Addendum No. 4 to

Master Work Plan/Field Sampling and Analysis Plan, Co-Located Chemical Sampling at Area IV Santa Susana Field Laboratory, Ventura County, California

EPA Subarea 5D North Soil Sampling

Prepared for:

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US Department of Energy
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CDM Task Order DE-AT30-08CC60021/ET17

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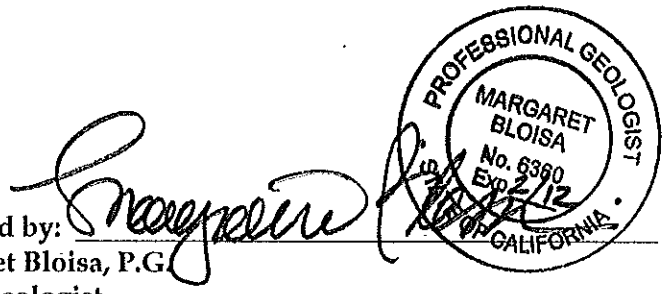

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Introduction

This document supports the field implementation of the soil sampling program addressed in the *Master Work Plan (WP)/Field Sampling and Analysis Plan (FSAP), Co-Located Chemical Sampling at Area IV, Santa Susana Field Laboratory* (Master WP/FSAP, CDM 2011). The Master WP/FSAP dictates the field sampling, analytical, quality control, and data review procedures for the collection and chemical analysis of soil samples within Area IV of the Santa Susana Field Laboratory (SSFL) and the Northern Buffer Zone (NBZ), collectively termed the Area IV study area. As part of a radiological characterization study, the United States Environmental Protection Agency (EPA) is collecting surface and subsurface soil samples throughout Area IV of SSFL and the NBZ for the presence of radioactive elements (radionuclides). The California Department of Toxic Substances Control (DTSC) and Department of Energy (DOE) requested that soil collected by EPA also be analyzed for chemical analytes. DTSC and DOE agreed that the chemical sampling be done by DOE's contractor, CDM Federal Programs Corporation (CDM).

Purpose of Addendum

This addendum documents the rationale for the location of surface and subsurface chemical soil samples to be collected during Phase I of soil sampling within Subarea 5D North as presented in EPA's *Subarea 5D North FSP Addendum, Santa Susana Field Laboratory Site, Area IV Radiological Study*, (HGL 2011). Phase I soil sampling is based on EPA's Historical Site Assessment (HSA) of Subarea 5D North (that also included a gamma survey, geophysical survey, and review of prior data) with sample locations selected by EPA to address concerns identified in the HSA. Phase II chemical sampling, which is not covered by this Addendum, will involve further chemical and radionuclide characterization "step-out" samples. The need for chemical "step-out" samples will be determined on a case-by-case basis following a review of all chemical data collected for Area IV.

Under the co-located soil sampling program, EPA and its consultant HydroGeoLogic, Inc. (HGL) will physically collect the soil material. CDM personnel will be responsible for the sample container preparation, sample handling and documentation, sample shipment, laboratory procurement, chemical analyses of the samples, and chemical data review. Co-located soil samples collected by CDM will be analyzed for chemical analytes as stipulated in Table 4-1 (Data Quality Objectives) and Table 6-1 (Analytical Methods, Containers, Preservatives, and Holding Times) of the Master WP/FSAP (CDM 2011).

Figure 1 is a layout of EPA's Subarea 5D North. The proposed sample locations are shown on Figures 2 through 4, which were taken from EPA's Subarea 5D-North FSP Addendum (HGL 2011). EPA's description and rationale for the soil sample locations in Subarea 5D North are summarized in Table 1.

De-Selection of Locations for Chemical Sampling

EPA's identified sample locations are based on radiological sampling needs as determined by EPA, and not on chemical sampling needs. The sampling protocol for targeting the depths of soil samples for chemical analyses are illustrated in Figures 5-1 and 5-2 of the Master WP/FSAP.

Soil samples for chemical analyses will not be collected from all locations identified in Subarea 5D North by EPA for radionuclide analyses. Portions of the Subarea 5D North study area that have been subject to prior investigations under the RFI include the:

- Rockwell International Hot Lab (Building 4020)
- Southern Portion of DOE Leach Field 3 site (includes Buildings 4055, 4373, 4363, 4353, and surrounding areas)
- Pond Dredge Area.

A few locations have adequate data for use in determining the need for a soil cleanup action. Locations with adequate data were discussed with DTSC personnel on April 25, 2011 and DOE and DTSC jointly de-selected HGL sample locations for chemical sample collection using the following three "Sample/No Sample" decision criteria.

SCENARIO 1. "CLEARLY CONTAMINATED" AREA THAT WILL REQUIRE CLEANUP DISCRETIONARY SAMPLING CRITERIA

The potential discretionary decision is to not collect chemical samples at some EPA locations where sufficient chemical data already exist to define the area as one that is clearly contaminated and will likely be remediated. Co-located sampling will still be conducted near the areas, as needed, to adequately define extent of contamination.

a. "Clearly contaminated" are those areas that have been previously sampled and sampling results show detected chemical concentrations that obviously exceed current background and/or Method Reporting Limits (MRLs)

b. There are a high frequency and number of chemical constituents that exceed background and MRLs

c. DOE agrees to cleanup of contaminated area.

SCENARIO 2. HIGH DENSITY RADIOLOGICAL SAMPLING AREA DUE TO ELEVATED GAMMA SURVEY RESULTS DISCRETIONARY SAMPLING CRITERIA

Potential discretionary decision: do not collect chemical samples at some EPA locations so that sample spacing is consistent with the RFI approach (approximately 50 to 100 feet).

a. No known and/or identified chemical operations and/or releases (subject to field observations)

b. Non-point source, no preferential pathways identified, open/flat area

c. Site is sufficiently distant from known potential chemical sources.

SCENARIO 3. HIGH DENSITY RADIOLOGIC SAMPLING OF HISTORIC FEATURES DISCRETIONARY SAMPLING CRITERIA

Potential discretionary decision: using professional judgment, do not collect chemical samples at some EPA locations so that sample spacing is consistent with the RFI approach.

a. Feature has known chemical and/or radiologic impacts, and/or identified data gaps

b. Targeted sampling density should be based on feature characteristics and historical use (e.g., holdup tanks, septic tanks, sumps, test areas, etc.).

The logic and rationale for discretionary de-selection of co-located sample locations for Subarea 5D North was discussed with the community stakeholders on May 5, 2011. The criterion for each agreed-upon de-selected co-located sampling location is also noted in Table 1.

Reduction of Analytes for Chemical Sampling

During the March 9, 2011 Technical Work Group meeting, DOE discussed with the stakeholders a proposal to modify the secondary analytical suite (i.e., those analyses performed on soil samples collected from areas with a process history of specific chemical usage, elevated field instrument readings, visually contaminated materials, or at locations of waste or fill) at locations where there is sufficient chemical analytical information known to warrant such a reduction. Inputs to reduction of the secondary analytical suite include:

- recent HSA sampling results indicate that many chemicals on the secondary analyte list have been rarely detected
- previous RFI sampling results, and
- DTSC comments and public input on RFI and EPA documents

Rationale for reduction of the secondary analyte list was developed taking into consideration historic operations at the site, proximity of the operation to the sample location, EPA rationale and targeted feature(s), and likelihood of multiple sources or pathways that may have contributed to contamination in the area.

All chemical co-located samples collected within Subarea 5D North will be analyzed for the primary suite. Locations where secondary analyses will be reduced are:

Within the southern portion of DOE Leach Field 3 site:

- Samples collected from locations 74, 77 through 85 and 88, and 206 will be analyzed for all primary analytes and energetics only from the secondary analyte list, since use and storage of energetics at Buildings 4373 and 4374 have been documented.

- Samples collected from locations 100, 114, and 115 will be analyzed for primary analytes and NMDA only from the secondary analyte list, based on elevated detections in previous RFI sampling results.

These reductions in the secondary suite of analyses are also noted in Table 1. All secondary analytes will be included if field conditions are indicative of potential impacts (e.g., odor, staining, or elevated measurement of volatile organic vapors).

Schedule

EPA is scheduled to initiate soil sampling within Subarea 5D North mid-May 2011 with the collection of surface soil samples identified in Table 1. Collection of subsurface samples is schedule to begin the last week of May 2011 following completion of soil boring sampling within Subarea 8N.

References

CDM Federal Programs Corporation (CDM). 2011. *Master Work Plan/Field Sampling and Analysis Plan Co-Located Chemical Sampling at Area IV, Santa Susana Field Laboratory, Ventura County, California.* February 16.

HydroGeoLogic, Inc. 2011. *Subarea 5D North FSP Addendum, Santa Susana Field Laboratory Site, Area IV Radiological Study, Santa Susana Field Laboratory.* May 5.

FIGURES

HGL—Subarea 5DN Addendum to FSP for Soil Sampling for Area IV Radiological Study, SSFL—Ventura County, CA

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

Y:\Santa_Susana\EP9038\Soil_Sampling\SubArea5D
(1)Subarea5DN_BaseMap_11x17.mxd
5/4/2011 sdrallos-kopecky
Source:HGL 2010, CIRGIS 2007

HGL HydroGeoLogic, Inc

HGL—Subarea 5D North Addendum to FSP for Soil Sampling for Area IV Radiological Study, SSFL—Ventura County, CA

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

U.S. EPA Region 9

Legend

- Demolished Buildings
- Existing Buildings
- 1 - 3 — 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

Bldg. 4100
Bldg. 4800
Bldg. 0
Bldg. 4009
Bldg. 4709
Bldg. 0
Bldg. 4020
Bldg. 4323
Bldg. 4425
24th St.
G St.
H St.
1
2
0 30 60 120
Scale In Feet
N

Y:\Santa_Susana\EP9038\Soil_Sampling\SubArea5D\(2)Group1ProposedSampleLocations_11x17_5DN.mxd
5/4/2011 sdrallos-kopecky
Source:HGL 2010, CIRGIS 2007

HGL HydroGeoLogic, Inc.

HGL—Subarea 5D North Addendum to FSP for Soil Sampling for Area IV Radiological Study, SSFL—Ventura County, CA

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

U.S. EPA Region 9

Legend

- Demolished Buildings
- Existing Buildings
- 1 - 3 — 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

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5/4/2011 sdrallos-kopecky
Source:HGL 2010, CIRGIS 2007

0 45 90 180
Scale In Feet

N

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

U.S. EPA Region 9

Legend

- Demolished Buildings
- Existing Buildings
- 1 - 3 — Subarea 5D North Groups
- Drainage and Subsurface Sample
- Subsurface Sample
- Surface and Subsurface Sample

(Grayed Symbols Represent Soil Samples from Previous Subareas)

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5/4/2011 sdrallos-kopecky
Source:HGL 2010, CIRGIS 2007

0 37.5 75 150
Scale In Feet

N

HGL HydroGeoLogic, Inc.

TABLE

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

Grouping	Sample Type	Location ID	Location Description	Technical Justification	Analytes	Co-located Chemical Sample Rationale
Group 1	Surface	1	Southwest edge of Parking Lot 4509.	Characterize radiological contamination from historical spills from containers stored on parking lot.	Primary	Primary suite only due to distance from historical operations and no known chemical use.
Group 1	Subsurface	1	Southwest edge of Parking Lot 4509.	Characterize radiological contamination from historical spills from containers stored on parking lot.	Primary	Primary suite only due to distance from historical operations and no known chemical use.
Group 1	Surface	2	Southeast edge of Parking Lot 4509.	Characterize radiological contamination from historical spills from containers stored on parking lot.	Primary	Primary suite only due to distance from historical operations and no known chemical use.
Group 1	Subsurface	2	Southeast edge of Parking Lot 4509.	Characterize radiological contamination from historical spills from containers stored on parking lot.	Primary	Primary suite only due to distance from historical operations and no known chemical use.
Group 1	Subsurface	3	Northeast side of Parking Lot 4509.	Characterize radiological contamination from historical spills from containers stored on parking lot.	Primary	Primary suite only due to distance from historical operations and no known chemical use.
Group 1	Surface	4	Northwest edge of Parking Lot 4509.	Characterize radiological contamination from historical spills from containers stored on parking lot.	Primary	Primary suite only due to distance from historical operations and no known chemical use.
Group 1	Subsurface	4	Northwest edge of Parking Lot 4509.	Characterize radiological contamination from historical spills from containers stored on parking lot.	Primary	Primary suite only due to distance from historical operations and no known chemical use.
Group 1	Surface	5	Southwest of Parking Lot 4509.	Aerial Photo Feature, "Excavation".	Primary	Primary suite only due to distance from historical operations and no known chemical use.
Group 1	Subsurface	5	Southwest of Parking Lot 4509.	Aerial Photo Feature, "Excavation".	Primary	Primary suite only due to distance from historical operations and no known chemical use.
Group 1	Drainage	6	Northeast of Parking Lot 4509, in ditch on south side of G Street.	Potential radiological contamination in soil/sediment originating from former Building 4020.	Primary	Primary suite only due to distance from historical operations and no known chemical use.
Group 1	Subsurface	6	Northeast of Parking Lot 4509, in ditch on south side of G Street.	Potential radiological contamination in soil/sediment originating from former Building 4020.	Primary	Primary suite only due to distance from historical operations and no known chemical use.
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.	Primary	Primary suite only due to distance from historical operations.
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.	Primary	Primary suite only due to distance from historical operations.
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.	Primary	Primary suite only due to distance from historical operations and no known chemical use.
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.	Primary	Primary suite only due to distance from historical operations and no known chemical use.
Group 2	Drainage	9	Ditch on the south side of G Street, north of former Building 4020.	Characterize surface water run-off from activities associated with former Building 4020 and parking lot.	Primary	Primary suite only due to distance from historical operations and no known chemical use.
Group 2	Subsurface	9	Ditch on the south side of G Street, north of former Building 4020.	Characterize surface water run-off from activities associated with former Building 4020 and parking lot.	Primary	Primary suite only due to distance from historical operations and no known chemical use.
Group 2	Surface	10	North of former building 4020.	Aerial Photo Feature, "Possible Open Storage".	Primary	Primary suite only due to distance from historical operations and no known chemical use.
Group 2	Subsurface	10	North of former building 4020.	Aerial Photo Feature, "Possible Open Storage".	Primary	Primary suite only due to distance from historical operations and no known chemical use.
Group 2	Drainage	11	North of former Building 4020, in ditch on south side of G Street.	Characterize potential radiological contamination in soil/sediment originating from former Building 4020.	Primary	Primary suite only due to distance from historical operations and no known chemical use.
Group 2	Subsurface	11	North of former Building 4020, in ditch on south side of G Street.	Characterize potential radiological contamination in soil/sediment originating from former Building 4020.	Primary	Primary suite only due to distance from historical operations and no known chemical use.
Group 2	Drainage	12	In ditch south side of G Street, northwest of former Building 4020.	Investigate potential residual radiological contamination associated with Incident A0016.	Primary & Secondary	Secondary suite added due to location in approximate spill pathway.
Group 2	Subsurface	12	In ditch south side of G Street, northwest of former Building 4020.	Investigate potential residual radiological contamination associated with Incident A0016.	Primary & Secondary	Secondary suite added due to location in approximate spill pathway.
Group 2	Surface	13	North of former Building 4020.	Investigate potential residual radiological contamination associated with Incident A0016.	Primary & Secondary	Secondary suite added due to location in approximate spill pathway.
Group 2	Subsurface	13	North of former Building 4020.	Investigate potential residual radiological contamination associated with Incident A0016.	Primary & Secondary	Secondary suite added due to location in approximate spill pathway.
Group 2	Surface	14	North of former Building 4020.	Investigate potential residual radiological contamination associated with Incident A0016.	Primary & Secondary	Secondary suite added due to location in approximate spill pathway.
Group 2	Subsurface	14	North of former Building 4020.	Investigate potential residual radiological contamination associated with Incident A0016.	Primary & Secondary	Secondary suite added due to location in approximate spill pathway.
Group 2	Surface	15	North side of former Building 4020.	Former location of fission tanks.	Primary & Secondary	Secondary suite added due to location at former fission tanks.
Group 2	Subsurface	15	North side of former Building 4020.	Former location of fission tanks.	Primary & Secondary	Secondary suite added due to location at former fission tanks.
Group 2	Surface	16	North side of former Building 4020.	Former location of fission tanks.	Primary & Secondary	Secondary suite added due to location at former fission tanks.
Group 2	Subsurface	16	North side of former Building 4020.	Former location of fission tanks.	Primary & Secondary	Secondary suite added due to location at former fission tanks.
Group 2	Surface	17	North of former Building 4020.	Potential migration of contamination from the former Fission Gas Tanks.	Primary	Primary suite only to delineate PCBs detects related to transformer.
Group 2	Subsurface	17	North of former Building 4020.	Potential migration of contamination from the former Fission Gas Tanks.	Primary	Primary suite only to delineate PCBs detects related to transformer.
Group 2	Surface	18	North side of former Building 4020.	Downgradient of the Fission Tank excavation pit. Geophysical Anomaly, "Conductivity".	Primary & Secondary	Secondary suite added due to location in area of potential chemical disposal area.
Group 2	Subsurface	18	North side of former Building 4020.	Downgradient of the Fission Tank excavation pit. Geophysical Anomaly, "Conductivity".	Primary & Secondary	Secondary suite added due to location in area of potential chemical disposal area.
Group 2	Surface	19	West of former Building 4020 'Hot Lab" footprint.	Geophysical Anomaly,"Conductivity". Aerial photo feature, "Possible Open Storage". 4020 leach field	Primary & Secondary	Secondary suite added due to location adjacent to doorways of Building 4020.
Group 2	Subsurface	19	West of former Building 4020 'Hot Lab" footprint.	Geophysical Anomaly,"Conductivity". Aerial photo feature, "Possible Open Storage". 4020 leach field	Primary & Secondary	Secondary suite added due to location adjacent to doorways of Building 4020.
Group 2	Surface	20	West of former Building 4020 'Hot Lab" footprint.	Geophysical Anomaly,"Conductivity". Aerial photo feature, "Possible Open Storage".	Primary & Secondary	Secondary suite added due to location at spill behind the Building 4020 loading dock.
Group 2	Subsurface	20	West of former Building 4020 'Hot Lab" footprint.	Geophysical Anomaly,"Conductivity". Aerial photo feature, "Possible Open Storage".	Primary & Secondary	Secondary suite added due to location at spill behind the Building 4020 loading dock.
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".	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
Group 2	Subsurface	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".	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
Group 2	Surface	22	Northeast corner of former Building 4020 'Hot Lab" footprint.	Location of former 500 gallon waste hold up tanks.	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
Group 2	Subsurface	22	Northeast corner of former Building 4020 'Hot Lab" footprint.	Location of former 500 gallon waste hold up tanks.	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
Group 2	Surface	23	North central portion of former Building 4020 'Hot Lab" footprint.	Geophysical Anomaly, "Magnetometer". Possible residual contamination from former radioactive waste hold up tanks in the basement.	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
Group 2	Subsurface	23	North central portion of former Building 4020 'Hot Lab" footprint.	Geophysical Anomaly, "Magnetometer". Possible residual contamination from former radioactive waste hold up tanks in the basement.	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
Group 2	Surface	24	Northeast corner of former Building 4020 'Hot Lab" footprint.	Possible residual contamination from former radioactive waste hold up tanks in the basement. Geophysical Anomaly, "Conductivity".	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
Group 2	Subsurface	24	Northeast corner of former Building 4020 'Hot Lab" footprint.	Possible residual contamination from former radioactive waste hold up tanks in the basement. Geophysical Anomaly, "Conductivity".	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
Group 2	Surface	25	Northeast corner of former Building 4020 'Hot Lab" footprint.	Possible residual contamination from former 500 gallon radioactive waste hold up tanks in the basement.	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
Group 2	Subsurface	25	Northeast corner of former Building 4020 'Hot Lab" footprint.	Possible residual contamination from former 500 gallon radioactive waste hold up tanks in the basement.	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
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".	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
Group 2	Subsurface	26	North central portion of former Building 4020 'Hot Lab" footprint.	Location of former sump underneath Hot Cell #4. Geophysical Anomaly, "Magnetometer".	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
Group 2	Surface	27	North central portion of former Building 4020 'Hot Lab" footprint.	Geophysical Anomaly,"Conductivity and Magnetometer".	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
Group 2	Subsurface	27	North central portion of former Building 4020 'Hot Lab" footprint.	Geophysical Anomaly,"Conductivity and Magnetometer".	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
Group 2	Surface	28	Central portion of former Building 4020 footprint.	Historical data	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
Group 2	Subsurface	28	Central portion of former Building 4020 footprint.	Historical data	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
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".	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
Group 2	Subsurface	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".	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
Group 2	Surface	30	Southwest portion of former Building 4020 footprint.	Loading dock area of former Building 4020.	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
Group 2	Subsurface	30	Southwest portion of former Building 4020 footprint.	Loading dock area of former Building 4020.	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
Group 2	Surface	31	Southwest portion of former Building 4020 footprint.	Loading dock area of former Building 4020.	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
Group 2	Subsurface	31	Southwest portion of former Building 4020 footprint.	Loading dock area of former Building 4020.	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.

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

Grouping	Sample Type	Location ID	Location Description	Technical Justification	Analytes	Co-located Chemical Sample Rationale
Group 2	Surface	32	Southeast portion of former Building 4020 footprint.	Geophysical Anomaly, "Magnetometer". Footprint of former Building 4020.	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
Group 2	Subsurface	32	Southeast portion of former Building 4020 footprint.	Geophysical Anomaly, "Magnetometer". Footprint of former Building 4020.	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
Group 2	Surface	33	Southern portion of former Building 4020 footprint.	Location of basement sump under Hot Cell #1.	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
Group 2	Subsurface	33	Southern portion of former Building 4020 footprint.	Location of basement sump under Hot Cell #1.	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
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".	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
Group 2	Subsurface	34	Southwest corner of former Building 4020.	Investigate the potential for radiological release through cracks in the foundation of former Building 4020 'Hot Lab".	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
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".	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
Group 2	Subsurface	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".	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
Group 2	Surface	36	East of former Building 4020 footprint.	Potential migration of contamination from the 3000 gallon holdup tank.	Primary & Secondary	Secondary suite added due to location within or adjacent to waste features.
Group 2	Subsurface	36	East of former Building 4020 footprint.	Potential migration of contamination from the 3000 gallon holdup tank.	Primary & Secondary	Secondary suite added due to location within or adjacent to waste features.
Group 2	Surface	37	East side of former Building 4020 footprint.	Former location of a radioactive waste pipeline to the 3000 gallon holdup tank.	Primary & Secondary	Secondary suite added due to location within or adjacent to waste features.
Group 2	Subsurface	37	East side of former Building 4020 footprint.	Former location of a radioactive waste pipeline to the 3000 gallon holdup tank.	Primary & Secondary	Secondary suite added due to location within or adjacent to waste features.
Group 2	Surface	38	East side of former Building 4020 footprint.	Former location of a radioactive waste pipeline to the 3000 gallon holdup tank.	Primary & Secondary	Secondary suite added due to location within or adjacent to waste features.
Group 2	Subsurface	38	East side of former Building 4020 footprint.	Former location of a radioactive waste pipeline to the 3000 gallon holdup tank.	Primary & Secondary	Secondary suite added due to location within or adjacent to waste features.
Group 2	Surface	39	East side of former Building 4020 footprint.	Former location of a radioactive waste 3000 gallon holdup tank.	Primary & Secondary	Secondary suite added due to location within or adjacent to waste features.
Group 2	Subsurface	39	East side of former Building 4020 footprint.	Former location of a radioactive waste 3000 gallon holdup tank.	Primary & Secondary	Secondary suite added due to location within or adjacent to waste features.
Group 2	Surface	40	East side of former Building 4020 footprint.	Former location of a radioactive waste 3000 gallon holdup tank.	Primary & Secondary	Secondary suite added due to location within or adjacent to waste features.
Group 2	Subsurface	40	East side of former Building 4020 footprint.	Former location of a radioactive waste 3000 gallon holdup tank.	Primary & Secondary	Secondary suite added due to location within or adjacent to waste features.
Group 2	Surface	41	East side of former Building 4020 footprint.	Location of former leach pits and leach field. Aerial Photo feature, "Open Storage".	Primary & Secondary	Secondary suite added due to location within or adjacent to waste features.
Group 2	Subsurface	41	East side of former Building 4020 footprint.	Location of former leach pits and leach field. Aerial Photo feature, "Open Storage".	Primary & Secondary	Secondary suite added due to location within or adjacent to waste features.
Group 2	Surface	42	East side of former Building 4020 footprint.	Location of former leach pits and leach field. Aerial Photo feature, "Open Storage".	Primary & Secondary	Secondary suite added due to location within or adjacent to waste features.
Group 2	Subsurface	42	East side of former Building 4020 footprint.	Location of former leach pits and leach field. Aerial Photo feature, "Open Storage".	Primary & Secondary	Secondary suite added due to location within or adjacent to waste features.
Group 2	Surface	43	East side of former Building 4020 footprint.	Location of former leach pits and leach field. Aerial Photo feature, "Open Storage".	Primary & Secondary	Secondary suite added due to location within or adjacent to waste features.
Group 2	Subsurface	43	East side of former Building 4020 footprint.	Location of former leach pits and leach field. Aerial Photo feature, "Open Storage".	Primary & Secondary	Secondary suite added due to location within or adjacent to waste features.
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.	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
Group 2	Subsurface	44	Center portion of former Building 4020 footprint.	Geophysical Anomaly, "Magnetometer". Potential for radiological release through cracks in the foundation of former Building 4020.	Primary & Secondary	Secondary suite added due to location within Building 4020 footprint.
Group 2	Surface	45	East of former Building 4020 footprint.	Historical Data	Primary & Secondary	Secondary suite added due to location within or adjacent to waste features.
Group 2	Subsurface	45	East of former Building 4020 footprint.	Historical Data	Primary & Secondary	Secondary suite added due to location within or adjacent to waste features.
Group 2	Surface	46	East of former Building 4020 footprint.	Drain line from former leach pits and septic tank to ditch.	Primary & Secondary	Secondary suite added due to location within or adjacent to waste features.
Group 2	Subsurface	46	East of former Building 4020 footprint.	Drain line from former leach pits and septic tank to ditch.	Primary & Secondary	Secondary suite added due to location within or adjacent to waste features.
Group 2	Surface	47	East of former Building 4020 footprint.	Drain line from former leach pits and septic tank to ditch.	Primary & Secondary	Secondary suite added due to location within or adjacent to waste features.
Group 2	Subsurface	47	East of former Building 4020 footprint.	Drain line from former leach pits and septic tank to ditch.	Primary & Secondary	Secondary suite added due to location within or adjacent to waste features.
Group 2	Surface	48	East of former Building 4020 footprint, along former 24th Street.	Potential contamination in the former ditch and from leach pit and leach field.	Primary	Primary suite only since downgradient from proposed sample locations.
Group 2	Subsurface	48	East of former Building 4020 footprint, along former 24th Street.	Potential contamination in the former ditch and from leach pit and leach field.	Primary	Primary suite only since downgradient from proposed sample locations.
Group 2	Surface	49	East of former Building 4020 footprint, along former 24th Street.	Potential contamination in the former ditch and from leach pit and leach field.	Primary	Primary suite only since downgradient from proposed sample locations.
Group 2	Subsurface	49	East of former Building 4020 footprint, along former 24th Street.	Potential contamination in the former ditch and from leach pit and leach field.	Primary	Primary suite only since downgradient from proposed sample locations.
Group 2	Surface	50	East of former Building 4020 footprint, along former 24th Street.	Potential contamination in the former ditch and from 3000 gallon holdup tank.	Primary	Primary suite only since downgradient from proposed sample locations.
Group 2	Subsurface	50	East of former Building 4020 footprint, along former 24th Street.	Potential contamination in the former ditch and from 3000 gallon holdup tank.	Primary	Primary suite only since downgradient from proposed sample locations.
Group 2	Surface	51	East of former Building 4020 footprint, along former 24th Street.	Potential contamination in the former ditch and from 3000 gallon holdup tank.	Primary & Secondary	Secondary suite added to address potential chemical releases described in Tech Memo (p. 37).
Group 2	Subsurface	51	East of former Building 4020 footprint, along former 24th Street.	Potential contamination in the former ditch and from 3000 gallon holdup tank.	Primary & Secondary	Secondary suite added to address potential chemical releases described in Tech Memo (p. 37).
Group 2	Surface	52	Northeast of former Building 4020 footprint.	Geophysical Anomaly, "Conductivity".	Primary	Primary suite only since outside of operational area.
Group 2	Subsurface	52	Northeast of former Building 4020 footprint.	Geophysical Anomaly, "Conductivity".	Primary	Primary suite only since outside of operational area.
Group 2	Surface	53	East of former Building 4020 footprint, along former 24th Street.	Potential contamination in the former ditch.	Primary	Primary suite only since downgradient from proposed sample locations.
Group 2	Subsurface	53	East of former Building 4020 footprint, along former 24th Street.	Potential contamination in the former ditch.	Primary	Primary suite only since downgradient from proposed sample locations.
Group 2	Surface	54	Northeast corner of former Parking Lot 4520.	Staging area for the D&D of former Building 4020.	Primary	Primary suite only since outside of operational area.
Group 2	Subsurface	54	Northeast corner of former Parking Lot 4520.	Staging area for the D&D of former Building 4020.	Primary	Primary suite only since outside of operational area.
Group 2	Surface	55	Northwest portion of former Parking Lot 4520.	Staging area for the D&D of former Building 4020.	Primary	Primary suite only since outside of operational area.
Group 2	Subsurface	55	Northwest portion of former Parking Lot 4520.	Staging area for the D&D of former Building 4020.	Primary	Primary suite only since outside of operational area.
Group 2	Surface	56	West side of former Parking Lot 4520.	Staging area for the D&D of former Building 4020.	Primary	Primary suite only since outside of operational area.
Group 2	Subsurface	56	West side of former Parking Lot 4520.	Staging area for the D&D of former Building 4020.	Primary	Primary suite only since outside of operational area.
Group 2	Surface	57	Southwest corner of the 4020 Parking Lot	Stakeholder Request - Staging area for the D&D of former Building 4020.	Primary	Primary suite only since outside of operational area.
Group 2	Subsurface	57	Southwest corner of the 4020 Parking Lot	Stakeholder Request - Staging area for the D&D of former Building 4020.	Primary	Primary suite only since outside of operational area.
Group 2	Surface	58	South edge of former Parking Lot 4520.	Staging area for the D&D of former Building 4020.	Primary	Primary suite only since outside of operational area.
Group 2	Subsurface	58	South edge of former Parking Lot 4520.	Staging area for the D&D of former Building 4020.	Primary	Primary suite only since outside of operational area.
Group 2	Surface	59	Center portion of former Parking Lot 4520.	Staging area for the D&D of former Building 4020. Geophysical Anomaly, "Conductivity".	Primary	Primary suite only since outside of operational area.
Group 2	Subsurface	59	Center portion of former Parking Lot 4520.	Staging area for the D&D of former Building 4020. Geophysical Anomaly, "Conductivity".	Primary	Primary suite only since outside of operational area.
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.	Primary	Primary suite only since outside of operational area.
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.	Primary	Primary suite only since outside of operational area.
Group 2	Subsurface	61	South of Building 4055.	Potential radiological contamination from activities associated with Building 4055.	Primary	Primary suite only since outside of operational area.
Group 2	Subsurface	62	South of Building 4055.	Potential radiological contamination from activities associated with Building 4055.	Primary	Primary suite only since outside of operational area.
Group 2	Subsurface	63	Southeast of Building 4055.	Potential migration of radiological contaminants from the Building 4055 waste holdup system.	Primary & Secondary	Secondary suite added since locations target waste features.

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

Grouping	Sample Type	Location ID	Location Description	Technical Justification	Analytes	Co-located Chemical Sample Rationale
Group 2	Surface	64	Southeast of Building 4055.	Potential migration of radiological contaminants from the Building 4055 waste holdup system.	Primary & Secondary	Secondary suite added since locations target waste features.
Group 2	Subsurface	64	Southeast of Building 4055.	Potential migration of radiological contaminants from the Building 4055 waste holdup system.	Primary & Secondary	Secondary suite added since locations target waste features.
Group 2	Surface	65	East of Building 4055.	Potential migration of radiological contamination from the 4055 waste holdup tank system and pipeline.	Primary & Secondary	Secondary suite added since locations target waste features.
Group 2	Subsurface	65	East of Building 4055.	Potential migration of radiological contamination from the 4055 waste holdup tank system and pipeline.	Primary & Secondary	Secondary suite added since locations target waste features.
Group 2	Surface	66	East of Building 4055.	Potential migration of radiological contamination from the 4055 waste holdup tank system and pipeline.	Primary & Secondary	Secondary suite added since locations target waste features.
Group 2	Subsurface	66	East of Building 4055.	Potential migration of radiological contamination from the 4055 waste holdup tank system and pipeline.	Primary & Secondary	Secondary suite added since locations target waste features.
Group 2	Surface	67	East of Building 4055.	Potential migration of radiological contamination from the 4055 waste holdup tank system and pipeline.	Primary & Secondary	Secondary suite added since locations target waste features.
Group 2	Subsurface	67	East of Building 4055.	Potential migration of radiological contamination from the 4055 waste holdup tank system and pipeline.	Primary & Secondary	Secondary suite added since locations target waste features.
Group 2	Subsurface	68	Parking Lot on the north side of Building 4055.	Potential radiologic contamination from activities associated with Building 4055.	Primary	Primary suite only since outside of operational area.
Group 2	Subsurface	69	Parking Lot on the north side of Building 4055.	Potential radiological contamination associated with activities conducted within Building 4055.	Primary	Primary suite only since outside of operational area.
Group 2	Subsurface	70	Parking Lot on the north side of Building 4055.	Potential radiological contamination associated with activities conducted within Building 4055.	Primary	Primary suite only since outside of operational area.
Group 2	Drainage	71	North of Building 4055.	Characterize potential radiological contaminated sediment and soil from activities associated with Building 4055.	Primary	Primary suite only since outside of operational area.
Group 2	Subsurface	71	North of Building 4055.	Characterize potential radiological contaminated sediment and soil from activities associated with Building 4055.	Primary	Primary suite only since outside of operational area.
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.	Primary	Primary suite only since outside of operational area.
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.	Primary	Primary suite only since outside of operational area.
Group 2	Subsurface	73	Parking Lot on the north side of Building 4055.	Potential radiological contamination associated with activities conducted within Building 4055.	Primary	Primary suite only since outside of operational area.
Group 2	Surface	74	East of Building 4055.	Potential radiological contamination from drainage ditch and elevated gamma survey readings.	Primary & Energetics	Energetics added due to documented use/storage in historical operations.
Group 2	Subsurface	74	East of Building 4055.	Potential radiological contamination from drainage ditch and elevated gamma survey readings.	Primary & Energetics	Energetics added due to documented use/storage in historical operations.
Group 2	Drainage	75	Drainage north of former Buildings 4373/4374 & east of Building 4055.	Potential radiological contamination from drainage ditch to the west and to the south.	Primary	Primary suite only since outside of operational area.
Group 2	Subsurface	75	Drainage north of former Buildings 4373/4374 & east of Building 4055.	Potential radiological contamination from drainage ditch to the west and to the south.	Primary	Primary suite only since outside of operational area.
Group 2	Surface	76	North of former Buildings 4373/4374 and east of Building 4055.	Historical Data	Primary	Primary suite only since outside of operational area.
Group 2	Subsurface	76	North of former Buildings 4373/4374 and east of Building 4055.	Historical Data	Primary	Primary suite only since outside of operational area.
Group 2	Subsurface	77	Ditch east of former Building 4373.	Potential radiological contamination migration from activities associated with Building 4373.	Primary & Energetics	Energetics added due to documented use/storage in historical operations.
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.	Primary & Energetics	Energetics added due to documented use/storage in historical operations.
Group 2	Surface	79	Former Building 4374 footprint.	Investigate potential radiological contamination from activities associated with former Building 4374 and 4373.	Primary & Energetics	Energetics added due to documented use/storage in historical operations.
Group 2	Subsurface	79	Former Building 4374 footprint.	Investigate potential radiological contamination from activities associated with former Building 4374 and 4373.	Primary & Energetics	Energetics added due to documented use/storage in historical operations.
Group 2	Surface	80	Former Building 4373 footprint.	Investigate potential radiological contamination from activities associated with former Building 4374.	Primary & Energetics	Energetics added due to documented use/storage in historical operations.
Group 2	Subsurface	80	Former Building 4373 footprint.	Investigate potential radiological contamination from activities associated with former Building 4374.	Primary & Energetics	Energetics added due to documented use/storage in historical operations.
Group 2	Surface	81	Northwest of Building 4373.	Potential radioactive contamination associated with Geophysical Anomaly (trench) emanating from former Building 4373 footprint.	Primary & Energetics	Energetics added due to documented use/storage in historical operations.
Group 2	Subsurface	81	Northwest of Building 4373.	Potential radioactive contamination associated with Geophysical Anomaly (trench) emanating from former Building 4373 footprint.	Primary & Energetics	Energetics added due to documented use/storage in historical operations.
Group 2	Surface	82	Former building 4373 footprint	Inside the footprint of former Building 4373, elevated gamma readings, magnetometer anomaly.	Primary & Energetics	Energetics added due to documented use/storage in historical operations.
Group 2	Subsurface	82	Former building 4373 footprint	Inside the footprint print of former Building 4373, elevated gamma readings, magnetometer anomaly.	Primary & Energetics	Energetics added due to documented use/storage in historical operations.
Group 2	Surface	83	Former building 4373 footprint.	Investigate potential radiological contamination from activities associated with former Building 4374.	Primary & Energetics	Energetics added due to documented use/storage in historical operations.
Group 2	Subsurface	83	Former building 4373 footprint	Investigate potential radiological contamination from activities associated with former Building 4374.	Primary & Energetics	Energetics added due to documented use/storage in historical operations.
Group 2	Surface	84	Former building 4373 footprint.	Investigate potential radiological contamination from activities associated with former Building 4374.	Primary & Energetics	Energetics added due to documented use/storage in historical operations.
Group 2	Subsurface	84	Former building 4373 footprint.	Investigate potential radiological contamination from activities associated with former Building 4374.	Primary & Energetics	Energetics added due to documented use/storage in historical operations.
Group 2	Subsurface	85	Southwest of former Building 4373.	Potentially contaminated soil in ditch from activities associated with former Building 4373 and Building 4374.	Primary & Energetics	Energetics added due to documented use/storage in historical operations.
Group 2	Surface	86	South of former Building 4373.	Characterize Geophysical Anomaly (underground pipe)emanating from the footprint of former Building 4373.	Primary & Secondary	Secondary suite added due since locations target waste features.
Group 2	Subsurface	86	South of former Building 4373.	Characterize Geophysical Anomaly (underground pipe)emanating from the footprint of former Building 4373.	Primary & Secondary	Secondary suite added due since locations target waste features.
Group 2	Surface	87	South of former Building 4373.	Characterize potential radiological contamination associated with leach field former Building 4373.	Primary & Secondary	Secondary suite added due since locations target waste features.
Group 2	Subsurface	87	South of former Building 4373.	Characterize potential radiological contamination associated with leach field former Building 4373.	Primary & Secondary	Secondary suite added due since locations target waste features.
Group 2	Surface	88	South of former Building 4373.	Geophysical Anomaly, "Magnetometer".	Primary & Energetics	Energetics added due to documented use/storage in historical operations.
Group 2	Subsurface	88	South of former Building 4373.	Geophysical Anomaly, "Magnetometer".	Primary & Energetics	Energetics added due to documented use/storage in historical operations.
Group 2	Surface	89	South of former Building 4373.	Characterize potential radiological contamination associated with leach field former Building 4373.	Primary & Secondary	Secondary suite added due since locations target waste features.
Group 2	Subsurface	89	South of former Building 4373.	Characterize potential radiological contamination associated with leach field former Building 4373.	Primary & Secondary	Secondary suite added due since locations target waste features.
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.	Primary & Secondary	Secondary suite added due since locations target waste features.
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.	Primary & Secondary	Secondary suite added due since locations target waste features.
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.	Primary	Primary suite only since outside of operational area.
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.	Primary	Primary suite only since outside of operational area.
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.	Primary	Primary suite only since outside of operational area.
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.	Primary	Primary suite only since outside of operational area.
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.	Primary	Primary suite only since outside of operational area.
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.	Primary	Primary suite only since outside of operational area.
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.	Primary	Primary suite only since outside of operational area.
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.	Primary	Primary suite only since outside of operational area.
Group 3	Surface	95	Southwest of former Buildings 4874/4375/4875.	Historical data	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	95	Southwest of former Buildings 4874/4375/4875.	Historical data	Primary	Primary suite only since outside of operational area.
~~Group 3~~	~~Surface~~	~~96~~	~~Southwest corner of former Building 4363.~~	~~Historical data~~	Deselect	High density of rad sampling at Building 4363; existing chemical data in area.
~~Group 3~~	~~Subsurface~~	~~96~~	~~Southwest corner of former Building 4363.~~	~~Historical data~~	Deselect	High density of rad sampling at Building 4363; existing chemical data in area.
Group 3	Surface	97	West of former Building 4363 footprint.	Historical data	Primary & Secondary	Secondary suite added due to activities associated w/ Organic Moderated Reactor (OMR) Bldg. 4873
Group 3	Subsurface	97	West of former Building 4363 footprint.	Historical data	Primary & Secondary	Secondary suite added due to activities associated w/ OMR at Bldg. 4873

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

Grouping	Sample Type	Location ID	Location Description	Technical Justification	Analytes	Co-located Chemical Sample Rationale
Group 3	Surface	98	Northwest of former Building 4363 footprint.	Historical data	Primary & Secondary	Secondary suite added due to activities associated w/ OMR at Bldg. 4873
Group 3	Subsurface	98	Northwest of former Building 4363 footprint.	Historical data	Primary & Secondary	Secondary suite added due to activities associated w/ OMR at Bldg. 4873
Group 3	Surface	99	North of former Building 4363 footprint.	Potential radiological contamination from pipeline associated with the leach field.	Primary & Secondary	Secondary suite added due to activities associated w/ OMR at Bldg. 4873
Group 3	Subsurface	99	North of former Building 4363 footprint.	Potential radiological contamination from pipeline associated with the leach field.	Primary & Secondary	Secondary suite added due to activities associated w/ OMR at Bldg. 4873
Group 3	Surface	100	Southeast corner of former Building 4363.	Aerial Photo Feature, "Possible Open Storage".	Primary & NDMA	NDMA added due to elevated detection in previous sampling results.
Group 3	Subsurface	100	Southeast corner of former Building 4363.	Aerial Photo Feature, "Possible Open Storage".	Primary & NDMA	NDMA added due to elevated detection in previous sampling results.
Group 3	Drainage	101	South side of former L Street, south of former Building 4363.	Potential contamination in soil and sediment.	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	101	South side of former L Street, south of former Building 4363.	Potential contamination in soil and sediment.	Primary	Primary suite only since outside of operational area.
Group 3	Surface	102	Northeast corner of former Building 4363.	Historical data	Primary & Secondary	Secondary added due to operations at Building 4363.
Group 3	Subsurface	102	Northeast corner of former Building 4363.	Historical data	Primary & Secondary	Secondary added due to operations at Building 4363.
Group 3	Surface	103	Northeast corner of former Building 4363.	Potential radiological contamination associated with former leach field.	Primary & Secondary	Secondary suite added due since locations target waste features.
Group 3	Subsurface	103	Northeast corner of former Building 4363.	Potential radiological contamination associated with former leach field.	Primary & Secondary	Secondary suite added due since locations target waste features.
Group 3	Surface	104	Northeast corner of former Building 4363.	Historical Data	Primary & Secondary	Secondary suite added due since locations target waste features.
Group 3	Subsurface	104	Northeast corner of former Building 4363.	Historical Data	Primary & Secondary	Secondary suite added due since locations target waste features.
Group 3	Surface	105	Northeast of former Building 4363.	Characterize potential radiological contamination associated with the former Building 4363 leachfield.	Primary & Secondary	Secondary suite added due since locations target waste features.
Group 3	Subsurface	105	Northeast of former Building 4363.	Characterize potential radiological contamination associated with the former Building 4363 leachfield.	Primary & Secondary	Secondary suite added due since locations target waste features.
Group 3	Surface	106	Northeast of former Building 4363.	Characterize potential radiological contamination associated with the former Building 4363 leachfield.	Primary & Secondary	Secondary suite added due since locations target waste features.
Group 3	Subsurface	106	Northeast of former Building 4363.	Characterize potential radiological contamination associated with the former Building 4363 leachfield.	Primary & Secondary	Secondary suite added due since locations target waste features.
Group 3	Surface	107	Northeast of former Building 4363.	Characterize potential radiological contamination associated with the former Building 4363 leachfield.	Primary & Secondary	Secondary suite added due since locations target waste features.
Group 3	Subsurface	107	Northeast of former Building 4363.	Characterize potential radiological contamination associated with the former Building 4363 leachfield.	Primary & Secondary	Secondary suite added due since locations target waste features.
Group 3	Surface	108	East of former Building 4363.	Aerial Photo Feature, "Possible Open Storage".	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	108	East of former Building 4363.	Aerial Photo Feature, "Possible Open Storage".	Primary	Primary suite only since outside of operational area.
Group 3	Surface	109	East of former Building 4363.	Aerial Photo Feature, "Possible Open Storage".	Primary & Secondary	Secondary suite added due to operations at Building 4363.
Group 3	Subsurface	109	East of former Building 4363.	Aerial Photo Feature, "Possible Open Storage".	Primary & Secondary	Secondary suite added due to operations at Building 4363.
Group 3	Surface	110	Former Building 4363 footprint.	Historical Data	Primary & Secondary	Secondary suite added due to operations at Building 4363.
Group 3	Subsurface	110	Former Building 4363 footprint.	Historical Data	Primary & Secondary	Secondary suite added due to operations at Building 4363.
Group 3	Surface	111	Former Building 4363 footprint.	Historical Data	Primary & Secondary	Secondary suite added due to operations at Building 4363.
Group 3	Subsurface	111	Former Building 4363 footprint.	Historical Data	Primary & Secondary	Secondary suite added due to operations at Building 4363.
Group 3	Surface	112	Former Building 4363 footprint.	Historical Data	Primary & Secondary	High density of rad sampling at Building 4363; existing chemical data in area.
Group 3	Subsurface	112	Former Building 4363 footprint.	Historical Data	Primary & Secondary	High density of rad sampling at Building 4363; existing chemical data in area.
Group 3	Surface	113	Former Building 4363 footprint.	Historical Data	Primary & Secondary	Secondary suite added due to activities associated w/ OMR at Bldg. 4873
Group 3	Subsurface	113	Former Building 4363 footprint.	Historical Data	Primary & Secondary	Secondary suite added due to activities associated w/ OMR at Bldg. 4873
Group 3	Surface	114	Southwest of former Building 4363.	Historical Data. Aerial Photo Feature, "Possible Open Storage".	Primary & NDMA	NDMA added due to elevated detection in previous sampling results.
Group 3	Subsurface	114	Southwest of former Building 4363.	Historical Data. Aerial Photo Feature, "Possible Open Storage".	Primary & NDMA	NDMA added due to elevated detection in previous sampling results.
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.	Primary & NDMA	NDMA added due to elevated detection in previous sampling results.
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.	Primary	Primary suite only since outside of operational area.
Group 3	Surface	117	Former Building 4875 footprint.	Potential radiological contamination associated with activities at former building 4875.	Primary & Secondary	Secondary suite added due to potential hold up pits associated with OMR activities.
Group 3	Subsurface	117	Former Building 4875 footprint.	Potential radiological contamination associated with activities at former building 4875.	Primary & Secondary	Secondary suite added due to potential hold up pits associated with OMR activities.
Group 3	Surface	118	Former Building 4375 footprint.	Potential radiological contamination associated with activities at former building 4375.	Primary & Secondary	Secondary suite added due to potential hold up pits associated with OMR activities.
Group 3	Subsurface	118	Former Building 4375 footprint.	Potential radiological contamination associated with activities at former building 4375.	Primary & Secondary	Secondary suite added due to potential hold up pits associated with OMR activities.
Group 3	Surface	119	East side of former Building 4375.	Potential radiological contamination associated with former pit tank - Drawing 303-GEN. C-42	Primary & Secondary	Secondary suite added due to potential hold up pits associated with OMR activities.
Group 3	Subsurface	119	East side of former Building 4375.	Potential radiological contamination associated with former pit tank - Drawing 303-GEN. C-43	Primary & Secondary	Secondary suite added due to potential hold up pits associated with OMR activities.
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	Primary & Secondary	Secondary suite added due to potential hold up pits associated with OMR activities.
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	Primary & Secondary	Secondary suite added due to potential hold up pits associated with OMR activities.
Group 3	Surface	121	North of former Building 4873.	Aerial Photo Feature, "Possible Open Storage".	Primary & Secondary	Secondary suite added due to potential hold up pits associated with OMR activities.
Group 3	Subsurface	121	North of former Building 4873.	Aerial Photo Feature, "Possible Open Storage".	Primary & Secondary	Secondary suite added due to potential hold up pits associated with OMR activities.
Group 3	Surface	122	North of former Building 4874.	Possible open storage area.	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	122	North of former Building 4874.	Possible open storage area.	Primary	Primary suite only since outside of operational area.
Group 3	Surface	123	Northwest of former Building 4363.	Aerial Photo Feature, "Ground Scar". Possible location of former 6 inch V.C. Pipe.	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	123	Northwest of former Building 4363.	Aerial Photo Feature, "Ground Scar". Possible location of former 6 inch V.C. Pipe.	Primary	Primary suite only since outside of operational area.
Group 3	Surface	124	North of former Building 4863.	Historical Site Assessment (HSA) Aerial Photo Feature, "Drainage".	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	124	North of former Building 4863.	Historical Site Assessment (HSA) Aerial Photo Feature, "Drainage".	Primary	Primary suite only since outside of operational area.
Group 3	Surface	125	Northwest of former Building 4863.	Aerial Photo Feature, "Drainage".	Primary & Secondary	Secondary suite added due to potential hold up pits associated with OMR activities.
Group 3	Subsurface	125	Northwest of former Building 4863.	Aerial Photo Feature, "Drainage".	Primary & Secondary	Secondary suite added due to potential hold up pits associated with OMR activities.
Group 3	Surface	126	Northwest of former Building 4863.	Historical Site Assessment (HSA) Aerial Photo Feature, "Drainage".	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	126	Northwest of former Building 4863.	Historical Site Assessment (HSA) Aerial Photo Feature, "Drainage".	Primary	Primary suite only since outside of operational area.
Group 3	Drainage	127	Ditch south side of J Street, northwest of former Building 4863.	Potential contamination from effluent of former 6 inch V.C. Pipe.	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	127	Ditch south side of J Street, northwest of former Building 4863.	Potential contamination from effluent of former 6 inch V.C. Pipe.	Primary	Primary suite only since outside of operational area.
Group 3	Drainage	128	Ditch south side of J Street at the boundary of 5DN.	Potential radiological contamination from activities associated with former Buildings 4353/4854.	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	128	Ditch south side of J Street at the boundary of 5DN.	Potential radiological contamination from activities associated with former Buildings 4353/4854.	Primary	Primary suite only since outside of operational area.

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

Grouping	Sample Type	Location ID	Location Description	Technical Justification	Analytes	Co-located Chemical Sample Rationale
Group 3	Surface	129	North of former Buildings 4353/4854.	Potential radiological contamination from activities associated with former Buildings 4353/4854.	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	129	North of former Buildings 4353/4854.	Potential radiological contamination from activities associated with former Buildings 4353/4854.	Primary	Primary suite only since outside of operational area.
Group 3	Surface	130	North of former Buildings 4353/4854.	Historical Site Assessment (HSA) Aerial Photo Feature, "Drainage".	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	130	North of former Buildings 4353/4854.	Historical Site Assessment (HSA) Aerial Photo Feature, "Drainage".	Primary	Primary suite only since outside of operational area.
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".	Primary	Primary suite only since outside of operational area.
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".	Primary	Primary suite only since outside of operational area.
Group 3	Surface	132	Northeast of former Building 4854.	Location of former leach field associated with former Building 4353/4854. Geophysical Anomaly, "Magnetometer".	Primary & Secondary	Secondary suite added since locations target waste features.
Group 3	Subsurface	132	Northeast of former Building 4854.	Location of former leach field associated with former Building 4353/4854. Geophysical Anomaly, "Magnetometer".	Primary & Secondary	Secondary suite added since locations target waste features.
Group 3	Surface	133	Northeast of former Building 4854.	Location of former leach field associated with former Building 4353/4854.	Primary & Secondary	Secondary suite added since locations target waste features.
Group 3	Subsurface	133	Northeast of former Building 4854.	Location of former leach field associated with former Building 4353/4854.	Primary & Secondary	Secondary suite added since locations target waste features.
Group 3	Surface	134	North side of Former Building 4353.	Location of pipe line leading to the leach field. Geophysical Anomaly, "Magnetometer".	Primary & Secondary	Secondary suite added due to proximity to activities associated with OMR Program
Group 3	Subsurface	134	North side of Former Building 4353.	Location of pipe line leading to the leach field. Geophysical Anomaly, "Magnetometer".	Primary & Secondary	Secondary suite added due to proximity to activities associated with OMR Program
Group 3	Surface	135	Former Building 4353 footprint.	Potential radiological contamination from activities associated with former Building 4353.	Primary & Secondary	Secondary suite added due to proximity to activities associated with OMR Program
Group 3	Subsurface	135	Former Building 4353 footprint.	Potential radiological contamination from activities associated with former Building 4353.	Primary & Secondary	Secondary suite added due to proximity to activities associated with OMR Program
Group 3	Surface	136	Former Building 4353 footprint.	Potential radiological contamination from activities associated with former Building 4353.	Primary & Secondary	Secondary suite added due to proximity to activities associated with OMR Program
Group 3	Subsurface	136	Former Building 4353 footprint.	Potential radiological contamination from activities associated with former Building 4353.	Primary & Secondary	Secondary suite added due to proximity to activities associated with OMR Program
Group 3	Surface	137	South side of former Building 4353 footprint.	Potential radiological contamination from activities associated with former Building 4353.	Primary & Secondary	Secondary suite added due to proximity to activities associated with OMR Program
Group 3	Subsurface	137	South side of former Building 4353 footprint.	Potential radiological contamination from activities associated with former Building 4353.	Primary & Secondary	Secondary suite added due to proximity to activities associated with OMR Program
Group 3	Surface	138	South of former building 4353.	Possible open storage associated with former Building 4353.	Primary & Secondary	Secondary suite added due to proximity to activities associated with OMR Program
Group 3	Subsurface	138	South of former building 4353.	Possible open storage associated with former Building 4353.	Primary & Secondary	Secondary suite added due to proximity to activities associated with OMR Program
Group 3	Surface	139	Southeast of former building 4353.	Possible open storage associated with former Building 4353.	Primary & Secondary	Secondary suite added due to proximity to activities associated with OMR Program
Group 3	Subsurface	139	Southeast of former building 4353.	Possible open storage associated with former Building 4353.	Primary & Secondary	Secondary suite added due to proximity to activities associated with OMR Program
Group 3	Surface	140	Southeast of former building 4854.	HSA "Historical Drainage". Geophysical Anomaly, "Magnetometer".	Primary & Secondary	Secondary suite added due to proximity to activities associated with OMR Program
Group 3	Subsurface	140	Southeast of former building 4854.	HSA "Historical Drainage". Geophysical Anomaly, "Magnetometer".	Primary & Secondary	Secondary suite added due to proximity to activities associated with OMR Program
Group 3	Surface	141	Southeast of former building 4854.	Historical Data	Primary & Secondary	Secondary suite added due to proximity to activities associated with OMR Program
Group 3	Subsurface	141	Southeast of former building 4854.	Historical Data	Primary & Secondary	Secondary suite added due to proximity to activities associated with OMR Program
Group 3	Surface	142	South of former building 4854.	Historical Data	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	142	South of former building 4854.	Historical Data	Primary	Primary suite only since outside of operational area.
Group 3	Drainage	143	Southeast of former building 4854.	HSA "Historical Drainage". Geophysical Anomaly, "Conductivity".	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	143	Southeast of former building 4854.	HSA "Historical Drainage". Geophysical Anomaly, "Conductivity".	Primary	Primary suite only since outside of operational area.
Group 3	Surface	144	South of former building 4854.	Aerial Photo Feature, "Possible Open Storage".	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	144	South of former building 4854.	Aerial Photo Feature, "Possible Open Storage".	Primary	Primary suite only since outside of operational area.
Group 3	Surface	145	South of former Buildings 4353/4854.	Aerial Photo Feature, "Possible Open Storage".	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	145	South of former Buildings 4353/4854.	Aerial Photo Feature, "Possible Open Storage".	Primary	Primary suite only since outside of operational area.
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.	Primary	Primary suite only since outside of operational area.
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.	Primary	Primary suite only since outside of operational area.
Group 3	Drainage	148	In ditch on the south side of former L Street.	Potential radiological contamination from activities associated with former Buildings 4473/4873/4863/4363. Historical Data.	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	148	In ditch on the south side of former L Street.	Potential radiological contamination from activities associated with former Buildings 4473/4873/4863/4363. Historical Data.	Primary	Primary suite only since outside of operational area.
Group 3	Surface	149	South of former Buildings 4353/4854.	Aerial Photo Feature, "Possible Open Storage".	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	149	South of former Buildings 4353/4854.	Aerial Photo Feature, "Possible Open Storage".	Primary	Primary suite only since outside of operational area.
Group 3	Surface	150	South of former Building 4353/4854.	Aerial Photo Feature, "Possible Open Storage". Geophysical Feature, "Magnetometer".	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	150	South of former Building 4353/4854.	Aerial Photo Feature, "Possible Open Storage". Geophysical Feature, "Magnetometer".	Primary	Primary suite only since outside of operational area.
Group 3	Surface	151	South of former Building 4353/4854.	Elevated gamma survey readings,"PGRAY 5". Geophysical Anomaly, "Conductivity". Berm and soil disturbance area.	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	151	South of former Building 4353/4854.	Elevated gamma survey readings,"PGRAY 5". Geophysical Anomaly, "Conductivity". Berm and soil disturbance area.	Primary	Primary suite only since outside of operational area.
Group 3	Surface	152	South of former Building 4353/4854.	Elevated gamma survey readings,"PGRAY 6". Geophysical Anomaly, "Conductivity". Berm and soil disturbance area.	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	152	South of former Building 4353/4854.	Elevated gamma survey readings,"PGRAY 6". Geophysical Anomaly, "Conductivity". Berm and soil disturbance area.	Primary	Primary suite only since outside of operational area.
Group 3	Surface	153	South of former Building 4353/4854.	Geophysical Anomaly,"Conductivity". Elevated gamma survey readings.	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	153	South of former Building 4353/4854.	Geophysical Anomaly,"Conductivity". Elevated gamma survey readings.	Primary	Primary suite only since outside of operational area.
Group 3	Surface	154	South of former Building 4353/4854.	Aerial Photo Feature, "Ground Scar".	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	154	South of former Building 4353/4854.	Aerial Photo Feature, "Ground Scar".	Primary	Primary suite only since outside of operational area.
Group 3	Surface	155	South of former Building 4353/4854.	Aerial Photo Feature, "Medium Toned Mounded Material".	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	155	South of former Building 4353/4854.	Aerial Photo Feature, "Medium Toned Mounded Material".	Primary	Primary suite only since outside of operational area.
Group 3	Surface	156	South of former Building 4353/4854.	Aerial Photo Feature, "Medium Toned Mounded Material".	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	156	South of former Building 4353/4854.	Aerial Photo Feature, "Medium Toned Mounded Material".	Primary	Primary suite only since outside of operational area.
Group 3	Surface	157	Southeast portion of Subarea 5DN.	Aerial Photo Feature, "Mounded Material". Historical Data	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	157	Southeast portion of Subarea 5DN.	Aerial Photo Feature, "Mounded Material". Historical Data	Primary	Primary suite only since outside of operational area.
Group 3	Surface	158	Southeast portion of Subarea 5DN.	Historical Data	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	158	Southeast portion of Subarea 5DN.	Historical Data	Primary	Primary suite only since outside of operational area.
Group 3	Surface	159	South east corner of Subarea 5DN.	Elevated gamma survey readings.	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	159	South east corner of Subarea 5DN.	Elevated gamma survey readings.	Primary	Primary suite only since outside of operational area.

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

Grouping	Sample Type	Location ID	Location Description	Technical Justification	Analytes	Co-located Chemical Sample Rationale
Group 3	Surface	160	South east corner of Subarea 5DN.	Elevated gamma survey readings.	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	160	South east corner of Subarea 5DN.	Elevated gamma survey readings.	Primary	Primary suite only since outside of operational area.
~~Group 3~~	~~Surface~~	~~161~~	~~South east corner of Subarea 5DN.~~	~~Aerial Photo Feature, "Trench".~~	Deselect	High density of rad sampling outside of operational area.
~~Group 3~~	~~Subsurface~~	~~161~~	~~South east corner of Subarea 5DN.~~	~~Aerial Photo Feature, "Trench".~~	Deselect	High density of rad sampling outside of operational area.
Group 3	Surface	162	Southeast of former Building 4865.	Aerial Photo Feature, "Ground Scar".	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	162	Southeast of former Building 4865.	Aerial Photo Feature, "Ground Scar".	Primary	Primary suite only since outside of operational area.
~~Group 3~~	~~Surface~~	~~163~~	~~Southeast of former Building 4865.~~	~~Aerial Photo Feature, "Ground Scar".~~	Deselect	High density of rad sampling outside of operational area.
~~Group 3~~	~~Subsurface~~	~~163~~	~~Southeast of former Building 4865.~~	~~Aerial Photo Feature, "Ground Scar".~~	Deselect	High density of rad sampling outside of operational area.
Group 2	Surface	164	Northeast of former Building 4865.	Downgradient of former Building 4865.	Primary	Primary suite only since outside of operational area.
Group 2	Subsurface	164	Northeast of former Building 4865.	Downgradient of former Building 4865.	Primary	Primary suite only since outside of operational area.
Group 2	Surface	165	Former Building 4865.	Historical use of Co-60 with a depleted uranium collimator in the former building.	Primary	Primary suite only since outside of operational area.
Group 2	Subsurface	165	Former Building 4865.	Historical use of Co-60 with a depleted uranium collimator in the former building.	Primary	Primary suite only since outside of operational area.
Group 3	Surface	166	North of former Building 4865.	Approx location of unknown site activities noted in 1992 aerial photo.	Primary	Primary suite only since outside of operational area.
Group 3	Subsurface	166	North of former Building 4865.	Approx location of unknown site activities noted in 1992 aerial photo.	Primary	Primary suite only since outside of operational area.
Group 2	Subsurface	167	North of former Building 4865.	Potential radiological contamination in ditch along the west side of 24th Street.	Primary	Primary suite only since outside of operational area.
Group 2	Subsurface	168	West of former Building 4363.	Potential radiological contamination in ditch along the west side of 24th Street.	Primary	Primary suite only since outside of operational area.
Group 2	Subsurface	169	South of former Building 4020.	Downgradient of the former Parking Lot 4520.	Primary	Primary suite only since outside of operational area.
Group 2	Surface	170	North portion of Fill Area 13.	Aerial Photo Feature, "Mounded Material". Geophysical Anomaly, "Conductivity".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Subsurface	170	North portion of Fill Area 13.	Aerial Photo Feature, "Mounded Material". Geophysical Anomaly, "Conductivity".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Surface	171	North portion of Fill Area 13.	Elevated gamma survey readings. Geophysical Anomaly, "Magnetometer". Aerial Photo Feature, "Mounded Material".	Primary & Secondary	Secondary suite added due to potential waste disposal in the Pond Dredge Area.
Group 2	Subsurface	171	North portion of Fill Area 13.	Elevated gamma survey readings. Geophysical Anomaly, "Magnetometer". Aerial Photo Feature, "Mounded Material".	Primary & Secondary	Secondary suite added due to potential waste disposal in the Pond Dredge Area.
Group 2	Surface	172	Fill Area 13, south of former Building 4020, west of 24th Street.	Geophysical Anomaly, "conductivity and Magnetometer".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Subsurface	172	Fill Area 13, south of former Building 4020, west of 24th Street.	Geophysical Anomaly, "conductivity and Magnetometer".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Surface	173	North portion of Fill Area 13.	Elevated gamma survey readings, "PGRAY 2". Geophysical Anomaly, "Magnetometer". Aerial Photo Feature, "Excavation".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Subsurface	173	North portion of Fill Area 13.	Elevated gamma survey readings, "PGRAY 2". Geophysical Anomaly, "Magnetometer". Aerial Photo Feature, "Excavation".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Surface	174	North portion of Fill Area 13.	Elevated gamma survey readings. Geophysical Anomaly, "Magnetometer".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Subsurface	174	North portion of Fill Area 13.	Elevated gamma survey readings. Geophysical Anomaly, "Magnetometer".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Surface	175	North portion of Fill Area 13.	Geophysical Anomaly, "Magnetometer and Conductivity". Aerial Photo Feature, "Trench".	Primary & Secondary	Secondary suite added due to potential waste disposal in the Pond Dredge Area.
Group 2	Subsurface	175	North portion of Fill Area 13.	Geophysical Anomaly, "Magnetometer and Conductivity". Aerial Photo Feature, "Trench".	Primary & Secondary	Secondary suite added due to potential waste disposal in the Pond Dredge Area.
Group 2	Surface	176	West portion of Fill Area 13.	Elevated gamma survey reading, "PGRAY 1". Aerial Photo Feature, "Ground Scar".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Subsurface	176	North portion of Fill Area 13.	Geophysical Anomaly, "Magnetometer and Conductivity". Aerial Photo Feature, "Trench".	Primary & Secondary	Secondary suite added due to potential waste disposal in the Pond Dredge Area.
Group 2	Surface	176	West portion of Fill Area 13.	Elevated gamma survey reading, "PGRAY 1". Aerial Photo Feature, "Ground Scar".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Subsurface	176	West portion of Fill Area 13.	Elevated gamma survey reading, "PGRAY 1". Aerial Photo Feature, "Ground Scar".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
~~Group 2~~	~~Surface~~	~~177~~	~~West portion of Fill Area 13.~~	~~Geophysical Anomaly, "Conductivity". Elevated gamma survey readings.~~	Deselect	High density of rad sampling in hummocky area and existing chemical data from previous investigations.
~~Group 2~~	~~Subsurface~~	~~177~~	~~West portion of Fill Area 13.~~	~~Geophysical Anomaly, "Conductivity". Elevated gamma survey readings.~~	Deselect	High density of rad sampling in hummocky area and existing chemical data from previous investigations.
~~Group 2~~	~~Surface~~	~~178~~	~~East portion of Fill Area 13.~~	~~Geophysical Anomaly, "Conductivity". Aerial Photo Feature, "Mounded Material". Elevated gamma survey readings.~~	Deselect	High density of rad sampling in hummocky area and existing chemical data from previous investigations.
~~Group 2~~	~~Subsurface~~	~~178~~	~~East portion of Fill Area 13.~~	~~Geophysical Anomaly, "Conductivity". Aerial Photo Feature, "Mounded Material". Elevated gamma survey readings.~~	Deselect	High density of rad sampling in hummocky area and existing chemical data from previous investigations.
Group 2	Surface	179	East portion of Fill Area 13.	Geophysical Anomaly, "Conductivity". Aerial Photo Feature, "Mounded Material". Elevated gamma survey readings.	Primary & Secondary	Secondary suite added due to potential waste disposal in the Pond Dredge Area.
Group 2	Subsurface	179	East portion of Fill Area 13.	Geophysical Anomaly, "Conductivity". Aerial Photo Feature, "Mounded Material". Elevated gamma survey readings.	Primary & Secondary	Secondary suite added due to potential waste disposal in the Pond Dredge Area.
Group 2	Surface	180	Northwest of former Building 4865.	Aerial Photo Feature, "Excavation". Geophysical Anomaly, "Magnetometer and Conductivity".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Subsurface	180	Northwest of former Building 4865.	Aerial Photo Feature, "Excavation". Geophysical Anomaly, "Magnetometer and Conductivity".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Surface	181	Northwest of former Building 4865.	Aerial Photo Feature, "Ground Scar". Geophysical Anomaly, "Magnetometer and Conductivity".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Subsurface	181	Northwest of former Building 4865.	Aerial Photo Feature, "Ground Scar". Geophysical Anomaly, "Magnetometer and Conductivity".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Surface	182	Southeast portion of Fill Area 13.	Aerial Photo Feature, "Mounded Material". Geophysical Anomaly, "Conductivity".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Subsurface	182	Southeast portion of Fill Area 13.	Aerial Photo Feature, "Mounded Material". Geophysical Anomaly, "Conductivity".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Surface	183	Southeast portion of Fill Area 13.	Geophysical Anomaly, "Magnetometer". Aerial Photo Feature, "Mounded Material". Elevated gamma survey readings.	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Subsurface	183	Southeast portion of Fill Area 13.	Geophysical Anomaly, "Magnetometer". Aerial Photo Feature, "Mounded Material". Elevated gamma survey readings.	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Surface	184	Southeast portion of Fill Area 13.	Aerial Photo Feature, "Mounded Material". Geophysical Anomaly, "Conductivity".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Subsurface	184	Southeast portion of Fill Area 13.	Aerial Photo Feature, "Mounded Material". Geophysical Anomaly, "Conductivity".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Surface	185	Pond Dredge Area - Southeast portion of Fill Area 14.	Geophysical Anomaly, "Conductivity".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Subsurface	185	Pond Dredge Area - Southeast portion of Fill Area 14.	Geophysical Anomaly, "Conductivity".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Surface	186	Pond Dredge Area - Southeast portion of Fill Area 14.	Aerial Photo Feature, "Light Toned Material".	Primary & Secondary	Secondary suite added due to potential waste disposal in the Pond Dredge Area.
Group 2	Subsurface	186	Pond Dredge Area - Southeast portion of Fill Area 14.	Aerial Photo Feature, "Light Toned Material".	Primary & Secondary	Secondary suite added due to potential waste disposal in the Pond Dredge Area.
Group 2	Surface	187	Pond Dredge Area - Southeast portion of Fill Area 14.	Aerial Photo Feature, "Light Toned Material".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Subsurface	187	Pond Dredge Area - Southeast portion of Fill Area 14.	Aerial Photo Feature, "Light Toned Material".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Surface	188	Pond Dredge Area - Southeast portion of Fill Area 14.	Geophysical Anomaly, "Conductivity".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Subsurface	188	Pond Dredge Area - Southeast portion of Fill Area 14.	Geophysical Anomaly, "Conductivity".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Surface	189	Pond Dredge Area - Southern portion of Fill Area 14.	Historical data	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Subsurface	189	Pond Dredge Area - Southern portion of Fill Area 14.	Historical data	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Surface	190	Pond Dredge Area - Southwest portion of Fill Area 14.	Geophysical Anomaly, "conductivity and Magnetometer".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Subsurface	190	Pond Dredge Area - Southwest portion of Fill Area 14.	Geophysical Anomaly, "conductivity and Magnetometer".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Surface	191	Pond Dredge Area - Southwest portion of Fill Area 14.	Geophysical Anomaly, "conductivity and Magnetometer". Slightly elevated gamma readings.	Primary & Secondary	Secondary suite added due to potential waste disposal in the Pond Dredge Area.
Group 2	Subsurface	191	Pond Dredge Area - Southwest portion of Fill Area 14.	Geophysical Anomaly, "conductivity and Magnetometer". Slightly elevated gamma readings.	Primary & Secondary	Secondary suite added due to potential waste disposal in the Pond Dredge Area.

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

Grouping	Sample Type	Location ID	Location Description	Technical Justification	Analytes	Co-located Chemical Sample Rationale
Group 2	Surface	192	Pond Dredge Area - South central portion of Fill Area 14.	Historical Data	Primary & Secondary	Secondary suite added due to potential waste disposal in the Pond Dredge Area.
Group 2	Subsurface	192	Pond Dredge Area - South central portion of Fill Area 14.	Historical Data	Primary & Secondary	Secondary suite added due to potential waste disposal in the Pond Dredge Area.
Group 2	Surface	193	Pond Dredge Area - South central portion of Fill Area 14.	Geophysical Anomaly, "Conductivity and Magnetometer". Aerial Photo Feature, "Fill".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Subsurface	193	Pond Dredge Area - South central portion of Fill Area 14.	Geophysical Anomaly, "Conductivity and Magnetometer". Aerial Photo Feature, "Fill".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Surface	194	Pond Dredge Area - Southeast portion of Fill Area 14.	Geophysical Anomaly, "Conductivity and Magnetometer". Aerial Photo Feature, "Fill".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Subsurface	194	Pond Dredge Area - Southeast portion of Fill Area 14.	Geophysical Anomaly, "Conductivity and Magnetometer". Aerial Photo Feature, "Fill".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Surface	195	Pond Dredge Area - South central portion of Fill Area 14.	Geophysical Anomaly, "Conductivity and Magnetometer". Aerial Photo Feature, "Fill".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Subsurface	195	Pond Dredge Area - South central portion of Fill Area 14.	Geophysical Anomaly, "Conductivity and Magnetometer". Aerial Photo Feature, "Fill".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Surface	196	Pond Dredge Area - Central portion of Fill Area 14.	Geophysical Anomaly, "Conductivity ". Aerial Photo Feature, "Fill".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Subsurface	196	Pond Dredge Area - Central portion of Fill Area 14.	Geophysical Anomaly, "Conductivity ". Aerial Photo Feature, "Fill".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Surface	197	Pond Dredge Area - Central portion of Fill Area 14.	Geophysical Anomaly, "Conductivity and Magnetometer". Aerial Photo Feature, "Fill".	Primary & Secondary	Secondary suite added due to potential waste disposal in the Pond Dredge Area.
Group 2	Subsurface	197	Pond Dredge Area - Central portion of Fill Area 14.	Geophysical Anomaly, "Conductivity and Magnetometer". Aerial Photo Feature, "Fill".	Primary & Secondary	Secondary suite added due to potential waste disposal in the Pond Dredge Area.
Group 2	Surface	198	Pond Dredge Area - North portion of Fill Area 14.	Geophysical Anomaly, "Conductivity and Magnetometer". Aerial Photo Feature, "Fill".	Primary & Secondary	Secondary suite added due to multiple lines of evidence indicating potential for contamination.
Group 2	Subsurface	198	Pond Dredge Area - North portion of Fill Area 14.	Geophysical Anomaly, "Conductivity and Magnetometer". Aerial Photo Feature, "Fill".	Primary & Secondary	Secondary suite added due to multiple lines of evidence indicating potential for contamination.
Group 2	Surface	199	Pond Dredge Area - West portion of Fill Area 14.	Slightly elevated gamma survey readings.	Primary	Primary suite only since outside of operational area.
Group 2	Subsurface	199	Pond Dredge Area - West portion of Fill Area 14.	Slightly elevated gamma survey readings.	Primary	Primary suite only since outside of operational area.
Group 2	Surface	200	Southwest corner of Subarea 5DN.	Geophysical Anomaly, "Conductivity".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Subsurface	200	Southwest corner of Subarea 5DN.	Geophysical Anomaly, "Conductivity".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Surface	201	Southwest corner of Subarea 5DN.	Aerial Photo Feature, "Trench".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Subsurface	201	Southwest corner of Subarea 5DN.	Aerial Photo Feature, "Trench".	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Surface	202	Northeast corner of former Parking Lot 4520	Stakeholder Request - Staging area for the D&D of former Building 4020.	Primary	Primary suite only since outside of operational area.
Group 2	Subsurface	202	Northeast corner of former Parking Lot 4521	Stakeholder Request - Staging area for the D&D of former Building 4020.	Primary	Primary suite only since outside of operational area.
Group 2	Surface	203	Pond Dredge Area - East portion of Fill Area 14.	Aerial Photo Feature, "Fill Area".	Primary	Primary suite only since outside of operational area.
Group 2	Subsurface	203	Pond Dredge Area - East portion of Fill Area 14.	Aerial Photo Feature, "Fill Area".	Primary	Primary suite only since outside of operational area.
Group 2	Surface	204	Pond Dredge - West portion of Fill Area 14.	Geophysical Anomaly, "Conductivity and Magnetometer". Aerial Photo Feature, "Fill". - Stakeholder Request	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Subsurface	204	Pond Dredge - West portion of Fill Area 14.	Geophysical Anomaly, "Conductivity and Magnetometer". Aerial Photo Feature, "Fill". - Stakeholder Request	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Surface	205	Southwest corner of Subarea 5DN.	Possible open storage - Stakeholder Request	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Subsurface	205	Southwest corner of Subarea 5DN.	Possible open storage - Stakeholder Request	Primary	Primary suite only due to high sample density in Pond Dredge Area.
Group 2	Surface	206	West side of former Building 4373.	Entry way to former Building 4373 - Stakeholder Request	Primary & Energetics	Energetics added due to documented use/storage in historical operations.
Group 2	Subsurface	206	West side of former Building 4373.	Entry way to former Building 4373 - Stakeholder Request	Primary & Energetics	Energetics added due to documented use/storage in historical operations.

NOTES:

Subsurface locations 21 through 29, 32 through 35, and 44 will be sampled by HGL as follows:
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.

Subsurface locations 38, 47 through 51 and 53 will be sampled by HGL as follows:
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

PGRAY = potential gamma ray anomaly