.	Default
Group 2	Subsurface	61	Area over Building 4356 footprint	Geophysical survey indicates potential underground anomalies.	Default
Group 2	Surface	235	Area between 20th street and Building 4356	Geophysical survey indicates potential underground anomalies.	Default
Group 2	Subsurface	235	Area between 20th street and Building 4356	Geophysical survey indicates potential underground anomalies.	Default
Group 2	Surface	62	Area over Building 4356 footprint	Geophysical survey indicates potential underground anomalies.	Default
Group 2	Subsurface	62	Area over Building 4356 footprint	Geophysical survey indicates potential underground anomalies.	Default

Table 1, Revision 1
Summary of Soil Sample Locations in Subarea 5B

Group	Sample Type	Location ID	Location Description	Technical Justification	Analytical Suite ^{5,6}
Group 2	Subsurface	63	Area northwest of Building 4457 footprint	Geophysical survey indicates potential buried metal.	Default
Group 2	Surface	64	Area northwest of Building 4457 footprint	Geophysical survey indicates potential buried metal.	Default
Group 2	Subsurface	64	Area northwest of Building 4457 footprint	Geophysical survey indicates potential buried metal.	Default
Group 2	Surface	65	Area between Buildings 4457 and 4357 footprints	Aerial photos indicate presence of a possible stain.	Default
Group 2	Subsurface	65	Area between Buildings 4457 and 4357 footprints	Aerial photos indicate presence of a possible stain.	Default
Group 2	Subsurface	66	Area between northwest of Building 4006	Aerial photos indicate presence of a possible stain.	Default
Group 2	Surface	67	Area between northwest of Building 4006	Aerial photos indicate presence of an area of dark toned material.	Default
Group 2	Subsurface	67	Area between northwest of Building 4006	Aerial photos indicate presence of an area of dark toned material.	Default
Group 2	Subsurface	68	Area between northwest of Building 4006	Aerial photos indicate presence of an area of dark toned material.	Default
Group 2	Subsurface	69	Area east of Building 4357 footprint	Location of sodium tank pit containment sump.	Default
Group 2	Surface	70	Area east of Building 4457 footprint	Location of sodium tank pit and trench.	Default
Group 2	Subsurface	70	Area east of Building 4457 footprint	Location of sodium tank pit and trench.	Default
Group 2	Drainage	138	Storm drainage channel along 17th street and north of Building 4006	Potential surface migration through storm water runoff.	Default
Group 3	Drainage	139	Drainage sample along 17th street and near west corner of Building 4006	Potential surface migration through storm water runoff.	Default
Group 3	Surface	71	Area south of Building 4006 (Sodium Laboratory)	Geophysical survey indicates potential buried metal; location of potential gamma anomaly.	Default
Group 3	Subsurface	71	Area south of Building 4006	Geophysical survey indicates potential buried metal; location of potential gamma anomaly.	Default
Group 3	Surface	72	Area south of Building 4006	Geophysical survey indicates potential buried metal; location of potential gamma anomaly.	Default
Group 3	Subsurface	72	Area south of Building 4006	Geophysical survey indicates potential buried metal; location of potential gamma anomaly.	Default
Group 3	Surface	73	Area north of Building 4704 footprint	Location of potential gamma anomaly; location of stain noted in aerial photos.	Default
Group 3	Subsurface	73	Area north of Building 4704 footprint	Location of potential gamma anomaly; location of stain noted in aerial photos.	Default
Group 3	Surface	74	Area north of Building 4704 footprint	Location of potential gamma anomaly; location of stain noted in aerial photos.	Default
Group 3	Subsurface	74	Area north of Building 4704 footprint	Location of potential gamma anomaly; location of stain noted in aerial photos.	Default
Group 3	Surface	75	Area north of Building 4704 footprint	Location of potential gamma anomaly; location of stain noted in aerial photos.	Default
Group 3	Subsurface	75	Area north of Building 4704 footprint	Location of potential gamma anomaly; location of stain noted in aerial photos.	Default
Group 3	Surface	76	Area north of Building 4704 footprint	Location of potential gamma anomaly; location of stain noted in aerial photos.	Default
Group 3	Subsurface	76	Area north of Building 4704 footprint	Location of potential gamma anomaly; location of stain noted in aerial photos.	Default
Group 3	Surface	77	Area north of Building 4704 footprint	Location of potential gamma anomaly; location of stain noted in aerial photos.	Default
Group 3	Subsurface	77	Area north of Building 4704 footprint	Location of potential gamma anomaly; location of stain noted in aerial photos.	Default
Group 3	Surface	78	Area north of Building 4704 footprint	Location of potential gamma anomaly; location of stain noted in aerial photos.	Default
Group 3	Subsurface	78	Area north of Building 4704 footprint	Location of potential gamma anomaly; location of stain noted in aerial photos.	Default
Group 3	Surface	301	Area east of Building 4816 footprint	Location of potential gamma anomaly; location of stain noted in aerial photos.	Default
Group 3	Subsurface	301	Area east of Building 4816 footprint	Location of potential gamma anomaly; location of stain noted in aerial photos.	Default
Group 3	Subsurface	79	Area east of Building 4816 footprint	Location of stain noted in aerial photos.	Default
Group 3	Subsurface	80	Area south of Building 4816 footprint	Location of possible leakage noted in aerial photos and horizontal tank.	Default
Group 3	Subsurface ³	81	Area southwest of Building 4006	Location of abandoned septic tank.	Default
Group 3	Subsurface ³	82	Area southwest of Building 4006	Location of abandoned septic tank.	Default
Group 3	Surface	83	Area north of Building 4616 footprint	Location of potential gamma anomaly.	Default
Group 3	Subsurface	83	Area north of Building 4616 footprint	Location of potential gamma anomaly.	Default
Group 3	Surface	84	Area south of Building 4616 footprint	Location of potential gamma anomaly.	Default
Group 3	Subsurface	84	Area south of Building 4616 footprint	Location of potential gamma anomaly.	Default
Group 4	Surface	85	Area south of Building 4226 footprint	Location of former sump described in Subarea HSA 5B TM.	Default

Table 1, Revision 1
Summary of Soil Sample Locations in Subarea 5B

Group	Sample Type	Location ID	Location Description	Technical Justification	Analytical Suite ^{5,6}
Group 4	Subsurface	85	Area south of Building 4226 footprint	Location of former sump described in Subarea HSA 5B TM.	Default
Group 4	Surface	86	Area inside Building 4026 (Large Component Test Loop Complex) footprint	Location of potential gamma anomaly.	Default
Group 4	Subsurface	86	Area inside Building 4026 footprint	Location of potential gamma anomaly.	Default
Group 4	Surface	87	Area inside Building 4026 footprint	Geophysical survey indicates potential underground anomalies and buried metal.	Default
Group 4	Subsurface	87	Area inside Building 4026 footprint	Geophysical survey indicates potential underground anomalies and buried metal.	Default
Group 4	Subsurface	88	Area inside Building 4026 footprint	Geophysical survey indicates potential underground anomalies and buried metal.	Default
Group 4	Surface	89	Area north Building 4026 footprint	Past facility operation history in Subarea HSA 5B; location of former catch basin.	Default
Group 4	Subsurface	89	Area north Building 4026 footprint	Location of former catch basin described in Subarea HSA 5B.	Default
Group 4	Subsurface	90	Area inside Building 4026 footprint	Location of former catch basin described in Subarea HSA 5B.	Default
Group 4	Surface	91	Area inside Building 4026 footprint	Potential location of former sodium tanks described in Subarea HSA 5B.	Default
Group 4	Subsurface	91	Area inside Building 4026 footprint	Potential location of former sodium tanks described in Subarea HSA 5B.	Default
Group 4	Surface	92	Area inside Building 4026 footprint	Potential location of former sodium tanks described in Subarea HSA 5B.	Default
Group 4	Subsurface	92	Area inside Building 4026 footprint	Potential location of former sodium tanks described in Subarea HSA 5B.	Default
Group 4	Subsurface	93	Area south Building 4226 and east 4358 footprints	Location of stain noted in aerial photos.	Default
Group 4	Subsurface	94	Area south Building 4226 and east 4358 footprints	Location of stain noted in aerial photos.	Default
Group 4	Surface	95	Area south Building 4226 and east 4358 footprints	Location of stain noted in aerial photos.	Default
Group 4	Subsurface	95	Area south Building 4226 and east 4358 footprints	Location of stain noted in aerial photos.	Default
Group 4	Subsurface	96	Area south Building 4226 and east 4358 footprints	Location of stain noted in aerial photos.	Default
Group 4	Surface	102	Inside Building 4358 footprint	Location of "possible saturated material" noted in aerial photos.	Default
Group 4	Subsurface	102	Inside Building 4358 footprint	Location of "possible saturated material" noted in aerial photos.	Default
Group 4	Surface	103	Inside Building 4826 (Sodium Component Test Loop Test Facility) footprint	Past facility operation history in Subarea HSA 5B; potential location of former sodium tanks and drains.	Default
Group 4	Subsurface	103	Inside Building 4826 (Sodium Component Test Loop Test Facility) footprint	Past facility operation history in Subarea HSA 5B; potential location of former sodium tanks and drains.	Default
Group 4	Subsurface	104	Inside Building 4826 (Sodium Component Test Loop Test Facility) footprint	Past facility operation history in Subarea HSA 5B; potential location of former sodium tanks and drains.	Default
Group 5	Surface	105	Area north of Building 4334 footprint	Geophysical survey indicates potential underground anomalies.	Default
Group 5	Subsurface	105	Area north of Building 4334 footprint	Geophysical survey indicates potential underground anomalies.	Default
Group 5	Subsurface	106	Area north of Building 4334 footprint	Geophysical survey indicates potential underground anomalies.	Default
Group 5	Subsurface	107	Area north of Building 4334 footprint	Geophysical survey indicates potential underground anomalies.	Default
Group 5	Surface	108	Area north of Building 4334 footprint	Geophysical survey indicates potential underground anomalies and buried metal.	Default
Group 5	Subsurface	108	Area north of Building 4334 footprint	Geophysical survey indicates potential underground anomalies and buried metal.	Default
Group 5	Surface	109	Area north of Building 4334 footprint	Geophysical survey indicates potential underground anomalies.	Default
Group 5	Subsurface	109	Area north of Building 4334 footprint	Geophysical survey indicates potential underground anomalies.	Default
Group 5	Subsurface	110	Area north of Building 4334 footprint	Geophysical survey indicates potential underground anomalies.	Default
Group 5	Subsurface	111	Area north of Building 4334 footprint	Geophysical survey indicates potential underground anomalies.	Default
Group 6	Subsurface ³	97	Area south Building 4226 and east 4358 footprints	Location of stain noted in aerial photos and along location of septic system discharge line.	Default
Group 6	Surface	98	Area south Building 4226 and east 4358 footprints	Location of stain noted in aerial photos and along location of septic system discharge line.	Default
Group 6	Subsurface ³	98	Area south Building 4226 and east 4358 footprints	Location of stain noted in aerial photos and along location of septic system discharge line.	Default
Group 6	Subsurface ³	99	Area south of Building 4334 footprint	Location of "possible saturated material" noted in aerial photos and along septic system discharge line.	Default

Table 1, Revision 1
Summary of Soil Sample Locations in Subarea 5B

Group	Sample Type	Location ID	Location Description	Technical Justification	Analytical Suite ^{5,6}
Group 6	Surface	100	Area south of Building 4334 footprint	Location of "possible saturated material" noted in aerial photos and along septic system discharge line.	Default
Group 6	Subsurface ³	100	Area south of Building 4334 footprint	Location of "possible saturated material" noted in aerial photos and along septic system discharge line.	Default
Group 6	Surface	101	Area south of Building 4334 footprint	Location of "possible saturated material" noted in aerial photos and along septic system discharge line.	Default
Group 6	Subsurface ³	101	Area south of Building 4334 footprint	Location of "possible saturated material" noted in aerial photos and along septic system discharge line.	Default
Group 6	Subsurface ³	112	Area south of Building 4334 footprint	Potential leach field location.	Default
Group 6	Subsurface ³	113	Area south of Building 4334 footprint	Potential leach field location.	Default
Group 6	Surface	114	Area south of Building 4334 footprint	Potential leach field location.	Default
Group 6	Subsurface ³	114	Area south of Building 4334 footprint	Potential leach field location.	Default
Group 6	Subsurface ³	115	Area south of Building 4334 footprint	Potential leach field location.	Default
Group 6	Subsurface ³	116	Area south of Building 4334 footprint	Potential leach field location.	Default
Group 6	Surface	117	Area south of Building 4334 footprint	Potential leach field location.	Default
Group 6	Subsurface ³	117	Area south of Building 4334 footprint	Potential leach field location.	Default
Group 6	Surface	118	Area south of Building 4334 footprint	Potential leach field location.	Default
Group 6	Subsurface ³	118	Area south of Building 4334 footprint	Potential leach field location.	Default
Group 6	Surface	119	Central area of Group 6	Location of potential gamma anomaly.	Default
Group 6	Subsurface	119	Central area of Group 6	Location of potential gamma anomaly.	Default
Group 6	Surface	120	Central area of Group 6	Location of potential gamma anomaly.	Default
Group 6	Subsurface	120	Central area of Group 6	Location of potential gamma anomaly.	Default
Group 6	Surface	121	Central area of Group 6	Location of potential gamma anomaly.	Default
Group 6	Subsurface	121	Central area of Group 6	Location of potential gamma anomaly.	Default
Group 6	Surface	122	Central area of Group 6	Location of potential gamma anomaly.	Default
Group 6	Subsurface	122	Central area of Group 6	Location of potential gamma anomaly.	Default
Group 6	Surface	123	Central area of Group 6	Location of potential gamma anomaly.	Default
Group 6	Subsurface	123	Central area of Group 6	Location of potential gamma anomaly.	Default
Group 6	Surface	124	Central area of Group 6	Location of potential gamma anomaly.	Default
Group 6	Subsurface	124	Central area of Group 6	Location of potential gamma anomaly.	Default
Group 6	Surface	125	Central area of Group 6	Location of potential gamma anomaly.	Default
Group 6	Subsurface	125	Central area of Group 6	Location of potential gamma anomaly.	Default
Group 6	Surface	126	Central area of Group 6	Location of potential gamma anomaly.	Default
Group 6	Subsurface	126	Central area of Group 6	Location of potential gamma anomaly.	Default
Group 6	Surface	129	Central area of Group 6	Location of potential gamma anomaly.	Default
Group 6	Subsurface	129	Central area of Group 6	Location of potential gamma anomaly.	Default
Group 6	Drainage	131	Storm drainage channel along 18th street	Potential surface migration through storm water runoff.	Default
Group 6	Drainage	132	Storm drainage channel along 18th street	Potential surface migration through storm water runoff.	Default
Group 6	Drainage	133	Storm drainage channel along 18th street	Potential surface migration through storm water runoff.	Default
Group 6	Drainage	134	Storm drainage channel along 18th street	Potential surface migration through storm water runoff.	Default
Group 6	Drainage	135	Storm drainage channel along 18th street	Potential surface migration through storm water runoff.	Default
Group 6	Drainage	136	Storm drainage channel at corner of 17th and 18th streets	Potential surface migration through storm water runoff.	Default

Table 1, Revision 1
Summary of Soil Sample Locations in Subarea 5B

Group	Sample Type	Location ID	Location Description	Technical Justification	Analytical Suite ^{5,6}
Group 6	Drainage	257	Storm drainage channel at corner of 17th and 18th streets	Potential surface migration through storm water runoff.	Default
Group 6	Drainage	140	Culvert along 20th street and near upper west corner of Group 6	Potential surface migration through storm water runoff.	Default
Group 6	Drainage	141	Storm drainage channel and culvert at corner of 18th and 20th street	Potential surface migration through storm water runoff.	Default
Group 6	Surface	142	Lower central area of Group 6	Past facility operation history in Subarea HSA 5B TM; location of "vertical tank" noted in aerial photo.	Default
Group 6	Subsurface	142	Lower central area of Group 6	Past facility operation history in Subarea HSA 5B TM; location of "vertical tank" noted in aerial photo.	Default
Group 6	Surface	253	Open area on lower southwest corner of Group 6	Geophysical survey indicates potential underground anomalies.	Default
Group 6	Subsurface	253	Open area on lower southwest corner of Group 6	Geophysical survey indicates potential underground anomalies.	Default
Group 6	Surface	254	Open area on lower southwest corner of Group 6	Geophysical survey indicates potential underground anomalies.	Default
Group 6	Subsurface	254	Open area on lower southwest corner of Group 6	Geophysical survey indicates potential underground anomalies.	Default
Group 6	Surface	143	Lower central area of Group 6	Location of potential gamma anomaly.	Default
Group 6	Subsurface	143	Lower central area of Group 6	Location of potential gamma anomaly.	Default
Group 7	Drainage	302	Culvert along 17th street between transformer yard and 17th street	Potential surface migration through storm water runoff.	Default
Group 7	Drainage	303	Culvert along 17th street between transformer yard and 17th street	Potential surface migration through storm water runoff.	Default
Group 7	Drainage	144	Storm drainage channel at corner of 17th and G streets	Potential surface migration through storm water runoff.	Default
Group 7	Subsurface	145	Northeast corner of Building 4011	Potential location of septic tank noted in aerial photos.	Default
Group 7	Subsurface	146	Northeast corner of Building 4011	Potential location of septic tank noted in aerial photos.	Default
Group 7	Drainage	147	Drainage sample along G street and south of Building 4011	Potential surface migration through storm water runoff.	Default
Group 7	Subsurface	258	Area north of Building 4500	Location of OS-20 and possible stain noted in aerial photos.	Default
Group 7	Subsurface	259	Area north of Building 4500	Location of OS-20 and possible stain noted in aerial photos.	Default
Group 7	Surface	262	Area south of Building 4007 footprint	Location of potential gamma anomaly.	Default
Group 7	Subsurface	262	Area south of Building 4007 footprint	Location of potential gamma anomaly.	Default
Group 7	Surface	263	Area between Buildings 4007 and 4008 footprints	Geophysical survey indicates potential underground anomaly.	Default
Group 7	Subsurface	263	Area between Buildings 4007 and 4008 footprints	Geophysical survey indicates potential underground anomaly.	Default
Group 7	Surface	264	Area south of Building 4007 footprint	Location of potential gamma anomaly.	Default
Group 7	Subsurface	264	Area south of Building 4007 footprint	Location of potential gamma anomaly.	Default
Group 7	Subsurface	148	Area between G street and Building 4011	Past facility operation history in Subarea HSA 5B TM; location of OS-20 and possible stain noted in aerial photos.	Default
Group 7	Surface	149	Area between G street and Building 4011	Location of potential gamma anomaly.	Default
Group 7	Subsurface	149	Area between G street and Building 4011	Location of potential gamma anomaly.	Default
Group 7	Surface	150	Area between G street and Building 4011	Location of potential gamma anomaly.	Default
Group 7	Subsurface	150	Area between G street and Building 4011	Location of potential gamma anomaly.	Default
Group 7	Subsurface	151	Intersection of G street and 20th street	Geophysical survey indicates potential underground anomalies and probable stain noted in aerial photos.	Default
Group 7	Subsurface	152	Intersection of G street and 20th street	Geophysical survey indicates potential underground anomalies and probable stain noted in aerial photos.	Default
Group 7	Surface	153	Intersection of G street and 20th street	Geophysical survey indicates potential underground anomalies and probable stain noted in aerial photos.	Default
Group 7	Subsurface	153	Intersection of G street and 20th street	Geophysical survey indicates potential underground anomalies and probable stain noted in aerial photos.	Default
Group 7	Subsurface	154	Area between 20th street and Building 4011	Past facility operation history in Subarea HSA 5B TM; probable stain and OS-15 noted in aerial photos.	Default

Table 1, Revision 1
Summary of Soil Sample Locations in Subarea 5B

Group	Sample Type	Location ID	Location Description	Technical Justification	Analytical Suite ^{5,6}
Group 7	Surface	155	Area between 20th street and Building 4011	Past facility operation history in Subarea HSA 5B TM; probable stain and OS-15 noted in aerial photos.	Default
Group 7	Subsurface	155	Area between 20th street and Building 4011	Past facility operation history in Subarea HSA 5B TM; probable stain and OS-15 noted in aerial photos.	Default
Group 7	Surface	156	Area between 20th street and Building 4011	Past facility operation history in Subarea HSA 5B TM; probable stain and OS-15 noted in aerial photos.	Default
Group 7	Subsurface	156	Area between 20th street and Building 4011	Past facility operation history in Subarea HSA 5B TM; probable stain and OS-15 noted in aerial photos.	Default
Group 7	Subsurface	157	Area between 20th street and Building 4011	Past facility operation history in Subarea HSA 5B TM; probable stain and OS-15 noted in aerial photos.	Default
Group 7	Subsurface	158	Area between 20th street and Building 4011	Past facility operation history in Subarea HSA 5B TM; probable stain and OS-15 noted in aerial photos.	Default
Group 8	Surface	159	North of control road IV and south of Group 8	Geophysical survey indicates potential underground anomaly.	Default
Group 8	Subsurface	159	North of control road IV and south of Group 8	Geophysical survey indicates potential underground anomaly.	Default
Group 8	Surface	269	Area of southeast corner of Group 8	Location of potential gamma anomaly.	Default
Group 8	Subsurface	269	Area of southeast corner of Group 8	Location of potential gamma anomaly.	Default
Group 8	Surface	270	Area of southeast corner of Group 8	Location of potential gamma anomaly.	Default
Group 8	Subsurface	270	Area of southeast corner of Group 8	Location of potential gamma anomaly.	Default
Group 8	Surface	271	Area of southeast corner of Group 8	Location of potential gamma anomaly.	Default
Group 8	Subsurface	271	Area of southeast corner of Group 8	Location of potential gamma anomaly.	Default
Group 8	Surface	160	Bottom of Group 8 and east of PZ-051	Location of potential gamma and geophysical anomalies.	Default
Group 8	Subsurface	160	Bottom of Group 8 and east of PZ-051	Location of potential gamma and geophysical anomalies.	Default
Group 8	Surface	161	Bottom of Group 8 and east of PZ-051	Location of potential gamma and geophysical anomalies.	Default
Group 8	Subsurface	161	Bottom of Group 8 and east of PZ-051	Location of potential gamma and geophysical anomalies.	Default
Group 8	Surface	162	Bottom of Group 8 and east of PZ-051	Location of potential gamma and geophysical anomalies.	Default
Group 8	Subsurface	162	Bottom of Group 8 and east of PZ-051	Location of potential gamma and geophysical anomalies.	Default
Group 8	Subsurface	163	Bottom of Group 8 and east of PZ-051	Geophysical survey indicates potential underground anomaly.	Default
Group 8	Subsurface	164	Bottom of Group 8 and east of PZ-051	Geophysical survey indicates potential underground anomaly.	Default
Group 8	Subsurface	165	Bottom of Group 8 and east of PZ-051	Geophysical survey indicates potential underground anomaly.	Default
Group 8	Surface	166	Bottom center of Group 8 and east of PZ-051	Past facility operation history in Subarea HSA 5B TM; "light toned mounded material" noted in aerial photos.	Default
Group 8	Subsurface	166	Bottom center of Group 8 and east of PZ-051	Past facility operation history in Subarea HSA 5B TM; "light toned mounded material" noted in aerial photos.	Default
Group 8	Subsurface	167	Bottom center of Group 8 and east of PZ-051	Past facility operation history in Subarea HSA 5B TM; "light toned mounded material" noted in aerial photos.	Default
Group 8	Subsurface	168	Bottom center of Group 8 and east of PZ-051	Past facility operation history in Subarea HSA 5B TM; "light toned mounded material" noted in aerial photos.	Default
Group 8	Surface	169	Bottom of Group 8 and west of PZ-051	Geophysical survey indicates potential underground anomaly.	Default
Group 8	Subsurface	169	Bottom of Group 8 and west of PZ-051	Geophysical survey indicates potential underground anomaly.	Default
Group 8	Subsurface	170	Bottom of Group 8 and west of PZ-051	Geophysical survey indicates potential underground anomaly.	Default
Group 8	Drainage	284	Lower central area of Group 8	Channel that drains into 17th street drainage area (south of berm).	Default
Group 8	Drainage	285	Lower area of Group 8 at 20th Street and G Street	Channel that drains south into Subarea 5C.	Default
Group 8	Drainage	286	Lower area of Group 8 at 20th Street and G Street	Channel that drains south into Subarea 5C.	Default

Table 1, Revision 1
Summary of Soil Sample Locations in Subarea 5B

Group	Sample Type	Location ID	Location Description	Technical Justification	Analytical Suite ^{5,6}
Group 8	Subsurface	171	Bottom of Group 8 and west of PZ-051	Geophysical survey indicates potential underground anomaly.	Default
Group 8	Surface	172	Bottom of Group 8 and west of PZ-051	Geophysical survey indicates potential underground anomaly.	Default
Group 8	Subsurface	172	Bottom of Group 8 and west of PZ-051	Geophysical survey indicates potential underground anomaly.	Default
Group 8	Surface	173	Bottom of Group 8 and west of PZ-051	Geophysical survey indicates potential underground anomaly.	Default
Group 8	Subsurface	173	Bottom of Group 8 and west of PZ-051	Geophysical survey indicates potential underground anomaly.	Default
Group 8	Subsurface	174	Bottom of Group 8 and west of PZ-051	Geophysical survey indicates potential underground anomaly.	Default
Group 8	Subsurface	175	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Surface	176	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Subsurface	176	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Subsurface	177	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Surface	178	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Subsurface	178	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Subsurface	179	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Subsurface ³	180	Southwest portion of Group 8	Geophysical survey indicates potential anomaly co-located with FA-11 aerial photo feature and leach field.	Default
Group 8	Surface	181	Southwest portion of Group 8	Geophysical survey indicates potential anomaly co-located with FA-11 aerial photo feature and leach field.	Default
Group 8	Subsurface ³	181	Southwest portion of Group 8	Geophysical survey indicates potential anomaly co-located with FA-11 aerial photo feature and leach field.	Default
Group 8	Subsurface ³	182	Southwest portion of Group 8	Geophysical survey indicates potential anomaly co-located with FA-11 aerial photo feature and leach field.	Default
Group 8	Surface ⁷	183	Southwest portion of Group 8	Geophysical survey indicates potential anomaly co-located with FA-11 aerial photo feature and leach field.	Default
Group 8	Subsurface ^{3,7}	183	Southwest portion of Group 8	Geophysical survey indicates potential anomaly co-located with FA-11 aerial photo feature and leach field.	Default
Group 8	Subsurface ^{3,7}	184	Southwest portion of Group 8	Geophysical survey indicates potential anomaly co-located with FA-11 aerial photo feature and leach field.	Default
Group 8	Subsurface ^{3,7}	185	Southwest portion of Group 8	Geophysical survey indicates potential anomaly co-located with FA-11 aerial photo feature and leach field.	Default
Group 8	Surface	186	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Subsurface	186	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Surface	187	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Subsurface	187	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Subsurface	188	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Surface	189	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Subsurface	189	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Subsurface	190	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Subsurface	191	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Surface	192	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Subsurface	192	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Subsurface	193	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Surface	194	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Subsurface	194	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default

Table 1, Revision 1
Summary of Soil Sample Locations in Subarea 5B

Group	Sample Type	Location ID	Location Description	Technical Justification	Analytical Suite ^{5,6}
Group 8	Subsurface	195	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Surface	196	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Subsurface	196	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Subsurface	197	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Surface	198	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Subsurface	198	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Surface	199	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Subsurface	199	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Subsurface	200	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Subsurface	201	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Surface	202	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Subsurface	202	Southwest portion of Group 8	Geophysical survey indicates potential underground anomaly and FA-11 aerial photo	Default
Group 8	Surface ⁷	203	Southwest portion of Group 8	Geophysical survey indicates potential anomaly co-located with FA-11 aerial photo feature and leach field.	Default
Group 8	Subsurface ^{3,7}	203	Southwest portion of Group 8	Geophysical survey indicates potential anomaly co-located with FA-11 aerial photo feature and leach field.	Default
Group 8	Surface	204	Southwest portion of Group 8	Geophysical survey indicates potential anomaly co-located with FA-11 aerial photo feature and leach field.	Default
Group 8	Subsurface ³	204	Southwest portion of Group 8	Geophysical survey indicates potential anomaly co-located with FA-11 aerial photo feature and leach field.	Default
Group 8	Surface	205	Southwest portion of Group 8	Aerial photos indicate a ground scar.	Default
Group 8	Subsurface	205	Southwest portion of Group 8	Aerial photos indicate a ground scar.	Default
Group 8	Surface	206	Eastern portion of Group 8 and north and west of PZ-052	Location of potential gamma anomaly.	Default
Group 8	Subsurface	206	Eastern portion of Group 8 and north and west of PZ-052	Location of potential gamma anomaly.	Default
Group 8	Surface	207	Eastern portion of Group 8 and north and west of PZ-052	Location of potential gamma anomaly.	Default
Group 8	Subsurface	207	Eastern portion of Group 8 and north and west of PZ-052	Location of potential gamma anomaly.	Default
Group 8	Surface	208	Eastern portion of Group 8 and north and west of PZ-052	Location of potential gamma anomaly.	Default
Group 8	Subsurface	208	Eastern portion of Group 8 and north and west of PZ-052	Location of potential gamma anomaly.	Default
Group 8	Surface	209	Eastern portion of Group 8 and north and west of PZ-052	Location of potential gamma anomaly.	Default
Group 8	Subsurface	209	Eastern portion of Group 8 and north and west of PZ-052	Location of potential gamma anomaly.	Default
Group 8	Surface	210	Eastern portion of Group 8 and north and west of PZ-052	Location of potential gamma anomaly.	Default
Group 8	Subsurface	210	Eastern portion of Group 8 and north and west of PZ-052	Location of potential gamma anomaly.	Default
Group 8	Surface	272	Eastern portion of Group 8	Location of potential gamma anomaly.	Default
Group 8	Subsurface	272	Eastern portion of Group 8	Location of potential gamma anomaly.	Default
Group 8	Surface	273	Eastern portion of Group 8	Location of potential gamma anomaly.	Default
Group 8	Subsurface	273	Eastern portion of Group 8	Location of potential gamma anomaly.	Default
Group 8	Surface	274	Eastern portion of Group 8	Location of potential gamma anomaly.	Default
Group 8	Subsurface	274	Eastern portion of Group 8	Location of potential gamma anomaly.	Default
Group 8	Surface	211	Eastern portion of Group 8	Location of potential gamma anomaly.	Default
Group 8	Subsurface	211	Eastern portion of Group 8	Location of potential gamma anomaly.	Default
Group 8	Surface	275	Northeast corner of Group 8	Location of potential gamma anomaly.	Default
Group 8	Subsurface	275	Northeast corner of Group 8	Location of potential gamma anomaly.	Default

Table 1, Revision 1
Summary of Soil Sample Locations in Subarea 5B

Group	Sample Type	Location ID	Location Description	Technical Justification	Analytical Suite ^{5,6}
Group 8	Surface	276	Northeast corner of Group 8	Location of potential gamma anomaly.	Default
Group 8	Subsurface	276	Northeast corner of Group 8	Location of potential gamma anomaly.	Default
Group 8	Surface	277	Northeast corner of Group 8	Location of potential gamma anomaly.	Default
Group 8	Subsurface	277	Northeast corner of Group 8	Location of potential gamma anomaly.	Default
Group 8	Surface	278	Northeast corner of Group 8	Location of potential gamma anomaly.	Default
Group 8	Subsurface	278	Northeast corner of Group 8	Location of potential gamma anomaly.	Default
Group 8	Surface	279	Northeast corner of Group 8	Location of potential gamma anomaly.	Default
Group 8	Subsurface	279	Northeast corner of Group 8	Location of potential gamma anomaly.	Default
Group 8	Drainage	212	Channel that drains into 17th street drainage area (north of berm)	Potential surface migration through storm water runoff.	Default + SS
Group 8	Drainage	213	Channel that drains into 17th street drainage area (north of berm)	Potential surface migration through storm water runoff.	Default + SS
Group 8	Drainage	214	Channel that drains into 17th street drainage area (north of berm)	Potential surface migration through storm water runoff.	Default + SS
Group 8	Drainage	215	Channel that drains into 17th street drainage area (north of berm)	Potential surface migration through storm water runoff.	Default + SS
Group 8	Drainage	216	Channel that drains into 17th street drainage area (north of berm)	Potential surface migration through storm water runoff.	Default + SS
Group 8	Drainage	217	Channel that drains into 17th street drainage area (north of berm)	Potential surface migration through storm water runoff.	Default + SS
Group 8	Surface	218	Channel that drains into 17th street drainage area (north of berm)	Potential surface migration through storm water runoff. Sample omitted due to occurrence in a DOE "Likely Remediation Zone" and the soil will likely be removed during remediation.	Default + SS
Group 8	Subsurface	218	Channel that drains into 17th street drainage area (north of berm)	Potential surface migration through storm water runoff. Sample omitted due to occurrence in a DOE "Likely Remediation Zone" and the soil will likely be removed during remediation.	Default + SS
Group 8	Drainage	219	Channel that drains into 17th street drainage area (north of berm)	Potential surface migration through storm water runoff.	Default + SS
Group 8	Surface	255	Channel that drains into 17th street drainage area (west of berm)	Potential surface migration through storm water runoff.	Default + SS
Group 8	Subsurface	255	Channel that drains into 17th street drainage area (west of berm)	Potential surface migration through storm water runoff.	Default + SS
Group 8	Surface	304	Channel that drains into 17th street drainage area (west of berm)	Potential surface migration through storm water runoff.	Default + SS
Group 8	Subsurface	304	Channel that drains into 17th street drainage area (west of berm)	Potential surface migration through storm water runoff.	Default + SS
Group 8	Surface	220	Channel that drains into 17th street drainage area (north of berm)	Potential surface migration through storm water runoff. Sample omitted due to occurrence in a DOE "Likely Remediation Zone" and the soil will likely be removed during remediation.	Default + SS
Group 8	Subsurface	220	Channel that drains into 17th street drainage area (north of berm)	Potential surface migration through storm water runoff. Sample omitted due to occurrence in a DOE "Likely Remediation Zone" and the soil will likely be removed during remediation.	Default + SS
Group 8	Drainage	221	Channel that drains into 17th street drainage area (north of berm)	Potential surface migration through storm water runoff. Sample omitted due to occurrence in a DOE "Likely Remediation Zone" and the soil will likely be removed during remediation.	Default + SS
Group 8	Surface	222	Channel that drains into 17th street drainage area (north of berm)	Potential surface migration through storm water runoff. Sample omitted due to occurrence in a DOE "Likely Remediation Zone" and the soil will likely be removed during remediation.	Default + SS
Group 8	Subsurface	222	Channel that drains into 17th street drainage area (north of berm)	Potential surface migration through storm water runoff. Sample omitted due to occurrence in a DOE "Likely Remediation Zone" and the soil will likely be removed during remediation.	Default + SS
Group 8	Surface	223	Channel that drains into 17th street drainage area (north of berm)	Potential surface migration through storm water runoff. Sample omitted due to occurrence in a DOE "Likely Remediation Zone" and the soil will likely be removed during remediation.	Default + SS

Table 1, Revision 1
Summary of Soil Sample Locations in Subarea 5B

Group	Sample Type	Location ID	Location Description	Technical Justification	Analytical Suite ^{5,6}
Group 8	Subsurface	223	Channel that drains into 17th street drainage area (north of berm)	Potential surface migration through storm water runoff. Sample is within "Likely Remediation Zone" and was retained to characterize depth of contamination.	Default + SS
Group 8	Surface	224	Channel that drains into 17th street drainage area (north of berm)	Potential surface migration through storm water runoff. Sample omitted due to occurrence in a DOE "Likely Remediation Zone" and the soil will likely be removed during	Default + SS
Group 8	Subsurface	224	Channel that drains into 17th street drainage area (north of berm)	Potential surface migration through storm water runoff. Sample is within "Likely Remediation Zone" and was retained to characterize depth of contamination.	Default + SS
Group 8	Surface	305	Channel that drains into 17th street drainage area (north of berm)	Potential surface migration through storm water runoff. Sample omitted due to occurrence in a DOE "Likely Remediation Zone" and the soil will likely be removed during	Default + SS
Group 8	Subsurface	305	Channel that drains into 17th street drainage area (north of berm)	Potential surface migration through storm water runoff. Sample omitted due to occurrence in a DOE "Likely Remediation Zone" and the soil will likely be removed during	Default + SS
Group 8	Surface	225	Channel that drains into 17th street drainage area (south of berm)	Potential surface migration through storm water runoff.	Default + SS
Group 8	Subsurface	225	Channel that drains into 17th street drainage area (south of berm)	Potential surface migration through storm water runoff.	Default + SS
Group 8	Surface	226	Channel that drains into 17th street drainage area (south of berm)	Potential surface migration through storm water runoff.	Default + SS
Group 8	Subsurface	226	Channel that drains into 17th street drainage area (south of berm)	Potential surface migration through storm water runoff.	Default + SS
Group 8	Surface	227	Channel that drains into 17th street drainage area (south of berm)	Potential surface migration through storm water runoff.	Default + SS
Group 8	Subsurface	227	Channel that drains into 17th street drainage area (south of berm)	Potential surface migration through storm water runoff.	Default + SS

Notes:

All surface and subsurface soil samples are collected following decision rules in the Field Sampling Plan for Soil Sampling (HGL, 2010a) except in unique locations such as those that contain below grade reactor vessels and waste tanks. In these locations, the rationale for targeting the subsurface depth interval of interest is identified by location according to the notes below.

¹Within the footprint and outside perimeter of Building 4010, the subsurface target sample collection interval is 15 - 20 feet bgs. This is based on drawing 303-010-S3 that shows the lowest structure point in building 4010 to be approx. 17 feet underneath the reactor vault. Therefore at each location, two samples will be collected, one between 1-5 foot interval, and the second between the 15-20 foot interval. Additional samples between these intervals, or lower, may be collected based on the results of borehole gamma logging.

²Design and installation details of the Gas Hold Tank and Sump shown in drawings 303-010-M6 and 303-010-S5 identify the bottom of these waste units being at 12 and 20 feet bgs., respectively. Samples from the 1-5 foot interval will be collected from both locations. At the gas hold tank location, the subsurface samples will be collected from the 15-20 foot interval and at the sump location the subsurface samples will be collected from the 20-25 foot interval. Additional samples either between these intervals, or lower, may be collected based on the results of borehole gamma scan results.

³At the three septic system (discharge line, tank, and leach field) locations within Subarea 5B, the target depth interval will be 3 - 5 feet bgs based on typical design details for the leach field that serves Building 4010 that indicates the depth of the leach field piping at approximately 36 inches bgs. Samples in the 5 - 10 feet depth interval will be collected only if gamma anomalies are identified.

⁴Design and installation details of the Survey Tank (Bldg 4012) shown in drawings 303-012-A1 identify the bottom of this tank being at 12 feet bgs. The subsurface samples from this location will be collected from the 10-15 foot depth interval.

⁵Default suite includes the radionuclide analysis shown in Table 2.4 of the Field Sampling Plan for Soil Sampling (HGL, 2010a). ALL SAMPLES WILL BE ANALYZED FOR DEFAULT SUITE.

⁶Site-specific indicates that C-14, Ni-63, Ni-59, and Tc-99 will be added to the suite of radiological laboratory analysis identified in Table 2.4 of the Field Sampling Plan for Soil Sampling (HGL, 2010a).

⁷This sample coincides with the location of small concrete structures observed in a photograph of this area that was presented by Stakeholders during the technical review meeting on November 19, 2010. These are believed to be concrete storage tank saddles used during a period at SSFL when natural gas was used and stored at this location.

bgs - below ground surface

Dwg - drawing

ER - experimental reactor

HSA - Historical Site Assessment

NaK - Sodium Potassium

OS - open storage

pCi/g - pico curies per gram

SNAP - Systems for Nuclear Auxiliary Power

SS - site-specific

SSFL - Santa Susana Field Laboratory

TM - Technical Memorandum

WDA - waste disposal area

ATTACHMENT 2

Figure 9 Subarea 5B Group 8 Sample Locations, Revision 1

Figure 9- Rev 1 Subarea 5B Group 8 Sample Locations Santa Susana Field Laboratory

U.S. EPA Region 9



Legend

Buildings:

Demolished

Existing

Subarea 5B Groups

Drainage Sample

Subsurface Sample

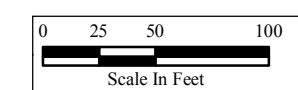
Surface and Subsurface Sample

Changed

Omitted

Likely Remediation Zones

(Grayed Symbols Represent Soil Samples from Previous Subareas)



Y:\Santa_Susana\EP9038\Soil_Sampling\Subarea5B\
(9)Group8ProposedSampleLocations_11x17_utilities_Omitted.mxd
2/23/2011 sdrallos-kopecky
Source:HGL 2010, CIRGIS 2007

