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Dear Regulatory Team Members:

Please find enclosed the Final Removal Action Completion Report (RACR), Parcel G, Hunters Point Naval Shipyard, San Francisco, California. Response to Comments (RTCs) from the draft version of this report is included as Appendix Y. Technical review of the enclosed report has been completed by the Navy's Radiological Affairs Support Office.

The Navy requests a letter of concurrence on the enclosed RTCs and the Final RACR for Parcel G **no later than Friday, January 6, 2012**. If you have questions regarding the enclosed report, please contact Mr. Chris Yantos at (619) 532-0912, or Mr. Keith Forman at (619) 532-0913.

Sincerely,

KEITH FORMAN
BRAC Environmental Coordinator
By direction of the Director

Enclosures: 1. Final Removal Action Completion Report, Parcel G, Hunters Point Naval Shipyard, San Francisco, California.

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CONTRACT NO. N62473-07-D-3211
CTO NO. 0018

FINAL

REMOVAL ACTION COMPLETION REPORT

December 2, 2011

DCN: ECSD-3211-0018-0179

PARCEL G
HUNTERS POINT NAVAL SHIPYARD
SAN FRANCISCO, CALIFORNIA

Base Realignment and Closure
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REMOVAL ACTION COMPLETION REPORT

December 2, 2011

PARCEL G
HUNTERS POINT NAVAL SHIPYARD
SAN FRANCISCO, CALIFORNIA

DCN: ECSD-3211-0018-0179

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12/2/2011
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12/2/2011
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EXECUTIVE SUMMARY

The U.S. Department of the Navy (DON) directed Tetra Tech EC Inc. (TtEC) to prepare this Removal Action Completion Report (RACR) to describe and summarize the Parcel G storm drain and sanitary sewer systems time-critical removal action and buildings and former buildings site Final Status Survey (FSS) radiological activities at Hunters Point Naval Shipyard (HPNS) located in San Francisco, California. The FSS and removal action activities were performed under multiple contracts and task orders and were conducted in accordance with regulatory requirements. The purpose of this RACR was to summarize the results of the radiological work activities performed for Parcel G to protect the public health, welfare, and the environment from actual or potential releases of radiologic contaminants and to document the achievement of the implemented radiological removal action objective (RAO) identified in the "Record of Decision for Parcel G" (ROD) (DON 2009). Except in relation to reuse or disposal of excavated soil derived from the removal of the Parcel G storm drain and sanitary sewer systems, this RACR does not address chemical contamination and does not include or affect any other designated HPNS parcels.

Originally, the 98 acres designated as Parcel D located in the central portion of HPNS was part of the industrial support area and was used for shipping, ship repair, and office and commercial activities. Parcel D was divided by the DON in July 2008 into Parcel D-1, Parcel D-2, Parcel UC1, and Parcel G. In addition, a small area perpendicular to H Street was added to Parcel G so that the property boundary extended straight along H Street.

Approximately 40 acres in area, Parcel G extends from Spear Avenue on the north, to Morrell Street on the east, to 3rd Avenue on the south, and to H Street on the west. Parcel G consists of relatively flat lowlands with surface elevations between zero and 10 feet above mean sea level. These lowlands were constructed with borrowed fill material from various sources. The geology of Parcel G generally consists of artificial fill and undifferentiated sands. The majority of the Parcel G ground surface is covered with buildings and pavement. Radiologically surveyed and released Buildings 351, 351A, 366, 401, 408, 411, 439, and the Buildings 317/364/365 Site are located within the boundaries of Parcel G. These buildings and site were identified in the final "Historical Radiological Assessment, Volume II" (HRA) prepared by the Naval Sea Systems Command (NAVSEA) in 2004 (NAVSEA 2004) as radiologically impacted.

Based on its radiological operational history, the DON determined that low-level radioactive contamination potentially present in some buildings, storm drain and sanitary sewer lines, soil, debris, and slag material at HPNS required a response action. This decision was documented in the final "Base-wide Radiological Removal Action, Action Memorandum" (AM) (DON 2006). Physical removal with proper off-site disposal was selected as the only viable remedial alternative.

The majority of the radiological work for Parcel G was performed under the AM (DON 2006). Appendix A of the AM presented the applicable or relevant and appropriate requirements for the HPNS removal actions. The cleanup goals for localized radioactive contamination at HPNS presented in the AM were derived in consultation with federal and state regulators to meet the most conservative requirements at the time the AM was being written. The maximum radiological dose release criteria delineated in the AM was based on the Nuclear Regulatory Commission dose limit of 25 millirems per year (mrem/y). However, the residual dose for the majority of the release criteria is well below that limit. Currently, the DON reviews all surveys and remedial actions to ensure that residual radioactivity at HPNS meets the dose criterion of less than 15 mrem/y and the risk criterion of less than 3×10^{-4} when clearing radiologically impacted sites for unrestricted release.

The final Parcel G ROD (DON 2009) was signed on February 18, 2009 after fieldwork for the storm drain and sanitary sewer systems removal action and FSS buildings and former buildings site activities were largely completed. The ROD presented the selected remedy for Parcel G and addressed both chemical and radiological contamination. The selected remedy for radiologically impacted soil and structures identified in the ROD included survey, decontamination, excavation, disposal, and release. As identified in the ROD, the RAO for radiologically impacted sites was to prevent exposure to the radionuclides of concern (ROCs) in concentrations that exceed remediation goals for all potentially complete exposure pathways. The remediation goals were selected to achieve the RAO and were used to measure the success of the removal action. The radiological remedy selected in the ROD met the RAO by 1) identifying and decontaminating any radiologically impacted structures and 2) removing the source of contamination in soils by excavating the storm drain and sanitary sewer systems with proper off-site disposal of radiologically contaminated material. The Parcel G removal action activities performed under the AM (DON 2006) achieved the remediation goals and RAO later specified in the ROD (DON 2009).

Site restoration activities were performed for Parcel G including the installation of temporary drainage swales to manage overland stormwater flow. In addition, trench excavations in Parcel G outside the buildings were backfilled to grade. The soil placed in these trenches was compacted by pressing the soil down using mechanical compaction equipment. Compaction activities provided for adequate road stability as well as dust control. Street repaving was not performed since the Parcel G property likely will be transferred for future development.

Storm Drain and Sanitary Sewer Systems Removal Action

The present-day configuration of the HPNS storm drain and sanitary sewer systems is the result of an evolutionary process. The combined systems grew in sections and then underwent a series of separation projects to provide for installation of dedicated sanitary sewer piping and pump stations that would discharge effluent off-site. Complete separation of the combined systems

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was never achieved, and inspections have revealed that cross-connections may still exist. Due to the evolutionary nature of the separation process, radiological contamination from the same sources may have impacted the HPNS storm drain and sanitary sewer systems piping and other components. Based on historical documentation, the ROCs selected for the Parcel G storm drain and sanitary sewer systems included cesium-137 (Cs-137), radium-226 (Ra-226), and strontium-90 (Sr-90).

The general approach to removing and radiologically surveying the storm drain and sanitary sewer systems was:

1. Excavate soils.
2. Remove piping.
3. Conduct ex situ radiological screening and sampling of the piping.
4. Perform radiological screening and sampling of the excavated soil.
5. Conduct FSS activities for the excavated soils and exposed excavated trench surfaces.
6. Backfill the trenches and perform site restoration.

Excavation of the Parcel G storm drain and sanitary sewer systems was initiated on July 19, 2007 with the last truckload of Parcel G soil excavated on June 13, 2011. Due to the separation of Parcel G from the former Parcel D area after the removal action activities had commenced, the designated work areas and the Parcel G property boundary no longer completely corresponded to each other. Consequently, some piping outside of the work area boundaries, but within Parcel G, was left in place following the completion of the removal action. Located on the south side of Parcel G, these storm drain and sanitary sewer pipes and manholes were subsequently removed at the direction of the DON under a separate TtEC contract task order. The removal of these pipes and manholes and backfill of the resulting trenches completed the storm drain and sanitary sewer removal action and supported the DON's recommendation for radiological release for unrestricted use of Parcel G.

During the Parcel G removal action, 23,166 linear feet of storm drain and sanitary sewer trenches (including soil, pipes, and manholes) excavated. At a minimum, soil associated with the storm drain and sanitary sewer systems was excavated to a depth of 1 foot below and to either side of the pipelines. The excavation of these trenches resulted in the transfer of 4,224 truckloads (approximately 50,688 cubic yards) of soil to the Radiological Screening Yards (RSYs) for processing. Prior to beginning radiological processing in the RSYs, these truckloads of excavated soil were spread on specially constructed 1,000 square meter (m^2) screening pads in lifts that did not exceed a thickness of 6 inches. The excavated materials on the screening pads often included small sections of crumbled pipe and crushed manhole pieces that were processed along with the soil. Each screening pad containing Parcel G excavated materials was assigned a unique survey unit identification number for tracking.

The radiological survey process in the RSYs was initiated for each of the excavated soil survey units once the screening pads were filled. During processing, gamma scans were performed over each of the excavated soil survey units and the results evaluated. Radioactive material identified during the gamma scan activities was collected, segregated, and stored in appropriate containers for subsequent disposal by the DON's radiological waste contractor. Areas of soil on the screening pads that showed the potential presence of radiation levels greater than the established investigation limits were further evaluated, and biased soil samples were collected, as appropriate. Identified radiological contamination was characterized and remediated.

Following the completion of scanning activities, systematic and biased (if appropriate) soil samples were collected from the Parcel G excavated soil survey units in the RSYs. During processing in the RSYs, a total of 7,742 soil samples (including biased, characterization, verification, and systematic FSS samples) were collected from the Parcel G excavated soil survey units and analyzed by the laboratory. Based on the surface scans and soil sample analytical results, approximately 2,828 cubic yards of soil was remediated from the excavated soil survey units in the RSYs. The contaminated soil was placed in low-level radioactive waste (LLRW) bins for off-site disposal by the DON's radiological waste contractor. Radionuclide concentrations above the release criteria in the excavated soil survey units were limited to Cs-137 and Ra-226. No concentrations above the release criterion were identified for Sr-90 in the excavated soil survey units processed in the RSYs.

Once the excavated soil survey units in the RSYs were verified to be free of radioactivity above the release criteria, 18 systematic FSS soil samples were collected and the laboratory analytical results evaluated. With the concurrence of the Radiological Affairs Support Office (RASO), excavated soil survey units processed in the RSYs were segregated for use as backfill soil or staged for off-site disposal by the DON's non-radiological waste contractor. The majority of the soil processed in the RSYs was backfilled into appropriate trenches.

The Parcel G storm drain and sanitary sewer pipes and manholes (collectively called piping) were removed during excavation of the trenches. During excavation, pipes were found at depths ranging from 1 foot to 21 feet below ground surface and primarily consisted of 2-inch-diameter to 24-inch-diameter concrete, cast iron, corrugated metal, vitreous clay, fiberglass, plastic, metal, or concrete-encased pipes. Manholes excavated during the Parcel G removal action were composed of brick, concrete, or a combination of the two. The majority of the piping was crushed or disintegrated during removal and the debris was transferred along with the surrounding soil to the RSYs for radiological processing. Pipe sections and manholes that were not crushed during excavation activities were placed on plastic pending further activities. In total, 185 manholes and 1,959 sections of pipe were removed and staged for further activities during the Parcel G removal action.

Sediment samples were collected from the excavated pipes and manholes when a sufficient volume of materials were available. During the storm drain and sanitary sewer excavation activities, a total of 90 sections of pipe and 35 manholes contained sufficient sediment for sample collection and analysis by gamma spectroscopy. Although the majority of the laboratory analytical results did not identify the presence of radioactive contamination, Cs-137 and Ra-226 above the radionuclide-specific release criterion was found in a number of the pipe and manhole sediment samples. Pipes and manholes associated with contaminated sediment samples were placed in LLRW bins for off-site disposal by the DON's radiological waste contractor. Typically, radiological survey activities were performed for those pipes and manholes that did not contain contaminated sediments prior to final disposition.

Radiological survey activities were performed during the Parcel G storm drain and sanitary sewer removal action for a total of 1,406 excavated sections of pipe and 150 manholes. Radiological surveys consisted of a 100 percent surface scan, static measurements, and swipe sample collection and analysis. Based on the survey results, the majority of the Parcel G piping was released for off-site disposal or recycling.

The majority of the storm drain and sanitary sewer pipe sections and bricks and/or concrete that formed the manhole sidewalls and bottoms were excavated during the Parcel G removal action activities; however, small sections of piping were left in place. In general, the piping remaining in place was associated with buildings or other physical obstructions that would be structurally compromised or could not be removed due to worker health and safety considerations. Based on survey results and other data generated during the Parcel G removal action, the DON concluded that the piping remaining in place was unlikely to be contaminated.

Following the completion of trench excavation and piping removal, 63 unique trench survey unit identification numbers were assigned for tracking purposes and FSS activities. None of the 63 designated trench survey units exceeded 1,000 m^2 in exposed surface area. The total area of the exposed trench surfaces in Parcel G was 39,440 m^2 with 22,449 linear feet of trench. Gamma scans were performed on the exposed trench surfaces and numerous soil samples were collected from the sidewalls and bottom of the trenches to determine whether radiologic contamination was present. A minimum of 18 systematic soil samples were collected from each of the 63 Parcel G trench survey units and analyzed by the laboratory using gamma spectroscopy. As necessary, remediation was performed to remove any identified radiologic contamination followed by the collection and analysis of verification soil samples. Once the analytical results for the verification samples indicated that no additional radiologic contamination was present, the final 18 FSS soil samples were collected from the sidewalls and bottom of the Parcel G trench survey units and analyzed by the laboratory.

During the Parcel G removal action, a total of 5,709 trench survey unit soil samples (including investigative, characterization, verification, and FSS samples) were collected and analyzed by

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the laboratory. Of these, 4,575 soil samples were investigative and 1,134 were systematic FSS soil samples. The highest investigative analytical results were identified in soil samples collected from Trench Survey Units 84 and 99. Based on the laboratory analytical results, approximately 3,400 cubic yards of contaminated soil was remediated from the Parcel G trench survey units during the removal action. The contaminated soil was placed in LLRW bins for off-site disposal by the DON's radiological waste contractor to either the U.S. Ecology facility in Idaho or the Energy Solutions facility in Clive, Utah.

Chemical contamination at HPNS is addressed through the Installation Restoration (IR) Program Site process. There are a total of 10 IR Program sites associated with Parcel G. Samples of excavated soil derived from IR Program sites were collected and sent to the off-site laboratory for chemical analysis to verify whether these materials met the release criteria. Based on the analytical results, soil that did not meet the appropriate criteria was stockpiled for collection and off-site disposal by the DON's non-radiological waste contractor, along with any non-IR Program soil that exhibited odor or staining.

The objective of the storm drain and sanitary sewer FSS activities for Parcel G was to demonstrate that identified residual radioactivity levels inside the excavated trenches and within the materials used as backfill met the release criteria. The results were documented in the Survey Unit Project Reports (SUPRs) prepared for each of the 63 trench survey units.

The environmental as low as reasonably achievable (ALARA) process was implemented for each of the 63 trench survey units in addition to dose and risk modeling efforts. ALARA analyses were performed based on recent estimates of dose to the public from HPNS operations. Based on qualitative ALARA analyses, excavation projects that could cause the potential dose to the public to exceed 1 millirem (individual) or 10 person-rem (collective) were subject to quantitative ALARA analyses. To date, no Parcel G operations at HPNS have resulted in an individual dose to the public greater than 1 millirem or a collective dose greater than 10 person-rem. In addition, air monitoring results did not exceed 10 percent of the derived air concentration and the processed personnel dosimetry badges did not identify a single gamma dose above background levels.

Dose and risk modeling using the most current version of RESRAD software and the larger of the method detection limit or reported activity was performed for each of the Parcel G trench survey units and documented in the SUPRs. Based on the Parcel G trench survey unit dose and risk modeling results, the highest net residual dose to workers or members of the public as a result of exposure to radioactive material in soil was identified in Trench Survey Unit 115 at 7.696 mrem/y with an excess lifetime cancer risk of 1.387×10^{-4}. These results meet the HPNS dose criterion of less than 15 mrem/y and risk criterion of less than 3×10^{-4}, which supports radiological free release.

Buildings and Former Buildings Site

In addition to the Parcel G storm drain and sanitary sewer systems, nine radiologically impacted buildings (Buildings 351, 351A, 364, 365, 366, 401, 408, 411, and 439) and one former buildings site (Buildings 317/364/365 Site) were identified in the HRA (NAVSEA 2004) as radiologically impacted. Radiological surveys were performed for each of the impacted Parcel G buildings and former buildings site, which typically included surface gamma scans, static measurements, and swipe samples or soil samples collected from discrete locations. The results of the FSS activities performed for the Parcel G buildings and former buildings site demonstrated that residual radioactivity levels met the radionuclide-specific release criterion for each ROC. No evidence of residual radioactivity above the release criteria was found to be present based on the results of the survey activities and laboratory analytical results. Analysis and evaluation of the collected field data showed that the residual radioactivity in the Parcel G buildings and former buildings site achieved the release criteria, and the buildings and former buildings site were ready for unconditional radiological release for unrestricted use.

The ALARA process was followed for each of the radiologically impacted Parcel G buildings and former buildings site. ALARA was implemented through identification of potential radiological impacts, review of radiological impacts, and the performance of qualitative and quantitative analyses. The majority of the data and analysis used for the ALARA evaluations was developed as part of the routine work processes. Results from radiological survey activities, and air, swipe, and soil samples were used to assess the potential radiological impacts of the Parcel G activities. These activities included characterization to ensure complete removal of radioactive material exceeding the release criteria. Based on recent estimates of dose to the public from the Parcel G radiological survey activities, only qualitative ALARA analyses were required. Qualitative ALARA analysis for the radiologically impacted Parcel G buildings and former buildings site resulted in no alpha or beta measurements above the investigation levels and did not identify residual radioactivity above the release criteria.

At the conclusion of the activities for the impacted Parcel G buildings and former buildings site, an FSS report was prepared to document the radiological work performed and the survey results. These FSS reports were submitted to the regulatory agencies for review. Radiological release for unrestricted use of each of the Parcel G buildings and former buildings site has been obtained from the California Department of Toxic Substances Control (DTSC) and the Department of Public Health (CDPH), Environmental Management Branch. According to statements by the U.S. Environmental Protection Agency, their decision for radiological free release of the Parcel G buildings and former buildings site will be based on the data and analyses presented in this RACR.

Conclusions and Recommendation

The DON has met its stated remediation goals and achieved its RAO for the approximately 40 acres of Parcel G property. The RAO was developed to protect public health, welfare, and the

environment from actual or potential releases of radiologic contaminants and preclude potential exposure to future residents or workers by physically removing and disposing of radioactive contaminants that exceeded the radiological remediation goals. By achieving the RAO, the possible migration of contaminated material within or outside Parcel G was substantially reduced and potential exposure to ROCs in concentrations that exceed remediation goals was eliminated for all potentially complete exposure pathways.

Each of the 63 trench survey units associated with the Parcel G storm drain and sanitary sewer systems was modeled and the results met the risk criterion of less than 3×10^{-4}, which supports radiological free release. In addition, each of the Parcel G impacted buildings and former buildings site have received concurrence from DTSC and CDPH for radiological release for unrestricted use.

The information described and summarized in this RACR, each of the 63 SUPRs, and the buildings and former buildings site FSS results support the DON's conclusion that Parcel G is ready for unconditional, unrestricted radiological free release. Based on the storm drain and sanitary sewer systems fieldwork performed, data collected and evaluated, subsequent remediation of identified contamination, off-site disposal of contaminated material, verification activities, and concurrence with radiological release for unrestricted use of Buildings 351, 351A, 366, 401, 408, 411, and 439 and the Buildings 317/364/365 Site, the DON achieved the remediation goals and RAO identified in the ROD (DON 2009) and the classification of "radiologically impacted" should be removed. No further radiological action is required for Parcel G.

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  NAVFAC Restoration Record Number N00217-002737

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  NAVFAC Restoration Record Number N00217-002724

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- Final Survey Unit 81 Project Report
  DCN: ECSD-3211-0018-0131
  NAVFAC Restoration Record Number N00217-002682
- Final Survey Unit 83 Project Report
  DCN: ECSD-3211-0018-0133
  NAVFAC Restoration Record Number N00217-002685
- Final Survey Unit 122 Project Report
  DCN: ECSD-3211-0018-0162
  NAVFAC Restoration Record Number N00217-002612
- Final Survey Unit 123 Project Report
  DCN: ECSD-3211-0018-0163
  NAVFAC Restoration Record Number N00217-002614
- Final Survey Unit 124 Project Report
  DCN: ECSD-3211-0018-0164
  NAVFAC Restoration Record Number N00217-002693
- Final Survey Unit 129 Project Report
  DCN: ECSD-3211-0018-0165
  NAVFAC Restoration Record Number N00217-002700

Appendix L Work Area 19 South Survey Unit Project Reports (Trench Survey Units 76, 77, 78, 79, 80, 82, 92, 93, 94, 106, 107, 108, and 116) (on CD only)

- Final Survey Unit 76 Project Report
  DCN: ECSD-3211-0018-0126
  NAVFAC Restoration Record Number N00217-002601

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- Final Survey Unit 77 Project Report
  DCN: ECSD-3211-0018-0127
  NAVFAC Restoration Record Number N00217-002603
- Final Survey Unit 78 Project Report
  DCN: ECSD-3211-0018-0128
  NAVFAC Restoration Record Number N00217-002604
- Final Survey Unit 79 Project Report
  DCN: ECSD-3211-0018-0129
  NAVFAC Restoration Record Number N00217-002675
- Final Survey Unit 80 Project Report
  DCN: ECSD-3211-0018-0130
  NAVFAC Restoration Record Number N00217-002681
- Final Survey Unit 82 Project Report
  DCN: ECSD-3211-0018-0132
  NAVFAC Restoration Record Number N00217-002684
- Final Survey Unit 92 Project Report
  DCN: ECSD-3211-0018-0171
  NAVFAC Restoration Record Number N00217-002519
- Final Survey Unit 93 Project Report
  DCN: ECSD-3211-0018-0172
  NAVFAC Restoration Record Number N00217-002520
- Final Survey Unit 94 Project Report
  DCN: ECSD-3211-0018-0173
  NAVFAC Restoration Record Number N00217-002527
- Final Survey Unit 106 Project Report
  DCN: ECSD-3211-0018-0147
  NAVFAC Restoration Record Number N00217-002513
- Final Survey Unit 107 Project Report
  DCN: ECSD-3211-0018-0148
  NAVFAC Restoration Record Number N00217-002515
- Final Survey Unit 108 Project Report
  DCN: ECSD-3211-0018-0149
  NAVFAC Restoration Record Number N00217-002619
- Final Survey Unit 116 Project Report
  DCN: ECSD-3211-0018-0156
  NAVFAC Restoration Record Number N00217-002629

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Appendix M Work Area 27 North Survey Unit Project Reports (Trench Survey Units 103, 104, and 105) (on CD only)

- Final Survey Unit 103 Project Report
  DCN: ECSD-3211-0018-0144
  NAVFAC Restoration Record Number N00217-002510
- Final Survey Unit 104 Project Report
  DCN: ECSD-3211-0018-0145
  NAVFAC Restoration Record Number N00217-002511
- Final Survey Unit 105 Project Report
  DCN: ECSD-3211-0018-0146
  NAVFAC Restoration Record Number N00217-002512

Appendix N Work Area 27 South Survey Unit Project Reports (Trench Survey Units 109, 110, 111, 112, and 113) (on CD only)

- Final Survey Unit 109 Project Report
  DCN: ECSD-3211-0018-0150
  NAVFAC Restoration Record Number N00217-002620
- Final Survey Unit 110 Project Report
  DCN: ECSD-3211-0018-0151
  NAVFAC Restoration Record Number N00217-002622
- Final Survey Unit 111 Project Report
  DCN: ECSD-3211-0018-0152
  NAVFAC Restoration Record Number N00217-002624
- Final Survey Unit 112 Project Report
  DCN: ECSD-3211-0018-0153
  NAVFAC Restoration Record Number N00217-002625
- Final Survey Unit 113 Project Report
  DCN: ECSD-3211-0018-0154
  NAVFAC Restoration Record Number N00217-002627

Appendix O Work Areas 17, 18, 19, and 27 South Survey Unit Project Report (Trench Survey Unit 204) (on CD only)

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Appendix P Building 366 Final Status Survey Report and Survey Unit 70 Final Status Survey Results Report (on CD only)

- Final Final Status Survey Results, Building 366
  DCN: ECSD-5713-0072-0043
  NAVFAC Restoration Record Number N00217-001737
- Final Status Survey Results, Survey Unit 70, Building 366
  DCN: ECSD-5713-0072-0050
  NAVFAC Restoration Record Number N00217-003630

Appendix Q Building 351 Final Status Survey Report (on CD only)

- Final Final Status Survey Results, Building 351
  DCN: ECSD-5713-0072-0045.R1
  NAVFAC Restoration Record Number N00217-001754

Appendix R Building 351A Final Status Survey Report (on CD only)

- Final Final Status Survey Results, Building 351A
  DCN: ECSD-3211-0018-0009
  NAVFAC Restoration Record Number N00217-001989

Appendix S Buildings 317/364/365 Site Final Status Survey Report (on CD only)

- Final Final Status Survey Results, Buildings 317/364/365 Site
  DCN: ECSD-3211-0018-0015
  NAVFAC Restoration Record Number N00217-002297

Appendix T Building 401 Final Status Survey Report (on CD only)

- Final Final Status Survey Results, Building 401
  DCN: ECSD-5713-0072-0015.R1
  NAVFAC Restoration Record Number N00217-001589

Appendix U Building 408 Final Status Survey Report (on CD only)

- Final Final Status Survey Results, Building 408 Site
  DCN: ECSD-5713-0072-0019.R1
  NAVFAC Restoration Record Number N00217-001578

Appendix V Building 411 Final Status Survey Report (on CD only)

- Final Final Status Survey Results, Building 411
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  NAVFAC Restoration Record Number N00217-001955

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  DCN: ECSD-5713-0072-0021.R1
  NAVFAC Restoration Record Number N00217-001580

Appendix X Buildings and Former Buildings Site Final Status Survey Regulatory Concurrence for Unrestricted Radiological Release (on CD only)

Appendix Y Response to Comments

ABBREVIATIONS AND ACRONYMS

ALARA	as low as reasonably achievable
AM	Action Memorandum
ARAR	applicable or relevant and appropriate requirement
bgs	below ground surface
BUMED	Navy Bureau of Medicine and Surgery
CDPH	California Department of Public Health, Environmental Management Branch
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CIP	cast iron pipe
cm^2	square centimeter
CMP	corrugated metal pipe
Co-60	cobalt-60
Cs-137	cesium-137
CSM	Conceptual Site Model
CTO	Contract Task Order
DCGL	derived concentration guideline level
DON	Department of the Navy
dpm	disintegrations per minute
DTSC	(California) Department of Toxic Substances Control
EP	extraneous pipe
EPA	U.S. Environmental Protection Agency
ES	Excavated Soil Survey Unit
FSS	Final Status Survey
GPS	Global Positioning System
HPNS	Hunters Point Naval Shipyard
HRA	Historical Radiological Assessment
IR	Installation Restoration (Program)
LLRW	low-level radioactive waste
m^2	square meter
MARSSIM	Multi-Agency Radiation Survey and Site Investigation Manual
MDL	method detection limit

ABBREVIATIONS AND ACRONYMS
(Continued)

mrem/y	millirems per year
NAVSEA	Naval Sea Systems Command
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NRC	Nuclear Regulatory Commission
NRDL	Naval Radiological Defense Laboratory
pCi/g	picocuries per gram
Pu-239	plutonium-239
PVC	polyvinyl chloride
Ra-226	radium-226
RACR	Removal Action Completion Report
RAO	removal action objective
RASO	Radiological Affairs Support Office
RCA	radiologically controlled area
ROC	radionuclide of concern
ROD	Record of Decision
RSO	Radiation Safety Officer
RSY2	Radiological Screening Yard 2
RSY4	Radiological Screening Yard 4
SAP	Sampling and Analysis Plan
SARA	Superfund Amendments and Reauthorization Act
SFRA	San Francisco Redevelopment Agency
SI	Site Investigation
Sr-90	strontium-90
SUPR	Survey Unit Project Report
SUPRA	Survey Unit Project Reports Abstract
Th-232	thorium-232
TO70	Task Order 0070
TtEC	Tetra Tech EC, Inc.
TU	Trench Survey Unit
U-235	uranium-235

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ABBREVIATIONS AND ACRONYMS
(Continued)

UC1	Utility Corridor 1
UC2	Utility Corridor 2
UC3	Utility Corridor 3
VCP	vitreous clay pipe
VSP	Visual Sample Plan

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1.0 INTRODUCTION

The U.S. Department of the Navy (DON) directed Tetra Tech EC, Inc. (TtEC) to prepare this Removal Action Completion Report (RACR) to describe and summarize the Parcel G building and former building site Final Status Survey (FSS) activities, and storm drain and sanitary sewer removal action at Hunters Point Naval Shipyard (HPNS) located in San Francisco, California. This RACR was prepared to summarize the results of the radiological work performed on Parcel G to protect the public health, welfare, and the environment from actual or potential releases of radiologic contaminants and to document achievement of the radiological removal action objective (RAO) identified in the "Record of Decision for Parcel G" (ROD) (DON 2009). Except in relation to reuse or disposal of excavated soil derived from removal of the Parcel G storm drain and sanitary sewer systems, this RACR does not address chemical contamination and does not include or affect any other designated HPNS parcels.

The Parcel G FSS and storm drain and sanitary sewer removal action activities were directed by the DON, Naval Facilities Engineering Command Southwest, and the Radiological Affairs Support Office (RASO) under multiple contracts and task orders. The storm drain and sanitary sewer removal activities for Trench Survey Units 66 through 99, 103 through 114, 116 through 124, 129, 151, and 153 were performed under Contract No. N44255-01-D-2000 and Task Order No. 0070 (TO70). The storm drain and sanitary sewer removal action activities for Trench Survey Units 100 through 102 and 115 as well as the FSS activities for Buildings 351, 351A, 366, 401, 408, 411, and 439 and the Buildings 317/364/365 Site were performed under Contract No. N68711-98-D-5713 and Contract Task Order (CTO) 0072. In addition, Trench Survey Unit 204 excavation and radiological activities were performed under Contract No. N62473-10-D-0809 and CTO 0007. The soil derived from excavation of the Parcel G storm drain and sanitary sewer systems was processed in Radiological Screening Yard (RSY2) constructed at HPNS under Contract No. N44255-01-D-2000 and TO70 and Radiological Screening Yard 4 (RSY4) constructed under Contract N62473-08-D-8823 and CTO 0003. Beginning in April 2009, the Parcel G excavated soil was radiologically processed under Contract No. N62473-07-D-3211 and CTO 0018 and subsequently under Contract N62473-10-D-0809 and CTO 0004. Initially, sections of this RACR were prepared under TO70; however, the majority of this document was prepared and completed under CTO 0018.

The Parcel G storm drain and sanitary sewer removal action was performed in accordance with the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986 and, to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

1.1 HUNTERS POINT NAVAL SHIPYARD LOCATION AND DESCRIPTION

The HPNS site lies entirely within the corporate boundaries of the County of San Francisco, at the southeast corner of the City of San Francisco, California (Figure 1-1). The HPNS site encompasses approximately 848 acres, including about 416 acres on land situated on a 2-mile-long promontory projecting southeastward into San Francisco Bay. The remaining 432 acres constitute the adjacent offshore areas.

In 1992, the DON divided HPNS into five contiguous parcels (A through E) to expedite remedial action activities and land reuse. Parcel F was designated in 1996 and encompasses the offshore areas. The DON designated the landfill area in Parcel E as Parcel E-2 in September 2004. Subsequently, Parcel A was transferred to the City and County of San Francisco. In July 2008, the DON again divided HPNS into eight parcels (B, C, D-1, D-2, E, E-2, G, and F) and three utility corridors identified as Utility Corridor 1 (UC1), Utility Corridor 2 (UC2), and Utility Corridor 3 (UC3) (Figure 1-2). Parcels B, C, D-1, D-2, E, E-2, G and UC1, UC2, and UC3 encompass the onshore areas,

Based on the HPNS radiological operational history described in the final "Historical Radiological Assessment, Volume II" (HRA) prepared by the Naval Sea Systems Command (NAVSEA) in 2004 (NAVSEA 2004) and site-specific investigative data, the DON determined that potential low-level radioactive contamination in soils and debris at HPNS required a response action. This decision is documented in the final "Base-wide Radiological Removal Action, Action Memorandum" (AM) (DON 2006). The AM was revised and updated to implement the recommendations of the HRA (NAVSEA 2004).

1.2 PARCEL G SITE DESCRIPTION

Originally, the 98 acres designated as Parcel D located in the central portion of HPNS was part of the industrial support area and was used for shipping, ship repair, and office and commercial activities. Parcel D was divided in July 2008 into Parcel D-1, Parcel D-2, Parcel UC1, and Parcel G. In addition, a small area perpendicular to H Street was added to Parcel G so that the property boundary extended straight along H Street. The purpose of the Parcel D division into four separate parcels was to support the potential early transfer of Parcel G to the City and County of San Francisco.

Approximately 40 acres in area, Parcel G extends from Spear Avenue on the north, to Morrell Street on the east, to 3rd Avenue on the south, and to H Street on the west (Figure 1-2). It is bounded on the north by Parcel UC1, on the east by Parcels C and D-1, on the south by Parcels D-1 and E, and on the west by Parcel E. Radiologically surveyed and released Buildings 351, 351A, 366, 401, 408, 411, and 439 as well as the radiologically surveyed and released Buildings 317/364/365 Site are located within the boundaries of Parcel G.

Parcel G consists of relatively flat lowlands with surface elevations between zero and 10 feet above mean sea level. These lowlands were constructed of borrowed fill material from various sources. The sources of the fill material included crushed serpentinite bedrock from the adjacent hills and dredged sediments. The serpentinite bedrock and bedrock-derived fill material consists of naturally occurring minerals including asbestos, arsenic, manganese, nickel, and other metals. The geology of Parcel G generally consists of artificial fill and undifferentiated sands over Bay Mud over coast-range bedrock. The majority of the Parcel G ground surface is covered with buildings and pavement. No threatened or endangered species are known to inhabit Parcel G and there is no viable terrestrial habitat.

1.3 CURRENT AND FUTURE LAND USE

Currently, each of the buildings located on Parcel G are vacant. Based on the San Francisco Redevelopment Agency's (SFRA) "Hunters Point Shipyard Redevelopment Plan" (Redevelopment Plan) (SFRA 1997), Parcel G is expected to be zoned to accommodate several uses, including:

- Educational and cultural
- Mixed use
- Industrial
- Open space

The mixed-use areas may include single-family homes, upper-story housing, or live/work arrangements and a variety of commercial enterprises, artist studios, retail, and business services on the ground floor. The cultural and educational area may include museums. The open space areas will provide public access and use of the waterfront as well as provide a corridor for the Bay Trail (hiking and bicycle access) close to the shoreline of San Francisco Bay (SFRA 1997).

1.4 PHOTOGRAPHS

The work performed during the Parcel G radiological activities was well documented using a photographic record. Photographs of typical operations, processes, and procedures performed during the Parcel G radiological fieldwork are provided in this RACR prior to the appendices.

1.5 PURPOSE AND ORGANIZATION OF REPORT

The purpose of this RACR is to describe and summarize the results of the radiological work performed on Parcel G to protect the public health, welfare, and the environment from actual or potential releases of radiologic contaminants and document the results of the implemented radiological remedial action selected in the ROD (DON 2009). The radiological work performed for Parcel G included storm drain and sanitary sewer systems removal as well as the FSS efforts

completed for Buildings 351, 351A, 366, 401, 408, 411, 439, and the Buildings 317/364/365 Site. This RACR is organized as follows:

- **Section 1.0 Introduction** – Section 1.0 provides project information including descriptions of Parcel G within the context of HPNS, current and future land use of the property, fieldwork photographic documentation, and the purpose and organization of the RACR document.
- **Section 2.0 Background** – Section 2.0 presents an abbreviated history of the storm drain and sanitary sewer systems, discusses the transport of radionuclides at HPNS, identifies the RAO and remediation goals, and summarizes the various documents that support the radiological work performed on Parcel G.
- **Section 3.0 Parcel G Overview** – Section 3.0 provides an overview of both the storm drain and sanitary sewer removal action and the FSS activities for the radiologically impacted buildings and former buildings site. This section summarizes the procedures for performance of the work activities, identifies those activities common to each of the trench survey units and buildings/site, and discusses the Installation Restoration (IR) Program sites associated with Parcel G.
- **Section 4.0 Work Area 17 North** – Section 4.0 summarizes the storm drain and sanitary sewer removal activities performed for Trench Survey Units 66 through 71, 100 through 102, and the FSS activities for Building 366.
- **Section 5.0 Work Area 17 South** – Section 5.0 summarizes the storm drain and sanitary sewer removal activities for Trench Survey Units 72 and 73.
- **Section 6.0 Work Area 18 North** – Section 6.0 summarizes the storm drain and sanitary sewer removal activities for Trench Survey Units 84 through 91, 114, 119 through 121, and 151.
- **Section 7.0 Work Area 18 South** – Section 7.0 summarizes the storm drain and sanitary sewer removal activities for Trench Survey Units 95 through 99, 115, 117, 118, and 153. This section also includes a discussion of the FSS activities performed for Buildings 351 and 351A and the Buildings 317/364/365 Site.
- **Section 8.0 Work Area 19 North** – Section 8.0 summarizes the storm drain and sanitary sewer removal activities for Trench Survey Units 74, 75, 81, 83, 122 through 124, and 129. In addition, this section describes the FSS activities performed for Building 401.
- **Section 9.0 Work Area 19 South** – Section 9.0 summarizes the storm drain and sanitary sewer removal activities for Trench Survey Units 76 through 80, 82, 92 through 94, 106 through 108, and 116. This section also includes a discussion of the Buildings 408 and 411 FSS activities.
- **Section 10.0 Work Area 27 North** – Section 10.0 summarizes the storm drain and sanitary sewer removal activities for Trench Survey Units 103, 104, and 105.

- **Section 11.0 Work Area 27 South** – Section 11.0 summarizes the storm drain and sanitary sewer removal activities for Trench Survey Units 109 through 113 and the Building 439 FSS activities.
- **Section 12.0 Work Areas 17, 18, 19, and 27 South** – Section 12.0 summarizes the storm drain and sanitary sewer removal activities performed for Trench Survey Unit 204.
- **Section 13.0 Site Restoration and Swale Construction** – Section 13.0 describes the site restoration activities completed for Parcel G and the installation of the HPNS swale system.
- **Section 14.0 Removal Action Cost Summary** – Section 14.0 summarizes the estimated costs associated with the Parcel G removal action.
- **Section 15.0 Conclusions and Recommendation** – Section 15.0 presents the conclusions and recommendation for radiological release for unrestricted use of Parcel G.
- **Section 16.0 References** – Section 16.0 lists the documents and references cited in this Parcel G RACR.
- **Appendices A through Y** – The appendices present information and technical data gathered during the performance of the storm drain and sanitary sewer removal action and the FSS building and former buildings site activities to support the conclusions and recommendation of this RACR. The Response to Comments on the Draft Parcel G RACR is provided in Appendix Y.

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2.0 BACKGROUND

The following sections provide an abbreviated history and pertinent background information leading to the development of the HPNS Conceptual Site Model (CSM) and the Parcel G RAO. Included are brief descriptions of the supporting documents and reports that guided the Parcel G storm drain and sanitary sewer removal action and building/site FSS work activities.

2.1 HISTORY

The DON obtained ownership of HPNS for shipbuilding, repair, and maintenance in 1940. HPNS began using radioactive materials in shipyard operations and Naval Radiological Defense Laboratory (NRDL) research projects in the early 1940s. Operations at HPNS included ship decontamination, repair, and dismantling activities that generated radium dial and sandblast grit waste streams. In addition, the DON managed a waste disposal program that included the removal of radioactive materials from HPNS. Between 1946 and 1947, HPNS operations included decontamination activities on ships used during OPERATION CROSSROADS nuclear weapons tests. NRDL activities and projects included research into decontamination methods, personnel protection, development of radiation detection instrumentation, effects of radiation on living organisms and natural and synthetic materials, and experimentation with decontamination methodologies. The NRDL research projects ended in 1969, and the associated buildings were decontaminated and cleared for unrestricted reuse based on the standards in place at that time. The DON deactivated HPNS operations in 1974 and the property remained largely unused until 1976. HPNS was leased to Triple A Machine Shop, Inc., a private ship repair company, from 1976 to 1986 when its tenancy was terminated. The DON resumed its occupancy of HPNS in 1987.

The present-day configuration of the storm drain and sanitary sewer systems at HPNS is the result of an evolutionary process. These systems were originally designed and built in the 1940s as a combined system, using the same conveyance piping and 40 separate discharge outfalls into San Francisco Bay. This combined system grew in sections from the 1940s to its maximum size in 1958, when it underwent the first in a series of separation projects. The purpose of the separation projects was to provide for installation of dedicated sanitary sewer piping and pump stations that would discharge sanitary sewer effluent off-site to a publicly-owned treatment plant operated by the City and County of San Francisco. A sewage lift station was constructed specifically for conveyance of much of the sanitary sewage; however, stormwater flows from heavy rains would overwhelm the sewage lift station and much of the sewage and stormwater diverted to various existing outfalls into the San Francisco Bay (DON 2008).

Separation of the storm drain and sanitary sewers involved installation of dedicated sanitary sewer collection piping or diversion structures within the combined system. A total of 28 San Francisco Bay outfalls were converted for exclusive use as stormwater outlets, while 12 continued to serve as combined outlets. In 1973, the second separation project was undertaken including the removal of some of the stormwater outfalls from the South Basin area, just offshore from the Parcel E shoreline. The last of the separation projects was completed in 1976 and involved the installation of additional dedicated sanitary sewer piping. Complete separation of the combined systems was never achieved, and subsequent inspections revealed that cross-connections may still exist. Due to the evolutionary nature of the separation process, radiological contamination from the same sources may have impacted storm drain and sanitary sewer systems piping and other components.

As a result of the historical radiological operations at HPNS, some buildings, storm drain and sanitary sewer lines, soil, debris, and slag material have indicated the potential presence of low-level radioactive contamination. Hazardous materials also have been found at HPNS. Pursuant to CERCLA and as amended by SARA, HPNS was placed on the National Priorities List in 1989.

2.2 CONCEPTUAL SITE MODEL

Radioactive material consists of radionuclides that are unstable and undergo spontaneous transformations by releasing energy until a stable state is reached. This transformation process, or radioactive decay, is usually accompanied by the emission of charged particles (e.g., alpha and beta particles) or gamma rays. The radionuclides potentially present at HPNS likely were the result of:

- Burial along with excavated fill materials while increasing the footprint of HPNS
- Residue from decontamination of ships or workers
- Residual contamination as a result of NRDL experiments or tests in structures or land areas
- Residual contamination from shipyard operations
- Release into sanitary sewers and storm drains

The CSM is based on the supposition that radioactive materials likely were discharged from numerous locations throughout HPNS into the storm drain and sanitary sewer systems and may have been released into surrounding soils during the course of normal operations and maintenance or repair activities (DON 2008). Manholes at HPNS have been found to be constructed of concrete and/or brick and appeared to be porous, likely resulting in the transport of contamination into the surrounding soil. Piping at HPNS was composed of:

- Concrete
- Vitreous clay pipe (VCP)
- Cast iron pipe (CIP)
- Corrugated metal pipe (CMP)
- Fiberglass
- Brick
- Steel
- Perforated metal
- Polyvinyl chloride (PVC) plastic
- Concrete-encased VCP
- Steel and VCP

Typically, the individual pipe sections were connected by unsealed slip fittings at joints. Some leakage from the piping was anticipated when the storm drain and sanitary sewer systems were installed. Historical information indicates that the storm drain and sanitary sewers often were cleaned by power washing that may have forced radiological contamination out of the piping into the surrounding soils. The most recent power washing event was performed at HPNS in 1999. Power washing of these old sewer systems may easily have caused further cracks or breaks in the piping and subsequent migration of contamination into the surrounding soil. The migration and extent of radiological soil contamination at HPNS likely depended on how and where releases from the storm drain and sanitary sewer systems occurred.

The HPNS storm drain and sanitary sewer removal actions performed throughout Parcels B, C, D-2, G, UC1, UC2, and UC3 support the accuracy of the CSM. Similar types of fill materials were found in the excavated trenches and no waste materials were discovered during excavation. Identified radiological contamination has been found primarily in excavated soil at HPNS. There has been little indication of historical spills or accidental releases based on the historical research performed and radiologically impacted site investigations (DON 2008).

2.3 REMOVAL ACTION OBJECTIVE AND REMEDIATION GOALS

Based on the radiological operational history described in the final HRA, Volume II (NAVSEA 2004), the DON determined that low-level radioactive contamination potentially present in some buildings, storm drain and sanitary sewer lines, soil, debris, and slag material at HPNS required a response action. This decision was documented in the final AM (DON 2006). The purpose of the AM was to document the DON's decision to perform time-critical removal actions at areas throughout HPNS that could contain localized radioactive contamination and substantially eliminate identified exposure pathways to surrounding populations and nearby ecosystems.

The DON identified the applicable or relevant and appropriate requirements (ARARs) for the HPNS removal actions, which were presented in Appendix A of the AM (DON 2006). Only those standards identified by the State of California in a timely manner that were more stringent than federal requirements became ARARs.

The cleanup goals for localized radioactive contamination at HPNS presented in the AM (DON 2006) were derived in consultation with federal and state regulators to meet the most conservative requirements at the time the AM (DON 2006) was being written. The maximum radiological dose release criteria delineated in the AM was based on the Nuclear Regulatory Commission (NRC) dose limit of 25 millirems per year (mrem/y). However, the residual dose for the majority of the release criteria is well below that limit. Currently, the DON reviews all surveys and remedial actions to ensure that residual radioactivity at HPNS meets the dose criterion of less than 15 mrem/y and the risk criterion of less than 3×10^{-4} when clearing radiologically impacted sites for unrestricted release. The radiological release criteria identified in the AM are reproduced in this RACR as Table 2-1. The HRA, Volume II (NAVSEA 2004) and Parcel G ROD (DON 2009) listed cesium-137 (Cs-137), radium-226 (Ra-226), and strontium-90 (Sr-90) as the radionuclides of concern (ROCs) for the storm drain and sanitary sewer systems removal action.

The final ROD for Parcel G (DON 2009) was signed on February 18, 2009 after the Parcel G radiological fieldwork was largely completed under the AM (DON 2006). This document presented the selected remedy for Parcel G and addressed both chemical and radiological contamination. The final ROD was developed and the remedy selected in accordance with CERCLA as amended by SARA and, to the extent practicable, the NCP. The ARARs for Parcel G were provided as Attachment 1 to the ROD (DON 2009). The selected remedy for radiologically impacted soil and structures identified in the ROD (DON 2009) included survey, decontamination, excavation, disposal, and release.

The RAO identified in the Parcel G ROD (DON 2009) for radiologically impacted sites was to prevent exposure to ROCs in concentrations that exceed remediation goals for all potentially complete exposure pathways. The remediation goals were selected to achieve the RAO and were used to measure the success of the removal action. These remediation goals were equivalent to the radiological release criteria identified in the AM (DON 2006) for HPNS (Table 2-1). The Parcel G radiological remediation goals were identified in Table 5 of the ROD and are reproduced in this RACR as Table 2-2.

The radiological remedy selected in the Parcel G ROD (DON 2009) met the RAO by 1) identifying and decontaminating any radiologically impacted structures and 2) removing the source of contamination in soils by excavating the storm drain and sanitary sewer systems with proper off-site disposal of radiologically contaminated material. The RAO was achieved by performing radiological surveys of designated impacted buildings (Buildings 351, 351A, 366,

401, 408, 411, and 439) and former building sites (Buildings 317/364/365 Site) with documented radiological impacts for unrestricted release and removing potentially radiologically impacted storm drain and sanitary sewer systems and soils. As defined in the ROD (DON 2009), unrestricted radiological release means that Parcel G can be used for any residential or commercial purpose once regulatory requirements are met.

2.4 SUPPORTING DOCUMENTS SUMMARY

The following sections summarize the relevant supporting work plans and other documents necessary to facilitate and complete the radiological removal action and FSS activities associated with Parcel G. No deviations to these work plans were implemented during the Parcel G removal action. Each of these supporting documents is incorporated by reference into this RACR.

2.4.1 Base-wide Storm Drain and Sanitary Sewer Removal Work Plan

The Parcel G work activities were performed in accordance with the "Base-Wide Storm Drain and Sanitary Sewer Removal Work Plan, Hunters Point Shipyard, San Francisco, California" (TtEC 2006a) and its subsequent revisions (TtEC 2007a, 2008c, 2008d, and 2010), collectively referred to as the Work Plan throughout this RACR. The Work Plan presents the overall scope and approach for storm drain and sanitary sewer systems removal and radiological survey and release of the excavated trench areas at HPNS.

The general approach to removing and radiologically surveying the storm drain and sanitary sewer lines described in the Work Plan (TtEC 2010) was to:

- Excavate soil to a minimum depth of 1 foot below the pipe
- Remove the pipelines
- Plug open sewer or storm drain lines left in place during the removal process to prevent water from entering or exiting pipes
- Perform ex situ radiological screening and sampling of the excavated soil
- Conduct FSS activities on excavated soil and exposed excavated trench surfaces
- Backfill the excavated trenches

Following an evaluation of the results of these activities and the removal of any identified radiological contamination, the trench excavations were backfilled and the site restored.

The Work Plan (TtEC 2010) specifies the work to be performed for the storm drain and sanitary sewer removal action activities including FSSs. FSSs for every excavated pipeline trench section included a 100 percent surface scan and the collection of systematic and biased static measurements, as appropriate. Following excavation, systematic soil samples were collected

after establishing a grid that did not exceed 1,000 square meters (m^2) over the exposed trench surface. A minimum of 18 systematic sample locations, based on a random start point and a triangular grid pattern, were generated using Visual Sample Plan (VSP) software. Sample collection points were placed in the field using approved land surveying technologies and identified with the Global Positioning System (GPS). The systematic samples were analyzed for radionuclides by gamma spectroscopy with 10 percent of the samples being analyzed for Sr-90. An additional 10 percent of the samples were sent to the off-site laboratory for quality assurance verification. The FSS results were used for dose modeling and evaluation of the results to facilitate regulatory agency concurrence for radiological release for unrestricted use.

The Work Plan provides the procedures and methodologies for performing the HPNS-wide storm drain and sanitary removal actions including:

- Radiological Control Plan
- FSSs
- Field Implementation
- Waste Management Plan
- Environmental Protection Plan
- Sampling and Analysis Plan (SAP)
- Project Quality Control Plan
- Stormwater Pollution Prevention Plan

In accordance with the Work Plan (TtEC 2010), most storm drain and sanitary sewer piping within each parcel or area were to be removed, although some piping may be left in place to be addressed at a later date and limited piping may be left in place permanently. Specifically, piping laterals originating at non-radiologically impacted buildings would only be removed within the first 10 feet of their union with a main trunk line. If radiological contamination was not present in this segment of the line, the exposed ends of the lateral were capped or plugged and the remaining portions left in place. If evidence of radiological contamination was encountered, the remaining lateral was removed to the extent practicable. In addition, piping located within 10 feet of a building (referred to in this RACR as the 10-foot buffer zone) or other obstruction was left in place to protect the integrity of the structure and to ensure the health and safety of workers and tenants.

2.4.2 Final Design Plan Work Areas 17, 18, 19, and 27

The "Final Design Plan Work Areas 17, 18, 19, and 27, Revision 1" (Design Plan) (TtEC 2007c) for the storm drain and sanitary sewer removal activities was prepared for the DON and submitted to the regulatory agencies and other interested parties on August 7, 2007. Based on

the requirements specified in the Work Plan (TtEC 2010), the Design Plan described the project-specific scope of work and the approach for removing the storm drain and sanitary sewer lines in Work Areas 17, 18, 19, and 27 of Parcel D that later encompassed the majority of Parcel G.

The Design Plan specified the extent of the storm drain and sanitary sewer systems to be removed and provided information regarding pipe size, flow direction, material type, and length. The detailed design drawings were based on the 1995 engineering drawings provided by the DON. Existing topographic data were obtained from the HPNS Base Map (44 sheets) dated November 1, 1993 (Gahagan and Brian 1993). Detailed design drawings, HPNS construction specifications (TtEC 2007b), and descriptions of the fieldwork procedures and methods applicable to the storm drain and sanitary sewer removal action were provided in the Design Plan. In addition, the Design Plan provides information related to construction of the HPNS temporary surface flow swale system for storm water management.

2.4.3 Base-wide Radiological Work Plan

The radiological work conducted for the Parcel G impacted buildings and former buildings site and other work control procedures were performed in accordance with the final "Base-wide Radiological Work Plan, Revision 1, Hunters Point Shipyard, San Francisco, California" (Radiological Work Plan) (TtEC 2007d). This document provides guidance for:

- Radiological training
- Various work control procedures
- Radiological survey types and classifications
- Survey planning and implementation
- Results assessment
- Release criteria and investigation levels
- Field and laboratory instruments
- Decontamination and remediation
- Radioactive materials management
- Quality assurance and control

The procedures and methodologies outlined in the Radiological Work Plan are applicable to the work performed for the radiologically impacted buildings and former buildings site, as well as other HPNS-wide support functions.

2.4.4 Final Survey Unit Project Reports Abstract

The "Final Survey Unit Project Reports Abstract, Revision 3, Sanitary Sewer and Storm Drain Removal Project, Hunters Point Shipyard, San Francisco, California" (SUPRA) (TtEC 2011) was prepared to document activities performed under the Work Plan (TtEC 2010) at HPNS. In general, this SUPRA is applicable to the storm drain and sanitary sewer removal actions performed at HPNS prior to December 31, 2010. To reduce the level of detail that typically would be redundant to each Survey Unit Project Report (SUPR), the SUPRA was developed as an overarching document that provides information and details common to each of the numerous trench survey units designated throughout HPNS during the storm drain and sanitary sewer removal action activities. The SUPRA is revised as state-of-the-art laboratory methodologies and quality assurance procedures are refined. This document is applicable to all HPNS storm drain and sanitary sewer SUPRs and data sets prepared for regulatory review. The SUPRA referenced in this RACR is provided in Appendix A.

The SUPRA provides a history of the storm drain and sanitary sewer systems at HPNS and documentation of the site's operational history. The SUPRA also presents detailed discussions and common information related to storm drain and sanitary sewer systems removal actions at HPNS including:

- Release limits
- As low as reasonably achievable (ALARA) process
- ROCs and associated release criteria
- Investigation levels for gamma scan surveys
- FSS objectives, design, and methodology
- RSY processing of peripheral material, overburden, and excavated soil
- Import fill sources, screening, and analytical results
- Reference areas
- Sample collection methodologies and laboratory analyses including gamma spectroscopy analysis flags
- Off-site laboratory selection
- Quality assurance, quality control, and comparative laboratory sample results
- Sr-90 analysis
- Uncertainty analysis
- Data assessment (verification, validation, and evaluation)
- Statistical tests

- Dose and risk modeling
- Final unrestricted radiological release criteria

The release criteria for storm drain and sanitary sewer soil ROCs, as presented in the SUPRA, are reproduced as Table 2-3 in this RACR and include residual doses for both outdoor workers and residents.

2.4.5 Survey Unit Project Reports

The radiological details of the storm drain and sanitary sewer removal work completed for Parcel G were provided in the final versions of the SUPRs for Trench Survey Units 66 through 124, 129, 151, 153, and 204. The objective of the SUPRs was to demonstrate that residual radioactivity levels along the sidewalls and bottom of the excavated trench and within the backfill material met the release criteria. Fieldwork and construction activities were briefly summarized in each SUPR; however, detailed information related to the fieldwork performed is provided in this RACR.

The individual SUPRs prepared for the storm drain and sanitary sewers associated with Parcel G present the radiological details and summarize the scope, approach, and survey results from the removal action activities. Each SUPR presented discussions and information including:

- FSS activities performed for the trench survey unit and selected backfill materials
- Laboratory analytical results and comparison of on-site and off-site analytical results
- Dose modeling with input parameters using the larger of the method detection limit (MDL) or reported activity
- Dose and risk modeling results
- Derived concentration guidelines, levels, and modeling
- ALARA and the environmental ALARA process, including identification and review of potential radiological impacts as well as discussions related to qualitative and quantitative ALARA analyses
- Recommendation for final unrestricted radiological release

A copy of each Parcel G SUPR is provided by Work Area in Appendices G (Work Area 17 North) through O (Work Areas 17, 18, 19, and 27 South).

2.4.6 U.S. Environmental Protection Agency Acceptance of On-Site Laboratory Results

The U.S. Environmental Protection Agency (EPA) is the lead regulatory agency for each time-critical removal action performed at HPNS. To expedite and focus remediation efforts, a state-of-the-art on-site laboratory for radiological analysis was established at HPNS under contract to TtEC. At a meeting regarding radiological cleanup of HPNS in October 2009, the California

Department of Toxic Substances Control (DTSC) and California Department of Public Health, Environmental Management Branch (CDPH) requested that the EPA submit a letter explaining their reasons for accepting the DON's on-site laboratory results to verify the completion of the radiological soil removal action.

On December 15, 2009, the EPA provided the CDPH with an explanation as to why the DON's methods provided sufficient data quality to allow risk-based determinations that the results of the removal activities were protective of human health and the environment. The EPA performed an inspection and documented that the procedures, conduct, and operational performance of the on-site laboratory were exemplary and that every reasonable step was being taken to show that the site-specific remediation goal was being met. A copy of the EPA letter to CDPH is provided in Appendix E.

3.0 PARCEL G OVERVIEW

This section is divided into three main components that provide an overview of the radiological activities performed for Parcel G. The purpose of this section is to eliminate redundancy in the remaining sections of this RACR and to provide an overview of the radiological work completed during the Parcel G field activities. The first component discusses those elements common to each of the trench survey units, and provides an overview of the storm drain and sanitary sewer systems removal action activities. The second component describes and summarizes the typical FSS activities performed for each radiologically impacted building and former buildings site associated with Parcel G. The final component summarizes the IR Program sites located within the boundaries of Parcel G and related chemical laboratory analytical results. The tables and figures introduced in each component of this section will be referenced throughout the remaining sections of this RACR.

Initially, the Parcel G radiological work activities were performed under New World Technologies, Inc.'s United States NRC Service Provider Radioactive Material License as a subcontractor to TtEC. Subsequently, TtEC continued the HPNS radiological work for the storm drain and sanitary sewer removal action and the impacted building and site FSS activities after invoking its own NRC license.

3.1 STORM DRAIN AND SANITARY SEWER REMOVAL ACTION OVERVIEW

The purpose of the removal action was to meet the RAO specified in the ROD (DON 2009) and achieve radiological release for unrestricted use of Parcel G. To meet the RAO, the storm drain and sanitary sewer systems within Parcel G were removed. The RAO was developed to protect public health and welfare and the environment, and to preclude potential exposure to future residents or workers by physically removing the existing storm drain and sanitary sewer lines and disposing of the associated radioactive contaminants that exceed the radiological remediation goals. Meeting the RAO substantially eliminates the potential migration of contaminated material within or outside of these systems at HPNS. The locations of the storm drain and sanitary sewer piping in Parcel G are depicted on Figure 3-1. The radiological release criteria for the storm drain and sanitary removal action identified in the AM (DON 2006) are provided in Table 2-1, the remediation goals listed in the ROD (DON 2009) are reproduced in Table 2-2, and the release criteria provided in the SUPRA (Appendix A) are presented in Table 2-3 of this RACR.

Initially, Parcel G was divided into four work areas (Work Areas 17, 18, 19, and 27) to expedite the storm drain and sanitary sewer removal action schedule and to ensure the accurate tracking of trench segments, piping, and trench survey units (TUs). For presentation in this RACR, these four Work Areas were further divided into northern and southern portions as follows:

- Work Area 17 North
  - Trench Survey Unit 66 (TU66)
  - Trench Survey Unit 67 (TU67)
  - Trench Survey Unit 68 (TU68)
  - Trench Survey Unit 69 (TU69)
  - Trench Survey Unit 70 (TU70)
  - Trench Survey Unit 71 (TU71)
  - Trench Survey Unit 100 (TU100)
  - Trench Survey Unit 101 (TU101)
  - Trench Survey Unit 102 (TU102)
- Work Area 17 South
  - Trench Survey Unit 72 (TU72)
  - Trench Survey Unit 73 (TU73)
- Work Area 18 North
  - Trench Survey Unit 84 (TU84)
  - Trench Survey Unit 85 (TU85)
  - Trench Survey Unit 86 (TU86)
  - Trench Survey Unit 87 (TU87)
  - Trench Survey Unit 88 (TU88)
  - Trench Survey Unit 89 (TU89)
  - Trench Survey Unit 90 (TU90)
  - Trench Survey Unit 91 (TU91)
  - Trench Survey Unit 114 (TU114)
  - Trench Survey Unit 119 (TU119)
  - Trench Survey Unit 120 (TU120)
  - Trench Survey Unit 121 (TU121)
  - Trench Survey Unit 151 (TU151)
- Work Area 18 South
  - Trench Survey Unit 95 (TU95)
  - Trench Survey Unit 96 (TU96)
  - Trench Survey Unit 97 (TU97)

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- Trench Survey Unit 98 (TU98)
- Trench Survey Unit 99 (TU99)
- Trench Survey Unit 115 (TU115)
- Trench Survey Unit 117 (TU117)
- Trench Survey Unit 118 (TU118)
- Trench Survey Unit 153 (TU153)

- Work Area 19 North
  - Trench Survey Unit 74 (TU74)
  - Trench Survey Unit 75 (TU75)
  - Trench Survey Unit 81 (TU81)
  - Trench Survey Unit 83 (TU83)
  - Trench Survey Unit 122 (TU122)
  - Trench Survey Unit 123 (TU123)
  - Trench Survey Unit 124 (TU124)
  - Trench Survey Unit 129 (TU129)

- Work Area 19 South
  - Trench Survey Unit 76 (TU76)
  - Trench Survey Unit 77 (TU77)
  - Trench Survey Unit 78 (TU78)
  - Trench Survey Unit 79 (TU79)
  - Trench Survey Unit 80 (TU80)
  - Trench Survey Unit 82 (TU82)
  - Trench Survey Unit 92 (TU92)
  - Trench Survey Unit 93 (TU93)
  - Trench Survey Unit 94 (TU94)
  - Trench Survey Unit 106 (TU106)
  - Trench Survey Unit 107 (TU107)
  - Trench Survey Unit 108 (TU108)
  - Trench Survey Unit 116 (TU116)

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- Work Area 27 North
  - Trench Survey Unit 103 (TU103)
  - Trench Survey Unit 104 (TU104)
  - Trench Survey Unit 105 (TU105)
- Work Area 27 South
  - Trench Survey Unit 109 (TU109)
  - Trench Survey Unit 110 (TU110)
  - Trench Survey Unit 111 (TU111)
  - Trench Survey Unit 112 (TU112)
  - Trench Survey Unit 113 (TU113)
- Work Areas 17, 18, 19, and 27 South
  - Trench Survey Unit 204 (TU204)

Some trench survey units crossed boundaries and were assigned to the Work Area in which the majority of the excavation was physically located or were distinctly associated with a radiologically impacted building or site. Detailed discussions of each of these trench survey units are provided in Sections 4.0 (Work Area 17 North) through 12.0 (Work Areas 17, 18, 19, and 27 South) of this RACR. The locations of the Work Areas and associated trench survey units in Parcel G are depicted on Figure 3-2. Table 3-1 summarizes the activities performed for each trench survey unit along with the assigned Work Area, associated trench segment identification numbers, size, and pertinent data related to samples collected, contamination, remediation, and dose and risk modeling results.

3.1.1 Pre-Excavation Field Activities

Pre-excavation field activities for the Parcel G removal action were initiated in June 2007. Temporary fencing was installed or reconfigured around the excavation locations and RSY2 to establish the radiologically controlled area (RCA). Pre-excavation activities included the development and refinement of the procedures to be used by the on-site laboratory, instrument calibration and testing and establishing operational practices for coordinating radiological screening and sampling activities. Geophysical surveys were performed and the storm drain and sanitary sewer lines were marked out. A total of 356 storm drain line segments and 152 sanitary sewer line segments were designated in Parcel G for excavation (Figure 3-1).

Traffic controls were implemented prior to beginning excavation of the storm drain and sanitary sewer lines. Wind socks were installed to determine the prevailing wind direction and ensure proper placement of the air monitoring equipment on a daily basis. Air monitors were installed

upwind and downwind of the excavation activities to measure airborne asbestos, particulates, lead, and magnesium and the results were uploaded to the DON's website as follows: http://www.bracpmo.navy.mil/basepage.aspx?baseid=45&state=&name=hps.

3.1.2 Storm Drain and Sanitary Sewer Systems Excavation Activities

Excavation of the storm drain and sanitary sewer systems was initiated on July 19, 2007 in Work Area 17 North and the last truckload of Parcel G soil was excavated on June 13, 2011. As indicated in Table 3-2, the depth of the excavations ranged from 1 foot below ground surface (bgs) to 22 feet bgs. In total, 23,166 linear feet of trench (inclusive of soil and piping) was excavated during the Parcel G removal action in accordance with the Work Plan (TtEC 2010). Of this 23,166 linear feet, 20,057 linear feet of piping was identified in the Design Plan (TtEC 2007c) and an additional 3,109 linear feet of piping was discovered either during the excavation activities or were associated with impacted buildings.

3.1.2.1 Soil Excavation

The soil generated during the Parcel G removal action was excavated in accordance with the Work Plan (TtEC 2010). At a minimum, soil associated with the storm drain and sanitary sewer systems was excavated to a depth of 1 foot below and to either side of the pipes. This soil often included small sections of crumbled pipe and crushed manhole pieces that were processed along with the excavated soil in RSY2 and RSY4. Each truckload of soil generated during excavation of the Parcel G storm drains and sanitary sewers was transferred to RSY2 or RSY4 for radiological processing. In total, 4,224 truckloads (approximately 50,688 cubic yards) of material was excavated from the Parcel G storm drain and sanitary sewers and transferred to either RSY2 or RSY4 for processing. Table 3-3 summarizes each truckload of soil generated during the storm drain and sanitary sewer removal activities, the assigned screening pad, and unique excavated soil survey unit identification number.

3.1.2.2 Radiological Screening Yard Processing of Excavated Soils

Excavated soil generated during the Parcel G storm drain and sanitary sewer removal action was radiologically processed in one of the screening yards (RSY2 or RSY4) specifically constructed for this purpose. This excavated soil was radiologically processed in the same manner, regardless of whether the material was transferred to RSY2 or RSY4.

Each truckload of excavated soil was delivered to an appropriate screening pad and was assigned an "ES" designation and unique sequential identification number for tracking purposes. A total of 181 excavated soil survey units were processed in RSY2 and RSY4 during the Parcel G storm drain and sanitary sewer systems removal action activities. Table 3-4 provides the unique ES identification number, IR Program site (if present), date on which the final gamma scan was performed, number of soil samples collected, identified ROCs and analytical results when

contamination was present, the volume of contaminated soil remediated, and final disposition of the processed soil.

Prior to radiological processing in RSY2 or RSY4, the excavated soils from Parcel G were spread on 1,000 m^2 screening pads in lifts that did not exceed a thickness of 6 inches and allowed to dewater. Radiological activities performed for the materials on each screening pad were tracked by the assigned ES identification number.

Radiological surface scans were performed for each excavated soil survey unit. These high-density gamma scans were conducted using gamma scintillation detectors supported by GPS equipment and resulted in a 100 percent surface scan. A discussion of the various towed array systems used for scanning is provided in the Work Plan (TtEC 2010) and the SUPRA (Appendix A). Radioactive materials identified during the screening activities were collected, segregated, and stored in appropriate containers for subsequent disposal by the DON's radiological waste contractor. Gamma scan data for each excavated soil survey unit used as backfill material were presented in the individual SUPRs included in Appendices G through O.

Areas of excavated soil on the screening pads that indicated the potential presence of radiation levels greater than the established investigation limits were further evaluated and biased soil samples were collected and submitted to the laboratory for analysis, as appropriate. Any soil associated with a sample result exceeding a radionuclide-specific release criterion was remediated. The release criteria for the storm drain and sanitary sewer removal action are identified in Tables 2-1, 2-2, and 2-3.

Following the removal of contaminated soils from the excavated soil survey units in RSY2 and RSY4, verification soil samples were collected and analyzed. If additional contamination was identified, further remediation was performed. This process was performed iteratively until the soil samples analyzed after each remediation event showed results less than the radionuclide-specific release criterion.

Typically, a minimum of 18 systematic FSS soil samples were collected from each excavated soil survey unit processed in RSY2 and RSY4 and analyzed by gamma spectroscopy. The systematic sample collection locations were based on a random start point using the most current version of VSP software. Once the FSS soil samples were determined to be less than the release criteria, concurrence was requested from the RASO to stage the excavated soil survey unit in the stockpile area pending receipt of the results of the off-site laboratory Sr-90 analysis. The off-site laboratory analytical results were evaluated against the release criteria, and a data package was prepared for the RASO's review. The RASO then concurred with whether or not the excavated soil survey unit was acceptable for use as backfill material. Only those excavated soil survey units that received concurrence from the RASO and were not chemically contaminated based on

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IR Program site analytical results were used as backfill material in the Parcel G storm drain and sanitary sewer trenches.

A total of 7,742 soil samples were collected from the Parcel G excavated soil survey units in RSY2 and RSY4 and analyzed by the laboratory using gamma spectroscopy. In addition, 10 percent of the soil samples were analyzed for Sr-90, and 10 percent were sent off-site for quality assurance verification. Based on the analytical results, 16 excavated soil survey units were disposed of as low-level radioactive waste (LLRW) in their entirety and about 2,828 cubic yards of soil was remediated from the excavated soil survey units for disposal by the DON's radiological waste contractor. Radionuclide concentrations above the release criteria in the excavated soil survey units processed in RSY2 and RSY4 were limited to Cs-137 ranging from 0.11899 picocuries per gram (pCi/g) to 0.53132 pCi/g and Ra-226 ranging from 1.4882 pCi/g to 4.4928 pCi/g. No concentrations above the release criterion were identified for Sr-90 in the excavated soil survey units processed in RSY2 or RSY4.

The majority of the Parcel G radiologically surveyed and released excavated soil survey units processed in RSY2 and RSY4 were backfilled into appropriate trench survey units with the concurrence of the RASO. The remaining excavated soil survey units were derived from IR Program site soils that exceeded the chemical release limits identified in the ROD (DON 2009) or were not acceptable for use as backfill material due to staining or odor. These chemically contaminated soils were staged pending off-site disposal and were subsequently transferred off-site by the DON's non-radiological waste contractor. The IR Program site chemical analytical results, comparison with the release criteria identified in the ROD (DON 2009), and identification of the elevated chemicals of concern are presented in Appendix F. Table 3-4 lists each of the Parcel G excavated soil survey units, pertinent information related to radiological screening, contamination levels identified and the associated ROC, estimated volume of soil remediated for disposal as LLRW, and the final disposition of the processed material.

3.1.3 Storm Drain and Sanitary Sewer Systems Piping

The Parcel G storm drain and sanitary sewer pipes and manholes (collectively called piping) were removed during excavation of the trenches. The majority of the piping was crushed or disintegrated during removal and the debris was transferred along with the surrounding soil to the RSY2 or RSY4 for radiological processing. Storm drain and sanitary sewer piping that was not crushed or crumbled during excavation activities in Parcel G was placed on plastic pending further activities. In total, 185 manholes and 1,959 sections of pipe were removed and staged during the Parcel G removal action pending further activities.

Sanitary sewer pipes in Parcel G consisted of 2-inch-diameter to 21-inch-diameter concrete, VCP, PVC, CIP, or steel located at depths between 1 foot and 21 feet bgs. The Parcel G storm drain lines consisted of 2-inch-diameter to 24-inch-diameter CIP, CMP, concrete, VCP, concrete-

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encased VCP, fiberglass, PVC, and steel pipes located at depths between 1 foot and 19 feet bgs. Table 3-2 identifies each trench survey unit, trench segment, type of trench segment (storm or sanitary), pipe material and diameter, and minimum and maximum depths for both the excavation and the pipe.

3.1.3.1 Pipe and Manhole Radiological Surveys

Radiological survey activities were performed during the Parcel G storm drain and sanitary sewer removal action for a total of 1,406 sections of pipe and 150 manholes. The radiological surveys consisted of a 100 percent surface scan of each pipe section and the materials forming each manhole. In addition, two static measurements were recorded, and two swipe samples were collected and submitted to the on-site laboratory for analysis. The collected data were reviewed by the Radiation Safety Officer (RSO) to determine whether investigative levels had been exceeded.

Several pipes and manholes exhibited radiological survey results that were greater than the release criteria. To reduce the volume of LLRW at HPNS, sampling and analysis for Sr-90 was performed in accordance with the "Work Instruction for Final Surveys of Potentially Contaminated Piping Systems Sanitary Sewer & Storm Drain Removal Activities" (Work Instruction) (TtEC 2008a) on selected piping to rule out the possibility of elevated measurements. The release criterion was 100 disintegrations per minute (dpm) per 100 square centimeters (cm^2) for alpha contamination and 1,000 dpm/100 cm^2 for beta contamination. When survey results exceeded the release criterion for alpha (Ra-226), the contaminated pipe section or manhole was placed in LLRW bins for disposal by the DON's radiological waste contractor. However, when the survey data indicated the presence of beta contamination greater than 1,000 dpm/100 cm^2 but less than 5,000 dpm/100 cm^2, a solid sample was collected from the suspect pipe/manhole and submitted to the laboratory for Sr-90 analysis. If the laboratory results did not identify the presence of Sr-90 in the sample, the higher release criterion of 5,000 dpm/100 cm^2 for Cs-137 was used since the analytical results ruled out the presence of Sr-90.

Based on the final survey results and solid sample analytical results, the majority of the Parcel G piping was released for off-site disposal or recycling by the RSO with the concurrence of the RASO. Table 3-5 identifies each radiologically surveyed manhole and pipe section, the potentially contaminated piping sampled and analyzed for Sr-90, and final disposition of the materials. The radiological survey reports are provided in Appendix B. Copies of the survey packages for potentially contaminated piping are presented in Appendix C.

3.1.3.2 Pipe and Manhole Sediments

A sufficient volume of sediment was available for sample collection and analysis in 35 manholes and 90 sections of pipe during the Parcel G removal action. The sediment samples collected from the Parcel G piping were analyzed by the laboratory using gamma spectroscopy. The

highest concentration of Cs-137 and Ra-226 identified in the Parcel G sediment samples was 0.87795 pCi/g and 4.2369 pCi/g, respectively. Pipes and manholes associated with sediment sample analytical results exceeding the release criteria were placed in LLRW bins for off-site disposal by the DON's radiological waste contractor. Radiological surveys typically were performed for those pipes and manholes that did not contain contaminated sediments prior to final disposition. Table 3-6 summarizes the sediment sample analytical results, identifies the ROC and result, and provides the disposition of the associated piping.

3.1.3.3 Extraneous Pipe

During the Parcel G removal action, various pipes with the potential to historically be liquid-bearing were found while excavating the storm drain and sanitary sewer systems. These extraneous pipes (EPs) were assigned identification numbers and were "hot tapped" or breached to identify the presence of potential liquid or gas in accordance with the Work Plan (TtEC 2010).

According to the Work Plan (TtEC 2010), sediment samples were to be collected from EPs whenever a sufficient volume of material was available for analysis; however, an insufficient volume of sediment was found in the Parcel G EPs for sample collection. Radiological surveys were performed on EPs, including those segments left in place following excavation of the trench survey units. A total of 12 EPs were identified during the Parcel G removal action. These EPs are listed in Table 3-7 along with the survey identification number and final disposition.

3.1.3.4 Piping Remaining In Place

The majority of the storm drain and sanitary sewer pipe sections and manholes were excavated during the Parcel G removal action activities; however, small sections of piping were left in place. In general, the piping remaining in place was associated with buildings or other physical obstructions that would be structurally compromised or could not be removed due to worker health and safety considerations. Table 3-8 identifies the piping remaining in place on Parcel G following the completion of the removal action and includes the associated trench survey units, trench segment or component, component type, and linear feet of pipe removed and remaining in place.

3.1.4 Storm Drain and Sanitary Sewer Trench Survey Units

Following the completion of trench excavation and piping removal, a unique trench survey unit identification number was designated for tracking FSS activities. During the Parcel G removal action, a total of 63 trench survey units were designated. None of the excavated trench survey units exceeded 1,000 m^2 in exposed surface area in conformance with the Work Plan (TtEC 2010). The total area of the exposed trench survey unit surfaces in Parcel G was 39,440 m^2 with 22,449 linear feet of trench. Figures 3-2 and 3-3 depict the locations of the designated Parcel G trench survey units.

3.1.4.1 Trench Survey Activities

Survey activities for the trench survey units included gamma scans of the exposed trench survey unit surfaces, static measurements, and soil sample collection and analysis. Numerous soil samples were collected from the sidewalls and bottoms of the 63 excavated trench survey units to determine whether radionuclide contamination was present above the release criteria. Systematic soil sample locations were identified for each round of sample collection using VSP software with a random start point on a triangular grid pattern. A minimum of 18 soil samples were collected from each trench survey unit and submitted under chain-of-custody to the laboratory for analysis by gamma spectroscopy. In addition, investigative samples were collected and analyzed, as needed, based on the results of trench survey activities and/or piping sediment sample analytical results. The soil samples were submitted to the on-site laboratory for analysis by gamma spectroscopy with 10 percent sent to the off-site laboratory for Sr-90 analysis and 10 percent for quality assurance verification.

During the Parcel G removal action, a total of 5,709 soil samples were collected from the trench survey units and analyzed by the laboratory. Of these 5,709 soil samples, 4,575 were investigative. Throughout this RACR, "investigative" trench survey unit soil samples refer to any systematic, characterization, investigative, or verification soil sample that was not included in the 18 final FSS soil samples. As indicated in Table 3-1, the highest Cs-137 investigative soil sample analytical result collected from a Parcel G trench survey unit was 1.0335 pCi/g (TU99) and the highest Ra-226 investigative soil sample analytical result was 5.816 pCi/g (TU84).

3.1.4.2 Trench Survey Unit Remediation Activities

Radiological contamination identified by the laboratory in soil samples collected from the trench survey units was remediated. During the removal action activities, approximately 3,400 cubic yards of contaminated soil was remediated from the trench survey units in Parcel G. These remediated soils were placed in LLRW bins pending off-site disposal. The LLRW bins were transported by the DON's radiological waste contractor off-site to either the U.S. Ecology facility in Idaho or the Energy Solutions facility in Clive, Utah. The majority of the Parcel G contaminated soil was remediated from TU84 (794 cubic yards) located in Work Area 18 North. Table 3-9 lists each Parcel G trench survey unit that was remediated, the date removed, estimated volume of soil remediated, and the specific LLRW bin or bins in which the contaminated material was placed.

Following remediation in the trench survey units, verification soil samples were collected and analyzed. If further contamination was found, additional soil around the sample location where the elevated ROC concentration was identified was remediated followed by verification sample collection and analysis. This iterative process of remediation followed by verification sampling was continued until no further contamination was identified by the laboratory analytical results.

The final 18 systematic FSS soil samples were collected from each trench survey unit following the completion of this process.

3.1.4.3 Trench Survey Unit Final Status Survey Activities

The Work Plan (TtEC 2010) specifies the work to be performed for the storm drain and sanitary sewer FSS activities. The "Multi-Agency Radiation Survey and Site Investigation Manual" (MARSSIM) (DoD et al. 2000), the "Nonparametric Statistical Methodology for the Design and Analysis of the Final Status Decommissioning Survey Guide" (Survey Guide) (NUREG-1505; NRC 1998), and the "Minimum Detectable Concentrations with Typical Radiation Survey Instruments for Various Contaminants and Field Conditions Guide" (Field Conditions Guide) (NRC 1997) were used as guidance in designing the FSSs. In general, FSSs for every excavated trench survey unit included a 100 percent surface scan and systematic static or direct measurements. Biased static measurements were recorded at the direction of the RSO, as appropriate. Static surface radiation measurements were collected at each systematic sample location prior to soil sample collection to identify the potential presence of gross contamination.

Systematic soil samples were collected from the sidewalls and bottom of each of the 63 trench survey units after establishing a grid that did not exceed 1,000 m^2 over the exposed trench surface. A minimum of 18 discrete soil samples were collected from each trench survey unit and submitted to the on-site laboratory for analysis by gamma spectroscopy. In addition, 10 percent of the samples were analyzed for Sr-90 and an additional 10 percent of the samples were submitted to the off-site laboratory for quality assurance verification. The collected data were reviewed by the RSO to determine whether investigative levels had been exceeded and were submitted to the RASO for concurrence. The FSS results were used for dose and risk modeling to facilitate regulatory agency concurrence for unrestricted radiological release. The radiological details for each of the 63 designated trench survey units were presented in the individual SUPRs provided in Appendices G through O.

During the Parcel G removal action, a total of 1,134 FSS soil samples were collected from the 63 designated trench survey units and analyzed by the laboratory. None of the FSS systematic soil samples indicated the presence of contamination above the release criteria for any ROC. Table 3-1 summarizes the Parcel G trench survey unit radiological activities including the results of the dose and risk modeling efforts.

3.1.5 Trench Survey Unit Dose and Risk Modeling

Survey units for dose and risk modeling activities consisted of two different types: 1) trenches and 2) backfill material. Dose and risk modeling was performed for each of the 63 Parcel G trench survey units using the default residential farmer scenario provided in the most current version of RESRAD software at the time of the modeling exercise. The backfill material and the trenches were modeled separately with input parameters using the larger of the MDL or reported

activity concentrations. Radionuclide-specific release criteria were obtained from the AM (DON 2006) and ROD (DON 2009) and were then modeled using RESRAD Version 6.4.

The results of the modeling efforts for the 63 trench survey units in Parcel G met the HPNS dose criterion of less than 15 mrem/y and risk criterion of less than 3×10^{-4}, which supports radiological free release. Based on the dose and risk modeling results, the highest net dose to workers or members of the public as a result of exposures to residual radioactive material in soil on Parcel G was identified in TU115 (7.696 mrem/y with an excess lifetime cancer risk of 1.387×10^{-4}). Modeling is discussed separately for each trench survey unit in this RACR and a complete discussion of the dose and risk modeling results was presented in each SUPR provided in Appendices G (Work Area 17 North) through O (Work Areas 17, 18, 19, and 27 South). Table 2-3 presents the storm drain and sanitary sewer removal action release criteria including residual doses for both outdoor workers and residents. A summary of the dose and risk modeling results for each trench survey unit is provided in Table 3-1.

3.1.6 As Low As Reasonably Achievable Process

As described in the SUPRA (Appendix A), the environmental ALARA process was implemented for each of the 63 survey units in addition to the dose and risk modeling efforts. The ALARA process was discussed in the individual SUPRs (Appendices G through O). ALARA analyses were performed based on recent estimates of dose to the public from HPNS operations. Based on qualitative ALARA analyses, excavation projects that could cause the potential dose to the public to exceed 1 millirem (individual) or 10 person-rem (collective) are subjected to quantitative ALARA analyses. To date, no operations at HPNS have resulted in an individual dose to the public greater than 1 mrem or a collective dose greater than 10 person-rem. Qualitative ALARA analyses did not result in any gamma measurements above the investigation levels, and none of the sample results identified activity above the release criteria for any ROC. In addition, air sampling results did not exceed 10 percent of the derived air concentration and the processed personnel dosimetry badges did not identify a single gamma dose above background levels. A complete discussion of the ALARA process for each Parcel G trench survey unit was provided in each SUPR (Appendices G through O).

3.1.7 Imported Fill

The storm drain and sanitary sewer removal action necessitated the importation of appropriate soil for use as backfill material: 1) when insufficient radiologically released excavated soil was available for these activities and 2) to account for the void created by the removed piping. The DON developed the "Hunters Point Shipyard Project Backfill Review and Acceptance Procedure HPO-Tt-0270" (TtEC 2006b) to describe the procedural requirements necessary to ensure that imported fill materials were adequately reviewed and accepted prior to being brought to HPNS. In addition, soil being screened for potential backfill material was sampled in accordance with specific instructions identified in the SAP, Appendix A of the Work Plan (TtEC 2010).

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Imported fill was used as backfill material in the majority of the trench survey units as a supplement to the radiologically processed and released excavated soil survey units. A complete discussion of the imported fill material was provided in the SUPRA (Appendix A) including soil analytical test results and acceptance criteria. The imported material used as backfill in Parcel G was identified as "Mills Peninsula Hospital" soil in the SUPRA. Table 3-1 identifies the backfill material used in each trench survey unit.

3.2 BUILDING AND FORMER BUILDINGS SITE OVERVIEW

The DON elected to conduct a time-critical removal action to address potential radioactive contamination in the HPNS buildings and former building sites. Nine radiologically impacted buildings (Buildings 351, 351A, 364, 365, 366, 401, 408, 411, and 439) and one former buildings site (Buildings 317/364/365 Site) were identified in Volume II of the HRA (NAVSEA 2004) within Parcel G. Buildings 364 and 365 were demolished during the Parcel G removal action and their footprints were incorporated into the Buildings 317/364/365 Site. Buildings 364 and 365 are not discussed separately in this RACR, but are included in the summary of the Buildings 317/364/365 Site FSS.

The following sections provide an overview of the majority of the FSS activities performed for each of the identified Parcel G radiologically impacted buildings and former buildings site. In addition, those elements common to each of the FSSs are described to limit redundancy in the Work Area sections (Sections 4.0 through 12.0) of this RACR. Figure 3-3 depicts the Parcel G work area and property boundaries and the FSS buildings and former buildings site.

3.2.1 Survey Design

The radiological surveys were designed in accordance with MARSSIM (NUREG-1575; DoD et al. 2000) with guidance for the design of the survey and its implementation provided by the Survey Guide (NUREG-1505; NRC 1998), and Field Conditions Guide (NUREG/CR-1507; NRC 1997). The surveys were performed in accordance with the task-specific plans prepared for each building or former building site, and the requirements outlined in the Radiological Work Plan (TtEC 2007d).

The intent of each survey design was to collect sufficient data to support the development of an FSS in accordance with MARSSIM. To maintain the potential for the scoping survey to become an FSS, data were continuously analyzed to determine the relationship between each survey unit and the reference (background) area. The objective of the surveys was to demonstrate that residual radioactivity levels in each building or former building site met the radionuclide-specific release criterion for the associated ROCs, and to achieve unrestricted radiological release of the structure or site. Radionuclide-specific release criteria were obtained using the AEC "Regulatory Guide 1.86, Termination of Operating Licenses for Nuclear Reactors" (Regulatory Guide 1.86) (AEC 1974). These limits were documented in the AM (DON 2006) and are

reproduced in this RACR as Table 2-1. Table 2-2 lists the remediation goals identified in the ROD (DON 2009).

3.2.2 Unrestricted Radiological Release Criteria

The NRC radiological release limit for unrestricted use was applied in assessing the results of the building and former building site surveys. The results were analyzed to determine whether residual radioactivity, distinguishable from background radiation, resulted in a total effective dose equivalent to an average member of the critical (screening) group exceeded 15 mrem/y or an excess lifetime cancer risk 1×10^{-4}, and if the residual radioactivity had been reduced to levels that were ALARA. This radiological release process ensured that residual radioactivity did not result in individuals being exposed to unacceptable levels of radiation or radioactive materials.

The radionuclide-specific release criteria, referred to as derived concentration guideline levels (DCGLs) used for the Parcel G FSSs are equivalent to the ROC release criteria established in the final AM (DON 2006) and the ROD (DON 2009). The DCGLs are presented in terms of surface activity concentrations and refer to average levels of radiation or radioactivity above background levels. The DCGLs for buildings and equipment surfaces are expressed in dpm/100 cm^2 and the former buildings site is expressed in pCi/g. Typically, each radionuclide DCGL corresponds to the release criterion; however, in the presence of multiple radionuclides, the DCGLs were adjusted using the unity rule. The established unrestricted radiological release criteria for structures were reproduced in this RACR as Table 2-1 and Table 2-2. A detailed discussion of the release criteria for each building and former buildings site was provided in the individual FSS reports presented in Appendices P through W.

3.2.3 Investigation Levels

Investigation levels are specific levels of radioactivity used to indicate whether additional investigations may be necessary and also to serve as a quality control check. When determining an investigation level using a statistical-based parameter (e.g., standard deviation), the following may be considered:

- Survey objectives
- Underlying radionuclide distributions (e.g., normal, log normal, nonparametric)
- Data population descriptors (e.g., standard deviation, mean, median)
- Prior survey and historical information

When investigation levels were exceeded, the measurement was confirmed to ensure that the initial measurement/sample was actually greater than that specific investigation level. This involved taking further measurements to verify the initial result, and as appropriate, to delineate the area of elevated residual radioactivity.

The investigation level for gamma surveys was established at the reference area mean plus 3-sigma (where sigma is the standard deviation of the gamma readings in the reference area) for both buildings and the former buildings site. Because various instruments were used during survey activities, investigation levels varied based on the individual instrument's parameters. Currently, there are no established release criteria based on gamma radiation readings alone. Essentially, gamma surveys were performed as an added measure to identify areas of gross contamination that would be an immediate health and safety concern and to help detect any anomalies, such as gamma-emitting sources, that may not emit alpha or beta radiation. The investigation levels for alpha/beta surveys are discussed for each Parcel G building and the former buildings site discussed in this RACR.

3.2.4 Survey Procedures

Survey procedures were performed in accordance with the standard operation procedures approved for use at HPNS and the Radiological Work Plan (TtEC 2007d). Class 1 survey units in the buildings were comprised of the floors and walls less than or equal to 2 meters above the respective floor areas. Class 1 survey units, regardless of whether they were established inside a building or on the exposed soil at a former building site, were less than 100 m^2 in area. Class 2 survey units included the upper portion of the walls and ceiling inside of the buildings. All of the Class 2 survey units, whether inside of a building or established at a former building site, had a maximum total area of 1,000 m^2. Using a random start point in each survey unit, systematic data collection locations were laid out in a grid pattern using VSP software.

Each Class 1 survey unit received 100 percent surface scan coverage, Class 2 survey units received 50 percent, and Class 3 received 25 percent. Scanning activities were performed in each survey unit to identify elevated levels of radiation, relative to corresponding background levels from the selected reference area. Alpha and beta scan data were evaluated to determine whether any readings exceeded the release criteria. Gamma scan data was reviewed to identify any measurements that exceeded the investigation limit of 3-sigma plus background. In those areas where elevated measurements were noted, biased measurements were collected and evaluated, as appropriate. The data were then evaluated to determine whether any measurements exceeded 90 percent of the release criteria and to identify patterns or areas where additional biased measurements were needed or appropriate. Gamma measurements that exceeded the investigation limit were compared to the beta measurements to determine whether additional follow-up measurements and/or sample collection were necessary. The majority of the readings logged above the investigation level were attributed to a disparity in the naturally occurring radioactive materials between the reference area and the survey units.

Following scanning and data evaluation, alpha, beta, and gamma static measurements were logged at discrete points in each survey unit. Basic statistical quantities were calculated for the

data in an effort to identify patterns, relationships, and anomalies. The measurement locations were established using VSP software based on a random start point and a systematic grid pattern.

Swipe samples for buildings were collected at each systematic static location to assess the presence of alpha and beta radioactive contamination that was readily removable from the surface. The scan readings, static measurements, and swipe sample results were provided in each FSS report presented in Appendices P through W.

In those buildings with exposed soil and for the former buildings site, soil samples were collected from the discrete systematic static measurement locations, processed, and analyzed by gamma spectroscopy following scanning activities. In addition, a minimum of 10 percent of the FSS samples were analyzed for Sr-90 and, depending on historical site use, thorium-232 (Th-232), plutonium-239 (Pu-239), uranium-235 (U-235), and cobalt-60 (Co-60). The on-site and off-site laboratory analytical reports for each soil sample are provided in the appendices of the Parcel G FSS reports provided in Appendices P through W.

Data collected during the survey activities were validated for integrity through verification of numerical results. Following collection of the daily survey data, the results were reviewed by the Radiological Control Technician to verify their completeness, ensure that the data presented were free of numerical or transcription errors, and that established procedures and methodology were followed. In addition, the collected data were reviewed by the area supervisor and examined by the RSO to determine whether investigative levels had been exceeded.

Swipe, solid, and soil samples were analyzed by the laboratory and the resulting data were assessed by the RSO to determine whether the goals of the survey process were met. The assessment process consisted of four data phases:

- Verification
- Validation
- Evaluation
- Quality assessment

In addition, results from the off-site and on-site laboratory analyses were reviewed to ensure that the radioactivity for FSS samples for all ROCs were less than the release criteria. Detailed discussions of the RSO assessment process and the off-site and on-site laboratory data comparison were provided in the building and former buildings site FSS reports provided in Appendices P through W.

3.2.5 Dose and Risk Modeling

The dose model for the critical group for unrestricted radiological release for building surfaces was based on the default residential (or "Building Occupancy") scenario for buildings using RESRAD-BUILD software. The default Building Occupancy scenario included external, ingestion, and inhalation exposure pathways. For all ROCs, a non-distributed total effective dose equivalent scenario was selected as the most conservative approach. For all parameters, the most conservative scenarios were selected and assumed that persons living in the building would be exposed without use restrictions.

The residual dose was determined to be 0.00 mrem/y with no additional increase in excess lifetime cancer risk, when the net mean activity for both alpha and beta emitters was less than zero in the buildings for modeling purposes. Net alpha or beta activities in the buildings that were less than background were not used in the dose or risk modeling efforts.

The dose model for the critical group for unrestricted radiological release of the former buildings site was based on the default residential farmer scenarios in RESRAD using the most current version of the software. RESRAD analyzes the various pathways and scenarios through which exposures could occur. These pathways include external and inhalation exposures and exposure from ingestion pathways including:

- Drinking water
- Food grown with contaminated irrigation water
- Food grown on contaminated soil
- Fish
- Inadvertent ingestion of soil

Land-based foods considered were:

- Leafy and root vegetables
- Fruit
- Grain
- Beef and poultry
- Milk
- Eggs

The default residential farmer scenario was used with only three minor changes: 1) the actual surface area of the entire site was used instead of the 10,000 m^2 default area; 2) the distance of the length parallel to the aquifer was changed; and 3) the net concentrations above background

were used. This is the most conservative scenario as it assumes that persons living on the site can use the land for any purpose without land use restrictions.

Modeling for the former buildings site was performed twice: using the actual survey data, even if the data were less than the MDL, and the larger of the MDL or reported activity concentrations (also referred to as the "potential" dose). The activities used to model each radionuclide were based on the isotopic net concentration. This approach was used to determine the maximum possible dose that one would expect to receive if the reported activities were actually at the MDL.

3.2.6 ALARA Process for Buildings and Former Buildings Site

The ALARA process was followed for each of the Parcel G buildings and the Buildings 317/364/365 Site. Founded in the professional judgment of radiation-safety managers and personnel, the ALARA concept cannot be used to measure whether or not a particular radiation-safety program is adequate in comparison with other programs and does not provide a numerical limit. For Parcel G, the ALARA process was implemented through identification of potential radiological impacts, a review of the radiological impacts, and performance of qualitative and quantitative ALARA analyses.

Each of the radiologically impacted Parcel G buildings and the Buildings 317/364/365 Site were subjected to ALARA review before fieldwork was initiated to ensure that radiation exposures to workers, the public, and the environment met ALARA principles. ALARA reviews were conducted for all operations, practices, and procedures with the potential for individual or collective doses.

To determine environmental impacts from radiological activities, the following methods were implemented for the Parcel G buildings and the Buildings 317/364/365 Site:

- Field monitoring and sampling to identify areas that may require remediation (including air, swipe, and soil samples)
- Control of the radiologically impacted building or site
- Air monitoring during remedial actions
- Frisking personnel and examining equipment leaving the RCA
- Use of release criteria that equate to dose and risk
- Review of historical radiological operations to support investigations
- Characterization of the building or site to ensure complete removal of radioactive material exceeding the release criteria, if identified
- Dosimetry worn by personnel to measure time-averaged doses from gamma radiation

Data analyses were performed for alpha, beta, and gamma radiation for each Parcel G building or site to ensure that any possible radioactive contamination was identified. Following the completion of the survey activities, the qualitative radiological impacts from operations in the field were evaluated by performing dose and risk assessments. These results were provided to the RASO and regulatory agencies for review.

Based on qualitative ALARA analyses, survey projects that could cause the potential dose to the public to exceed 1 millirem (individual) or 10-person-rem (collective) were subjected to quantitative ALARA analyses. Quantitative ALARA analyses included societal, technological, economic, and public policy considerations. In addition, these ALARA analyses considered NRC guidance for performing the following assessments:

- Identification of possible radiation protection systems that are reasonably achievable, such as alternative operating methods or controls.
- Quantification of exposures and doses to workers and the public in the vicinity of the work being performed through air monitoring and dosimetry.
- Quantification of economic factors including the costs of purchasing, installing, operating, and maintaining radiological equipment, and the potential health effects associated with public exposures, and any other direct or indirect cost resulting from exposures to radiation during investigations and/or remediations.
- Identification and estimation of other health and non-health detriments and benefits, such as equipment loss and accidents.
- Evaluation of process alternatives using a quantitative cost-benefit analysis, when possible. When evaluations included assumptions, judgments, and limitations that could be quantified, and potential doses were well below the dose limit, qualitative analyses were used with full documentation.
- Implementation of the ALARA principles and monitoring of the results.

Specific factors used to perform quantitative ALARA analyses for the Parcel G buildings and Buildings 317/364/365 Site included:

- Dose to workers, the public, and the environment before and during work processes
- Residual dose to the local population
- Applicable alternative processes (treatments, operating methods, or controls) for site investigations or remediations
- Costs for each alternative evaluated
- Societal and environmental (positive and negative) impacts associated with alternatives

To date, no operations at HPNS have resulted in an individual dose to the public greater than 1 millirem or a collective dose greater than 10 person-rem. Based on these estimates of dose to the public from the survey work performed, only qualitative ALARA analyses were required for Parcel G. The majority of the data and analysis used for environmental ALARA evaluations were developed as part of the routine work processes. Qualitative ALARA analyses performed for the Parcel G buildings and Buildings 317/364/365 Site resulted in the following:

- No alpha or beta measurements above the investigation levels
- None of the alpha, beta, or gamma measurement results identified residual radioactivity above the release criteria for any ROC
- No personnel dosimetry badges processed identified a gamma dose above the background level

A complete discussion of the ALARA process and its implementation was provided in the individual FSS reports for each of the Parcel G buildings and former buildings site discussed in this RACR. The individual FSS reports are provided in Appendices P through W.

3.3 INSTALLATION RESTORATION PROGRAM SITES

Chemical contamination at HPNS is addressed through the IR Program process and is consistent with CERCLA as amended by SARA, and the NCP, to the extent practicable. Pursuant to Executive Order 12580, the DON is the lead agency responsible for implementation of the IR Program. The EPA, DTSC, Regional Water Quality Control Board, RASO, and United States Fish and Wildlife Service (for sensitive species) provide regulatory oversight and guidance for time-critical removal actions associated with the storm drain and sanitary sewer systems removal. Table A-3 of the SAP, Appendix A of the Work Plan (TtEC 2010), identifies the IR Program sites located at HPNS and their associated chemicals of concern.

There are a total of 10 IR Program sites associated with the Parcel G storm drain and sanitary sewer removal action. The individual Parcel G IR Program sites and chemicals of concern along with the affected media are listed in Table 3-10. Throughout the excavation process, soil and piping was visually inspected for staining or odors regardless of whether it was excavated from an IR Program area. Material that emitted odors or appeared stained as well as material excavated from IR Program areas was segregated in RSY2 and RSY4 for further sampling and analysis in accordance with the Work Plan and SAP (TtEC 2010). The release criteria for the Parcel G IR Program sites were presented in the ROD (DON 2009).

Samples of the excavated soil were collected and sent to the off-site laboratory for chemical analysis to verify whether the excavated material met the remediation criteria in accordance with the approved Work Plan (TtEC 2010). The chemical analytical results were compared with the release criteria identified in the ROD (DON 2009). Based on the analytical results, soil that did

not meet the appropriate criteria was stockpiled for collection and off-site disposal by the DON's non-radiological waste contractor, along with soil excavated outside of the Parcel G IR Program sites that exhibited odor or staining. As indicated in Table 3-4, a number of excavated soil survey units processed in RSY2 and RSY4 were radiologically released, but were disposed of off-site by the DON's non-radiological waste contractor along with non-IR Program site soil that exhibited odor or staining. The chemical laboratory analytical results for each IR Program site associated with the excavation of the Parcel G storm drain and sanitary sewers, the results of the data comparison with the release criteria presented in the ROD (DON 2009), and the identification of the elevated chemicals of concern are provided in Appendix F.

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4.0 WORK AREA 17 NORTH

Work Area 17 North is located in northeast corner of Parcel G, just west of Drydock No. 4 (Figures 3-2, 3-3, and 4-1). It is bounded on the north by Parcels UC1 and UC2, on the east by Parcel C and Parcel D-1, on the south by Work Area 17 South, and on the west by Work Area 18 North. The radiological work activities performed in Work Area 17 North included TU66 through TU71, TU100 through TU102, and Building 366. The following sections summarize the work activities completed in Work Area 17 North to support the recommended radiological release for unrestricted use of the Parcel G property.

4.1 TRENCH SURVEY UNIT 66

TU66 is located in the northeast corner of Work Area 17 North on Parcel G, at the north end of Morrell Street and between Drydock No. 4 and Building 302 (Figures 3-2 and 4-1). TU66 connects to Trench Survey Unit 150 on the north, which is located on Parcel D-2. It also connects to TU67 at two separate locations on the east and TU68 on the south. No pipe was found west of Manhole MH281. A small section on the western end of TU66 is situated within IR Program Site IR-33. The chemicals of concern associated with IR-33 are listed in Table 3-10.

TU66 consists of six storm drain trench segments and two sanitary sewer trench segments. As identified on Figure 4-1, these trench segments include:

Storm Drain Trench Segments

- 70-D17-00-3C
- 70-D17-00-3G
- 70-D17-00-3H
- 70-D17-00-8A
- 70-D17-33-3G
- 70-D17-33-8A

Sanitary Sewer Trench Segments

- 70-D17-00-3D
- 70-D17-00-3I

Trench segment 70-D17-00-3I transitioned into TU68 on the south. With the exception of trench segments 70-D17-00-8A and 70-D17-33-8A, each of the trench segments associated with TU66 was identified in the Design Plan (TtEC 2007c). Trench segments 70-D17-00-8A and 70-D17-33-A were discovered during the excavation of trench segment 70-D17-00-3G.

4.1.1 TU66 Removal Action Activities

Excavation of TU66 was initiated on July 19, 2007 in trench segment 70-D17-00-3C. A total of 76 truckloads (approximately 912 cubic yards) of soil were excavated during the removal action

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(Table 3-3). Soil excavated from TU66 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on July 25, 2007, TU66 exhibited an exposed surface area of 651 m^2 and was 378 linear feet in length (Table 3-1). The maximum excavated TU66 depth was 14 feet bgs (Table 3-2).

A total of 44 sections of pipe and Manholes MH281, MH282, MH283, and MH387 were excavated from TU66 and placed on plastic pending further activities during the Parcel G removal action. Piping that crumbled during excavation was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, storm drain trench segments 70-D17-00-3C and -3H contained 8-inch-diameter and 10-inch-diameter VCP, respectively. The pipe in these trench segments was found at depths ranging from 3 feet to 5 feet bgs. Storm drain trench segment 70-D17-00-3G contained 3-inch-diameter steel pipe located at depths between 3 feet and 5 feet bgs and -8A contained 6-inch-diameter CMP located between 3 feet and 5 feet bgs. Sanitary sewer trench segments 70-D17-00-3D and -3I contained 21-inch-diameter concrete pipe located at depths ranging from 6 feet to 12 feet bgs.

Sufficient sediment for sample collection and analysis was obtained from eight sections of pipe and Manholes MH281 and MH287 during the Parcel G removal action (Table 3-6). Sediment samples collected from three pipe sections excavated from trench segment 70-D17-00-3I and Manhole MH281 did not indicate the presence of radioactivity above the release criteria for any ROC. The sediment sample collected from a pipe section excavated from trench segment 70-D17-00-3C identified the presence of Cs-137 contamination at 0.42159 pCi/g. Sediment samples collected from pipes excavated from trench segment 70-D17-00-3D identified the presence of Ra-226 contamination at 2.2179 pCi/g and Cs-137 contamination at 0.13621 pCi/g and 0.35878 pCi/g. In addition, the sediment sample collected from Manhole MH287 showed Ra-226 activity above the release limit at 4.2369 pCi/g. As indicated in Table 3-6, the pipe sections and Manhole MH287 containing contaminated sediment analytical results were placed in LLRW bins for disposal by the DON's radiological waste contractor. The sediment sample analytical reports are provided in Appendix D.

Radiological surveys were performed on 38 sections of pipe and the materials forming Manholes MH281, MH282, and MH283 during the removal action activities (Table 3-5). Elevated survey results were identified for only one pipe section excavated from trench segment 70-D17-00-3H. Because elevated survey results were identified, sampling and analysis was performed to eliminate the possibility of measurements in excess of 1,000 dpm/100 cm^2 being attributed to the presence of Sr-90. A solid sample was collected from the elevated pipe and submitted to the laboratory for Sr-90 analysis. Following an evaluation of the analytical results and with the RASO's concurrence that no contamination above the release criteria was present, this pipe section was transferred to the DON's non-radiological waste contractor in September 2008 for off-site disposal or recycling. The final disposition of pipes and the materials forming the manholes excavated from Parcel G is provided in Table 3-5. The radiological survey reports are

presented in Appendix B and the survey reports for potentially contaminated piping are included in Appendix C.

Due to the presence of Cs-137 and Ra-226 contamination in sediment samples collected from TU66 piping, a total of 91 investigative samples were collected along the bottom of the trench in August and September 2007 and submitted to the laboratory for analysis by gamma spectroscopy. None of these investigative samples identified the presence of radioactivity above the release criteria for any ROC.

4.1.2 TU66 Piping Remaining In Place

Storm drain trench segments 70-D17-00-3G and -8A run parallel to each other immediately west of Manhole MH287. A total of 20 linear feet of each of these trench segments was excavated during the Parcel G removal action prior to termination. In accordance with the Work Plan (TtEC 2010), additional pipe was not removed because the remaining pipe was more than 10 feet off the main trunk line and had originated at non-radiologically impacted Building 302. Approximately 24 linear feet of pipe in trench segments 70-D17-00-3G and -8A was not removed, which preserved traffic access between Building 302 and the TU66 excavation (Table 3-8). Because none of the radiological survey activities performed on pipe sections excavated from trench segment 70-D17-00-3G and -8A identified elevated survey results and since none of the 109 soil samples collected from TU66 and analyzed by the laboratory identified the presence of radioactivity above the release criteria for any ROC, the DON concluded that the piping left in place was unlikely to be contaminated.

Storm drain trench segments 70-D17-33-3G and -8A are a continuation of trench segments 70-D17-00-3G and -8A discussed above, and are the only two TU66 trench segments situated within an IR Program Site (IR-33). Based on historical drawings, an estimated 16 linear feet of each of these trench segments was left in place following the completion of the Parcel G removal action. None of the pipe associated with these two trench segments was excavated due to their proximity to non-impacted Building 302 and because the remaining pipe was more than 10 feet of the main truck line (Table 3-8).

4.1.3 TU66 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU66 in September 2007 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 4-1 depicts the FSS soil sample collection locations in TU66.

TU66 was defined for the FSS as the sum of the trench unit and the backfill material composed of radiologically processed and released excavated soil. The average net residual radioactivity concentrations for material used as backfill in TU66 were 0.048 pCi/g for Cs-137, 0.047 pCi/g

for Sr-90, and 0.404 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.046 pCi/g for Cs-137, 0.052 pCi/g for Sr-90, and 0.322 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.568 mrem/y with an increased cancer risk of 9.314×10^{-5} for the backfill material and 4.491 mrem/y with an increased cancer risk of 7.496×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU66 SUPR provided in Appendix G.

The results of the modeling efforts determined that the potential TU66 dose due to activity concentrations greater than or equal to the MDL was 5.568 mrem/y with an increased cancer risk of 9.314×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU66 SUPR (Appendix G).

4.1.4 TU66 Backfill Activities

Radiologically processed and released excavated soil survey units were selected for use as backfill material in TU66. The excavated soil survey units selected included:

- ES-0003
- ES-0004
- ES-0007

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and their associated laboratory analytical results were discussed in the TU66 SUPR (Appendix G).

Concurrence to backfill TU66 was obtained from the RASO on November 2, 2007 and backfilling activities were completed on November 14, 2007. Approximately 774 cubic yards of backfill soil was placed in TU66 to grade followed by the application of road base material over the backfilled trench. A summary of the activities performed to support the recommended radiological free release of TU66 is provided in Table 3-1.

4.2 TRENCH SURVEY UNIT 67

TU67 is located in the northeast corner of Work Area 17 North on Parcel G, at the north end of Morrell Street and between Drydock No. 4 and Building 302 (Figures 3-2 and 4-1). TU67 connects to TU66 on the north, TU69 on the south, and TU66 on the west. On the east, TU67 terminated at the Parcel C property boundary. None of the TU67 trench segments are associated with an IR Program Site.

TU67 is comprised of seven storm drain trench segments and no sanitary sewer trench segments. As identified on Figure 4-1, these trench segments include:

- 70-C17-00-2C
- 70-C17-00-3E
- 70-D17-00-2C
- 70-D17-00-2L
- 70-D17-00-3E
- 70-D17-00-3F
- 70-D17-00-3H

Trench segment 70-D17-00-3F extended toward the south and transitioned into TU69. Each of the trench segments associated with TU67 was identified in the Design Plan (TtEC 2007c). Although identified in the Design Plan, trench segments 70-C17-00-1Z and 70-D17-00-1Z could not be found after several excavation attempts and are excluded from further discussion in this RACR.

4.2.1 TU67 Removal Action Activities

Excavation of TU67 began on July 20, 2007 in trench segment 70-D17-00-2L. A total of 47 truckloads (approximately 564 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU67 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on July 25, 2007, TU67 had an exposed surface area of 467 m^2 and was 298 linear feet in length (Table 3-1). The maximum excavated TU67 depth was 10 feet bgs (Table 3-2).

A total of 20 sections of pipe and Manhole MH284 were excavated from TU67 and placed on plastic pending further activities during the Parcel G removal action. Piping that crumbled during excavation was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, trench segments 70-C17-00-2C and 70-D17-00-2C contained 10-inch-diameter concrete pipe located at depths between 4 feet and 6 feet bgs. Trench segments 70-C17-00-3E and 70-D17-00-3E contained 10-inch-diameter CIP located at depths ranging from 4 feet to 6 feet bgs. Trench segment 70-D17-00-3H contained 10-inch-diameter VCP located at depths from 3 feet to 4 feet bgs. In addition, trench segments 70-D17-00-2L and -3F contained 24-inch-diameter concrete pipe located at depths ranging from 3 feet to 8 feet bgs.

Sufficient sediment for sample collection and analysis was identified in two sections of pipe removed from trench segment 70-C17-00-2C, two sections of pipe removed from trench segment 70-D17-00-2L, and Manhole MH284 (Table 3-6). None of the sediment samples collected from the pipe sections identified the presence of radioactivity above the release criteria for any ROC; however, the sediment sample collected from Manhole MH284 identified the presence of Cs-137 contamination at 0.47859 pCi/g. Based on these results, Manhole MH284 was placed in LLRW bin CVGU001124C on August 9, 2007 for disposal by the DON's radiological waste contractor. The sediment sample analytical reports are provided in Appendix D.

Radiological surveys were performed on the 20 sections of pipe excavated from TU67 during the removal action activities (Table 3-5). None of the pipe sections surveyed indicated elevated results. The final disposition of the surveyed Parcel G pipe sections is provided in Table 3-5. The radiological survey reports are presented in Appendix B.

Due to the presence of Cs-137 activity above the release limit in Manhole MH284, a total of 41 investigative soil samples were collected along the bottom of TU67 on September 18, 2007 and submitted to the laboratory for analysis. One soil sample identified the presence of Ra-226 above the release criteria at 1.558 pCi/g. Based on this result, an estimated 3 cubic yards of soil was placed in LLRW bin GFLU001084G3 for disposal by the DON's radiological waste contractor (Table 3-9). Three verification soil samples were collected and analyzed following the remediation activities. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU67 on October 25, 2007 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 activity in one soil sample above the release limit at 1.8383 pCi/g. Based on this result, approximately 6 cubic yards of soil was remediated from TU67 on November 2, 2007. The remediated material was placed in LLRW bin GFLU001023G2 for disposal by the DON's radiological waste contractor (Table 3-9). Six verification soil samples were collected following the remediation activities. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

On November 7, 2007, an additional set of 18 systematic soil samples was collected and analyzed. The analytical results identified the continued presence of Ra-226 above the release limit in one soil sample at 2.2936 pCi/g. Following an evaluation of the analytical results, roughly 6.5 cubic yards of soil was placed in LLRW bins for disposal (Table 3-9). A total of six verification soil samples were collected and analyzed following the completion of the remediation activities. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC.

In total, 92 investigative soil samples (including systematic and verification samples) were collected prior to the final 18 systematic FSS samples and approximately 15.5 cubic yards of soil was remediated from TU67. Figure 4-2 depicts the approximate locations of the contaminated soil samples prior to remediation.

4.2.2 TU67 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU67 remained in place on Parcel G following the completion of the removal action.

4.2.3 TU67 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU67 on December 3, 2007 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 4-1 depicts the FSS soil sample collection locations in TU67.

For the FSS, TU67 was defined as the sum of the trench unit and backfill material composed of radiologically processed and released excavated soil. The average net residual radioactivity concentrations for material used as backfill in TU67 were 0.048 pCi/g for Cs-137, 0.052 pCi/g for Sr-90, and 0.384 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.039 pCi/g for Cs-137, 0.059 pCi/g for Sr-90, and 0.290 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 4.457 mrem/y with an increased cancer risk of 7.768×10^{-5} for the backfill material and 3.409 mrem/y with an increased cancer risk of 5.922×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU67 SUPR provided in Appendix G.

The results of the modeling efforts determined that the potential TU67 dose due to activity concentrations greater than or equal to the MDL was 4.457 mrem/y with an increased cancer risk of 7.768×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU67 SUPR (Appendix G).

4.2.4 TU67 Backfill Activities

Radiologically processed and released excavated soil survey units were selected for use as backfill material in TU67. The excavated soil survey units selected included:

- ES-0001
- ES-0028
- ES-0029

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and their associated laboratory analytical results were discussed in the TU67 SUPR (Appendix G).

The RASO concurred with backfilling TU67 on January 8, 2008 and backfilling operations were completed on February 18, 2008 with the placement of approximately 411 cubic yards of soil. A

summary of the activities performed to support the recommended radiological free release of TU67 is provided in Table 3-1.

4.3 TRENCH SURVEY UNIT 68

TU68 is located on the east side of Work Area 17 North at the north end of Morrell Street and west of Drydock No. 4 (Figures 3-2 and 4-1). TU68 connects to TU66 on the north, TU69 on the east, TU70 on the south, and TU120 on the west. No IR Program Sites are associated with TU68.

TU68 is composed of one storm drain trench segment and five sanitary sewer trench segments. As identified on Figure 4-1, these trench segments include:

Storm Drain Trench Segment	Sanitary Sewer Trench Segments
• 70-D17-00-3J	• 70-D17-00-1L
	• 70-D17-00-2N
	• 70-D17-00-2O
	• 70-D17-00-2P
	• 70-D17-00-3I

Trench segment 70-D17-00-1L extends toward the south and transitions into TU70 and TU71. Trench segment 70-D17-00-2P extends eastward and continues into TU69, while trench segment 70-D17-00-3I transitions into TU66 into TU68. Each of the trench segments associated with TU68 was identified in the Design Plan (TtEC 2007c).

4.3.1 TU68 Removal Action Activities

Excavation of TU68 was initiated on July 25, 2007 in trench segment 70-D17-00-3I. A total of 137 truckloads (approximately 1,644 cubic yards) of soil were excavated during the removal action (Table 3-3). Soil excavated from TU68 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on August 16, 2007, TU68 exhibited an exposed surface area of 825 m^2 and was 433 linear feet in length (Table 3-1). The maximum excavated TU68 depth was 13 feet bgs (Table 3-2).

A total of 20 sections of pipe and Manholes MH288, MH289, and MH290 were excavated from TU68 and placed on plastic pending further activities during the Parcel G removal action. Piping that crumbled during excavation was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, trench segments 70-D17-00-2N, -2O, and -3J contained 8-inch-diameter VCP located at depths ranging from 8 feet to 12 feet bgs. Trench segments 70-D17-00-1L, -2P, and -3I contained 12-inch-diameter to 21-inch-diameter concrete pipe located at depths between 5 feet and 12 feet bgs.

An insufficient volume of sediment was available from the majority of the pipes excavated from TU68 for sample collection and analysis. Sufficient sediment was available in one pipe section excavated from trench segment 70-D17-00-3I, and Manholes MH289 and MH290 (Table 3-6). The laboratory analytical results did not identify the presence of radioactivity greater than the release criteria for any ROC in either of the two manhole sediment samples; however, Cs-137 contamination was identified at 0.1798 pCi/g in the pipe sediment sample. As indicated in Table 3-6, this pipe section was placed in LLRW bin CVGU001124C for disposal by the DON's radiological waste contractor. Each of the sediment sample analytical reports is provided in Appendix D.

Radiological surveys were performed for the 20 sections of pipe and the materials forming Manholes MH288, MH289, and MH290 during the Parcel G removal action activities (Table 3-5). Only one section of pipe excavated from trench segment 70-D17-00-2N showed elevated survey results. Because elevated survey results were identified, sampling and analysis was performed to eliminate the possibility of measurements in excess of 1,000 dpm/100 cm^2 being attributed to the presence of Sr-90. A solid sample was collected from the elevated pipe and submitted to the laboratory for Sr-90 analysis. The analytical results identified the presence of Sr-90 at 0.019 pCi/g. With the RASO's concurrence, this pipe section was placed in LLRW bin BKRU026026G5 for disposal by the DON's radiological waste contractor. The final disposition of the piping excavated from TU68 is provided in Tables 3-5 and 3-6. The radiological survey reports are provided in Appendix B and the survey reports for potentially contaminated piping are included in Appendix C.

Due to the identified presence of Cs-137 contamination in the sediment sample collected from pipe excavated from trench segment 70-D17-00-3I, a total of 33 investigative soil samples were collected from TU68 and analyzed. One soil sample identified the presence of Ra-226 activity above the release limit at 1.8155 pCi/g. Based on this result, approximately 6.25 cubic yards of soil was remediated from TU68 on January 30, 2008. The remediated material was placed in LLRW bin GFLU001037G1 for disposal by the DON's radiological waste contractor (Table 3-9). Following remediation, three verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the verification samples for any ROC.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU68 on February 5, 2008 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 activity above the release limit in three soil samples at 2.1174 pCi/g, 2.2815 pCi/g, and 2.2815 pCi/g. To further delineate the contaminated areas, an additional 49 characterization samples were collected and analyzed by gamma spectroscopy. The analytical results identified Ra-226 activity above the release limit in six of the characterization samples ranging from 1.6107 pCi/g to 2.7739 pCi/g. Based on these results, approximately 22.5 cubic yards of soil was placed in LLRW bins for disposal (Table 3-9). Following the remediation activities, nine verification soil samples were collected on February 19, 2008 and analyzed. The

analytical results identified the continued presence of Ra-226 contamination in three soil samples at 1.5198 pCi/g, 1.5691 pCi/g, and 1.8355 pCi/g. An additional 7 cubic yards of soil was placed in LLRW bin GFLU001016G4 for disposal by the DON's radiological waste contractor followed by the collection of six verification soil samples. One of the verification soil samples identified the continued presence of Ra-226 contamination at 1.921 pCi/g. Based on this result, an estimated 1.5 cubic yards of soil was remediated. The remediated material was placed in LLRW bin GFLU001016G4 for disposal by the DON's radiological waste contractor (Table 3-9). Three verification soil samples were collected following the remediation activities and analyzed by the laboratory. The analytical results did not exceed the release criteria for any ROC.

In total, 133 investigative soil samples (including characterization, systematic, and verification samples) were collected prior to the 18 systematic FSS soil samples and roughly 37.25 cubic yards of soil was remediated from TU68. Figure 4-2 depicts the approximate locations of the contaminated soil samples prior to remediation.

4.3.2 TU68 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU68 remained in place on Parcel G following the completion of the removal action.

4.3.3 TU68 Final Status Survey Summary

During the FSS activities, a total of 18 systematic soil samples were collected from the sidewalls and bottom of TU68 on March 4, 2008 and analyzed by the laboratory. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 4-1 depicts the FSS soil sample collection locations in TU68.

TU68 was defined for the FSS as the sum of the trench unit and backfill material composed of both radiologically processed and released excavated soil and imported fill. The average net residual radioactivity concentrations for material used as backfill in TU68 were 0.051 pCi/g for Cs-137, 0.066 pCi/g for Sr-90, and 0.364 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.046 pCi/g for Cs-137, 0.094 pCi/g for Sr-90, and 0.212 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.868 mrem/y with an increased cancer risk of 9.495×10^{-5} for the backfill material and 3.635 mrem/y with an increased cancer risk of 5.816×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU68 SUPR provided in Appendix G.

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The results of the modeling efforts determined that the potential TU68 dose due to activity concentrations greater than or equal to the MDL was 5.868 mrem/y with an increased cancer risk of 9.495×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU68 SUPR (Appendix G).

4.3.4 TU68 Backfill Activities

Radiologically processed and released excavated soil survey units were selected for use as backfill material in TU68 in addition to a volume of imported fill. The excavated soil survey units selected included:

- ES-0012
- ES-0013

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and their associated laboratory analytical results were discussed in the TU68 SUPR (Appendix G). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

Concurrence with backfilling TU68 was obtained from the RASO on March 18, 2008, and backfilling activities commenced the same day. Approximately 1,021 cubic yards of soil was placed in TU68 to grade followed by the application of road base material over the backfilled trench. Backfilling activities were completed on March 24, 2008. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU68.

4.4 TRENCH SURVEY UNIT 69

TU69 is located in the eastern portion of Work Area 17 North between Drydock No. 4 and Building 302 and adjacent to the Parcel C property boundary (Figures 3-2 and 4-1). TU69 connects to TU67 on the north, TU71 on the south, and TU70 on the west. On the east, excavation activities were terminated near the Parcel C and Parcel D-1 property boundaries. No IR Program Sites are associated with TU69.

TU69 is comprised of seven storm drain trench segments and two sanitary sewer trench segments. As identified on Figure 4-1, these trench segments include:

<u>Storm Drain Trench Segments</u>

- 70-C17-00-1W
- 70-D17-00-1R
- 70-D17-00-1T

<u>Sanitary Sewer Trench Segments</u>

- 70-C17-00-2P
- 70-D17-00-2P

- 70-D17-00-1U
- 70-D17-00-1V
- 70-D17-00-1W
- 70-D17-00-3F

Trench segment 70-D17-00-2P extends toward the east and transitions into TU68. Trench segment 70-D17-00-3F extends southward from TU67 and continues into TU69. Each of the trench segments associated with TU69 was identified in the Design Plan (TtEC 2007c).

4.4.1 TU69 Removal Action Activities

Excavation of TU69 began on July 25, 2007 in trench segment 70-D17-00-3F. A total of 114 truckloads (approximately 1,368 cubic yards) of soil were excavated during the removal action (Table 3-3). Soil excavated from TU69 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on October 1, 2008, TU69 exhibited an exposed surface area of 793 m^2 and was 521 linear feet in length (Table 3-1). The maximum excavated TU69 depth was 13 feet bgs (Table 3-2).

A total of 21 sections of pipe and Manholes MH291, MH292, MH295, and MH296 were excavated from TU69 and placed on plastic pending further activities during the Parcel G removal action. Piping that disintegrated during excavation was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, storm drain trench segments 70-D17-00-1R, -1U, and -3F contained 24-inch-diameter concrete or concrete-encased VCP located at depths ranging from 5 feet to 7 feet bgs. Trench segments 70-D17-00-1W, 70-D17-00-1T, -1V, and -1W contained 8-inch-diameter and 10-inch-diameter VCP located at depths of 6 feet to 8 feet bgs. In addition, trench segments 70-C17-00-2P and 70-D17-00-2P contained 12-inch-diameter concrete pipe located at depths of 11 feet to 12 feet bgs.

An insufficient volume of sediment was available for sample collection and analysis in the majority of piping excavated from TU69. Sediment samples were collected from one pipe section excavated from trench segment 70-D17-00-1R and one pipe section excavated from trench segment 70-D17-00-2P (Table 3-6). The laboratory analytical results did not identify the presence of radioactivity above the release criteria in either of these two sediment samples for any ROC. The sediment sample analytical results are provided in Appendix D.

Radiological surveys were performed on 21 sections of pipe removed from TU69 and the materials forming Manholes MH291, MH292, MH295, and MH296 during the removal action activities (Table 3-5). Only one pipe section excavated from trench segment 70-D17-00-1R and the materials forming Manhole MH291 showed elevated survey results. Because elevated survey results were identified, sampling and analysis was performed to eliminate the possibility of measurements in excess of 1,000 dpm/100 cm^2 being attributed to the presence of Sr-90.

Solid samples were collected from the elevated pipe and the materials forming Manhole MH291 and submitted to the laboratory for Sr-90 analysis. Following a review of the data, the RASO concurred that the analytical results did not indicate the presence of contamination above the release criteria. The pipe and Manhole MH291 debris was transferred to the DON's non-radiological waste contractor in September 2008 for off-site disposal or recycling. The final disposition of piping excavated from TU69 is provided in Table 3-5. The radiological survey reports are provided in Appendix B and the survey reports for potentially contaminated piping are included in Appendix C.

Because Cs-137 contamination at 0.47859 pCi/g was identified in upstream Manhole MH284 (TU67), a total of 32 investigative soil samples were collected along the bottom TU69 in September 2007 and submitted to the laboratory for analysis by gamma spectroscopy. The analytical results identified Ra-226 activity greater than the release criteria in two of the investigative soil samples at 2.5175 pCi/g and 2.906 pCi/g. Based on these results, roughly 7 cubic yards of soil was remediated from TU69 on October 5, 2007. The remediated material was placed in LLRW bin GFLU001262G2 for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation activities, four verification soil samples were collected and analyzed. None of the verification sample analytical results identified the presence of radioactivity above the release criteria for any ROC.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU69 on October 17, 2007 and submitted to the laboratory for analysis. One soil sample showed the presence of Ra-226 activity above the release criteria at 1.8448 pCi/g. Based on this result, a total of 28 characterization soil samples were collected on November 6, 2007. The laboratory analytical results did not identify radioactivity exceeding the release criteria for any ROC in the characterization samples. An estimated 13.5 cubic yards of soil was remediated from the contaminated area on December 7, 2007 (Table 3-9). Six verification soil samples were collected following the remediation activities and submitted to the laboratory for analysis. No radioactivity above the release criteria was identified for any ROC in these verification soil samples.

In total, 88 investigative soil samples (including investigative, characterization, verification, and systematic samples) were collected prior to the 18 systematic FSS soil samples and approximately 20.5 cubic yards of soil was remediated from TU69 during the Parcel G removal action. Figure 4-2 depicts the approximate locations of the contaminated soil samples prior to remediation.

4.4.2 TU69 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU69 remained in place on Parcel G following the completion of the removal action.

4.4.3 TU69 Final Status Survey Summary

During the FSS activities for TU69, a total of 18 systematic soil samples were collected on December 13, 2007 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 4-1 depicts the FSS soil sample collection locations in TU69.

For the FSS, TU69 was defined as the sum of the trench unit and the backfill soil composed of both radiologically processed and released excavated soil and imported fill. The average net residual radioactivity concentrations for material used as backfill in TU69 were 0.050 pCi/g for Cs-137, 0.048 pCi/g for Sr-90, and 0.399 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.045 pCi/g for Cs-137, 0.050 pCi/g for Sr-90, and 0.273 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 6.187 mrem/y with an increased cancer risk of 1.009×10^{-4} for the backfill material and 4.309 mrem/y with an increased cancer risk of 7.007×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU69 SUPR provided in Appendix G.

The results of the modeling efforts determined that the potential TU69 dose due to activity concentrations greater than or equal to the MDL was 6.187 mrem/y with an increased cancer risk of 1.009×10^{-4}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU69 SUPR (Appendix G).

4.4.4 TU69 Backfill Activities

Radiologically processed and released excavated soil survey units were selected for use as backfill material in TU69 in addition to a volume of imported fill. The excavated soil survey units selected included:

- ES-0006
- ES-0010
- ES-0026
- ES-0030
- ES-0031

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and their associated laboratory analytical results were discussed in the

TU69 SUPR (Appendix G). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

The RASO concurred with backfilling TU69 on January 2, 2008 and backfilling operations commenced on February 15, 2008. Approximately 895 cubic yards of backfill soil was placed in TU69 and backfilling operations were completed on March 7, 2008. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU69.

4.5 TRENCH SURVEY UNIT 70

TU70 is located in the western portion of Work Area 17 North extending along the north side of radiologically surveyed and released Building 366 (Figures 3-2 and 4-1). The radiological work and FSS performed for Building 366 is summarized in Section 4.10 of this RACR. TU70 connects to TU68 on the north, TU69 on the east, and TU71 on the south. The portion of TU70 that extends along the north side of Building 336 connects to TU101 on the south. On the west, TU70 terminated at the Building 366 roof drain downspout. No piping was identified to the north of Manhole MH294 on the north side of Building 366. The majority of the TU70 is situated within IR Program Site IR-34. The chemicals of concern associated with IR-34 are listed in Table 3-10.

TU70 consists of 20 storm drain trench segments and 3 sanitary sewer trench segments. As identified on Figure 4-1, these trench segments include:

Storm Drain Trench Segments		Sanitary Sewer Trench Segments
• 70-D17-00-1S	• 70-D17-34-8H	• 70-D17-00-1L
• 70-D17-34-1S	• 70-D17-34-8I	• 70-D17-00-2M
• 70-D17-34-3K	• 70-D17-34-8J	• 70-D17-34-2M
• 70-D17-34-8A	• 70-D17-34-8K	
• 70-D17-34-8B	• 70-D17-34-8L	
• 70-D17-34-8C	• 70-D17-34-8M	
• 70-D17-34-8D	• 70-D17-34-8N	
• 70-D17-34-8E	• 70-D17-34-8O	
• 70-D17-34-8F	• 70-D17-34-8P	
• 70-D17-34-8G	• 70-D17-34-9B	

Trench segment 70-D17-00-1L extended southward from TU68 through TU70 and transitioned into TU71. With the exception of trench segments 70-D17-34-8A through -8P and -9B, each of the trench segments associated with TU70 was identified in the Design Plan (TtEC 2007c).

Trench segments 70-D17-34-8A through -8P and -9B were discovered during the removal action activities.

4.5.1 TU70 Removal Action Activities

Excavation of TU70 was initiated on July 30, 2007 in trench segment 70-D17-00-1L. A total of 123 truckloads (approximately 1,476 cubic yards) of soil were excavated during the removal action (Table 3-3). Soil excavated from TU70 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on August 22, 2007, TU70 had an exposed surface area of 944 m^2 and was 547 linear feet in length (Table 3-1). The maximum excavated TU70 depth was 9 feet bgs (Table 3-2).

A total of 54 sections of pipe and Manhole MH294 were excavated from TU70 and placed on plastic pending further activities during the Parcel G removal action. Piping that disintegrated during excavation was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, sanitary sewer trench segment 70-D17-00-1L contained 15-inch-diameter concrete pipe and trench segments -2M and 70-D17-34-2M contained 6-inch-diameter VCP. These pipes were located at depths ranging from 6 feet to 12 feet bgs. Trench segments 70-D17-00-1S, 70-D17-34-1S, and -3K contained 6-inch-diameter and 12-inch-diameter VCP located at depths between 7 feet and 11 feet bgs. In addition, storm drain trench segments 70-D17-34-8A through -8P, and -9B contained 4-inch-diameter and 6-inch-diameter CIP located at a maximum depth of 7 feet bgs.

The majority of the pipe excavated from TU70 and Manhole MH294 did not contain sufficient sediment for sample collection and analysis. However, sediment samples were collected from two pipe sections excavated from trench segment 70-D17-00-1L (Table 3-6). No radioactivity exceeding the release criteria was identified in the sediment sample analytical results for any ROC. The sediment sample analytical results are provided in Appendix D.

Radiological surveys were performed on the pipe sections excavated from TU70 and the materials forming Manhole MH294 during the Parcel G removal action (Table 3-5). Elevated survey results were identified for one section of pipe excavated from trench segment 70-D17-34-1S and one section of pipe excavated from trench segment 70-D17-34-8M. Because elevated survey results were identified, sampling and analysis was performed to eliminate the possibility of measurements in excess of 1,000 dpm/100 cm^2 being attributed to the presence of Sr-90. A solid sample was collected from the elevated pipe excavated from trench segment 70-D17-34-1S and submitted to the laboratory for Sr-90 analysis. Following a review of the data, the RASO concurred that the analytical results did not indicate the presence of contamination above the release limit. This pipe section was transferred to the DON's non-radiological waste contractor in September 2008 for off-site disposal or recycling. Because no solid sample was collected from the pipe section excavated from trench segment 70-D17-34-8M, it was placed in LLRW bin

GFLU001016G6 for disposal by the DON's radiological waste contractor. The final disposition of piping excavated from TU70 is provided in Table 3-5. The radiological survey reports are provided in Appendix B and the survey reports for potentially contaminated piping are included in Appendix C.

4.5.2 TU70 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU70 remained in place on Parcel G following the completion of the removal action.

4.5.3 TU70 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU70 in September 2007 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 4-1 depicts the FSS soil sample collection locations in TU70.

TU70 was defined for the FSS as the sum of the trench unit and backfill material composed of both radiologically processed and released excavated soil and imported fill. The average net residual radioactivity concentrations for material used as backfill were 0.045 pCi/g for Cs-137, 0.053 pCi/g for Sr-90, and 0.311 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.045 pCi/g for Cs-137, 0.050 pCi/g for Sr-90, and 0.293 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.455 mrem/y with an increased cancer risk of 8.683×10^{-5} for the backfill material and 5.145 mrem/y with an increased cancer risk of 8.189×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU70 SUPR provided in Appendix G.

The results of the modeling efforts determined that the potential TU70 dose due to activity concentrations greater than or equal to the MDL was 5.455 mrem/y with an increased cancer risk of 8.683×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU70 SUPR (Appendix G).

4.5.4 TU70 Backfill Activities

In addition to imported fill, radiologically processed and released excavated soil survey units were selected for use as backfill material in TU70. The excavated soil survey units selected included:

- ES-0005
- ES-0008
- ES-0011
- ES-0014
- ES-0015

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and their associated laboratory analytical results were discussed in the TU70 SUPR (Appendix G). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

Concurrence to backfill TU70 was obtained from the RASO on November 1, 2007 and backfill activities commenced on November 2, 2007. Approximately 1,282 cubic yards of soil was placed in TU70 to grade followed by the application of road base material over the backfilled trench. Backfilling activities were completed on November 16, 2007. A summary of the activities performed to support the recommended radiological free release of TU70 is provided in Table 3-1.

4.6 TRENCH SURVEY UNIT 71

TU 71 is located in the southern portion of Work Area 17 North on Morrell Street, and south and east of radiologically surveyed and released Building 366 (Figures 3-2 and 4-1). The radiological work and FSS activities performed for Building 366 are summarized in Section 4.10 of this RACR. TU71 connects to TU69, TU70, and TU100 on the north and TU72 on the south. No piping extended to the east of Manhole MH297 or south of Manhole MH300. TU71 terminated at the roof drain downspout on the western end of Building 366. The majority of TU71 is situated within IR Program Site IR-34. The chemicals of concern associated with IR-34 are listed in Table 3-10.

TU71 is comprised of 18 storm drain trench segments and 5 sanitary sewer trench segments. As identified on Figure 4-1, these trench segments include:

Storm Drain Trench Segments		Sanitary Sewer Trench Segments
• 70-D17-00-1O	• 70-D17-34-8S	• 70-D17-00-1L
• 70-D17-00-1P	• 70-D17-34-8T	• 70-D17-00-2H
• 70-D17-00-1Q	• 70-D17-34-8U	• 70-D17-00-2I
• 70-D17-00-1R	• 70-D17-34-8V	• 70-D17-34-2I
• 70-D17-34-1P	• 70-D17-34-8W	• 70-D17-34-2J

- 70-D17-34-1Q
- 70-D17-34-2K
- 70-D17-34-8Q
- 70-D17-34-8R
- 70-D17-34-8X
- 70-D17-34-8Y
- 70-D17-34-8Z
- 70-D17-34-9A

Trench segment 70-D17-00-1L extended from TU68, through TU70, and transitioned into TU71. Trench segment 70-D17-00-2H extended southward into TU72 and continued into TU73. With the exception of trench segments 70-D17-34-8Q through -8Z and -9A, each of the trench segments associated with TU71 was identified in the Design Plan (TtEC 2007c). Trench segments 70-D17-34-8Q through -8Z and -9A were discovered during the removal action activities.

4.6.1 TU71 Removal Action Activities

Excavation of TU71 was initiated on August 1, 2007 in trench segment 70-D17-00-1L. A total of 103 truckloads (approximately 1,236 cubic yards) of soil were excavated during the removal action (Table 3-3). Soil excavated from TU71 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on August 27, 2007, TU71 exhibited an exposed surface area of 872 m^2 and was 888 linear feet in length (Table 3-1). The maximum excavated TU71 depth was 13 feet bgs (Table 3-2).

A total of 33 sections of pipe and Manholes MH297, MH298, MH299, and MH300 were excavated from TU71 and placed on plastic pending further activities during the Parcel G removal action. Piping that crumbled during excavation was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, storm drain trench segments 70-D17-00-1O, -1Q, 70-D17-34-1Q, and -2K contained 8-inch-diameter to 24-inch-diameter VCP located at depths ranging from 3 feet to 7 feet bgs. Trench segments 70-D17-00-1P, 70-D17-34-1P, -8Q through -8Z, and -9A contained 4-inch-diameter to 10-inch-diameter CIP located at depths ranging from 2 feet to 8 feet bgs. Storm drain trench segment 70-D17-00-1R contained 24-inch-diameter concrete-encased VCP located at depths between 6 feet and 7 feet bgs and sanitary sewer trench segments 70-D17-00-1L and -2H contained 15-inch-diameter concrete pipe located at depths from 6 feet to 12 feet bgs. Trench segment 70-D17-34-2J contained 6-inch-diameter VCP located at depths from 4 feet to 8 feet bgs. In addition, trench segments 70-D17-00-2I and 70-D17-34-2I contained 15-inch-diameter CIP located at depths ranging from 3 feet to 11 feet bgs.

The majority of pipes and Manholes MH298 and MH299 did not contain sufficient sediment for sample collection and analysis. Sediment samples were collected from one pipe section excavated from trench segment 70-D17-00-2H, one pipe section excavated from trench segment 70-D17-34-2K, and Manholes MH297 and MH300 (Table 3-6). No radioactivity above the release criteria was identified in the sediment sample collected from the pipe section excavated

from trench segment 70-D17-34-2K or Manhole MH297. The sediment samples collected from the trench segment 70-D17-00-2H pipe section and Manhole MH300 showed the presence of Cs-137 contamination at 0.14897 pCi/g and 0.26691 pCi/g, respectively. This pipe section and Manhole MH300 were disposed of as LLRW. The sediment sample analytical reports are provided in Appendix D.

Radiological surveys were performed on 32 sections of pipe and the materials forming Manholes MH297, MH298, and MH299 during the Parcel G removal action (Table 3-5). Because none of the pipe sections or manholes identified elevated survey results, the TU71 piping was transferred to the DON's non-radiological waste contractor for off-site disposal or recycling. The final disposition of pipes and the materials forming the manholes excavated from TU71 is provided in Tables 3-5 and 3-6. The radiological survey reports are presented in Appendix B.

Due to the presence of Cs-137 contamination in sediment samples collected from TU71 piping, a total of 34 investigative soil samples were collected along the bottom of the trench on September 25, 2007 and submitted to the laboratory for analysis. One soil sample identified the presence of Ra-226 activity above the release limit at 2.2638 pCi/g. Based on this result, roughly 1 cubic yard of soil was remediated from TU71 on October 9, 2007. The remediated material was placed in LLRW bin GFLU001084G3 for disposal by the DON's radiological waste contractor (Table 3-9). Following remediation, a total of three verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in these soil samples for any ROC.

In total, 37 investigative soil samples (including investigative and verification samples) were collected prior to the final 18 systematic FSS samples and 1 cubic yard of soil was remediated from TU71 during the Parcel G removal action. Figure 4-2 depicts the approximate locations of the contaminated soil samples prior to remediation.

4.6.2 TU71 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU71 remained in place on Parcel G following the completion of the removal action.

4.6.3 TU71 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU71 on October 18, 2007 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 4-1 depicts the FSS soil sample collection locations in TU71.

TU71 was defined for the FSS as the sum of the trench unit and backfill material composed of radiologically processed and released excavated soil and a volume of imported fill. The average

net residual radioactivity concentrations for material used as backfill in TU71 were 0.047 pCi/g for Cs-137, 0.048 pCi/g for Sr-90, and 0.357 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.047 pCi/g for Cs-137, 0.037 pCi/g for Sr-90, and 0.307 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.895 mrem/y with an increased cancer risk of 9.492×10^{-5} for the backfill material and 5.067 mrem/y with an increased cancer risk of 8.164×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU71 SUPR provided in Appendix G.

The results of the modeling efforts determined that the potential TU71 dose due to activity concentrations greater than or equal to the MDL was 5.895 mrem/y with an increased cancer risk of 9.492×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU71 SUPR (Appendix G).

4.6.4 TU71 Backfill Activities

In addition to a volume of imported fill, radiologically processed and released excavated soil survey units were selected for use as backfill material in TU71. The excavated soil survey units selected included:

- ES-0009
- ES-0022
- ES-0023

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU71 SUPR (Appendix G). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

The RASO concurred with backfilling TU71 on November 5, 2007 and backfilling activities commenced on November 8, 2007. Approximately 1,025 cubic yards of soil was placed in TU71 to grade followed by the application of road base material over the backfilled trench. Backfilling activities for TU71 were completed on November 14, 2007. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU71.

4.7 TRENCH SURVEY UNIT 100

TU100 is located in the western portion of Work Area 17 North and extends west along the south side of radiologically surveyed and released Building 366 (Figures 3-2 and 4-1). The radiological activities performed for Building 366 are summarized in Section 4.10 and detailed in the FSS reports provided in Appendix P. TU100 connects to TU71 on the east, west, and south, then terminates on the interior of Building 366 on the north. TU100 is situated within IR Program Site IR-34. The chemicals of concern associated with IR-34 are listed in Table 3-10.

TU100 consists of three sanitary sewer trench segments, one connector trench segment, and no storm drain trench segments. As identified on Figure 4-1, these trench segments include:

Sanitary Sewer Trench Segments	Connector Trench Segment
• 72-D17-34-8E	• 72-D17-34-9R
• 72-D17-34-9L	
• 72-D17-34-9Q	

Connector trench segment 72-D17-34-9R extended from east to west along the exterior of Building 366 and joined the individual sanitary sewer trench segments to form a single trench survey unit. The trench segments associated with TU100 were not identified in the Design Plan (TtEC 2007c); however, the pipes were found during the Building 366 FSS activities.

4.7.1 TU100 Removal Action Activities

Excavation of TU100 began on July 3, 2008 in trench segment 72-D17-34-8E. A total of five truckloads (approximately 60 cubic yards) of soil were excavated during the removal action (Table 3-3). Soil excavated from TU100 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on July 10, 2008, TU100 exhibited an exposed surface area of 55 m^2 and was 122 linear feet in length (Table 3-1). The maximum excavated TU100 depth was 4 feet bgs (Table 3-2).

Approximately 57 linear feet of sanitary sewer CIP was removed from TU100 during the Parcel G removal action. No sediment samples were collected during removal of the pipes. Because the pipe sections were too narrow in diameter to survey properly, the removed pipe sections were placed in LLRW bins for disposal by the DON's radiological waste contractor.

4.7.2 TU100 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU100 remained in place on Parcel G following the completion of the removal action.

4.7.3 TU100 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU100 on July 25, 2008 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 4-1 depicts the FSS soil sample collection locations in TU100.

For the FSS, TU100 was defined as the sum of the trench unit and backfill material composed of radiologically processed and released excavated soil. The average net residual radioactivity concentrations for material used as backfill in TU100 were 0.040 pCi/g for Cs-137, 0.046 pCi/g for Sr-90, and 0.258 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.050 pCi/g for Cs-137, 0.085 pCi/g for Sr-90, and 0.201 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 1.489 mrem/y with an increased cancer risk of 3.067×10^{-5} for the backfill material and 1.199 mrem/y with an increased cancer risk of 2.450×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU100 SUPR provided in Appendix G.

The results of the modeling efforts determined that the potential TU100 dose due to activity concentrations greater than or equal to the MDL was 1.489 mrem/y with an increased cancer risk of 3.067×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU100 SUPR (Appendix G).

4.7.4 TU100 Backfill Activities

Radiologically processed and released excavated soil survey unit ES-0033 was selected for use as backfill material in TU100. Radiological information related to the processing of this excavated soil survey unit is summarized in Table 3-4 and its associated laboratory analytical results were discussed in the TU100 SUPR (Appendix G).

Concurrence with backfilling TU100 was obtained from the RASO on September 5, 2008. Backfilling activities commenced on October 29, 2008 and were completed the same day. Approximately 21 cubic yards of soil was placed in TU100 during the backfill operations. A summary of the activities performed to support the recommended radiological free release of TU100 is provided in Table 3-1.

4.8 TRENCH SURVEY UNIT 101

TU101 is located in the western portion of Work Area 17 North on Parcel G and extends west along the north side of radiologically surveyed and released Building 366 (Figures 3-2 and 4-1).

The radiological activities performed for Building 366 are summarized in Section 4.10 and detailed in the FSS reports provided in Appendix P. TU101 connects to TU70 on the north and terminates on the south on the interior of Building 366. TU101 is situated within IR Program Site IR-34. The chemicals of concern associated with IR-34 are listed in Table 3-10.

TU101 consists of 15 sanitary sewer trench segments, a connector trench segment, and no storm drain trench segments. As identified on Figure 4-1, these trench segments include:

Sanitary Sewer Trench Segments		Connector Trench Segment
• 72-D17-34-8A	• 72-D17-34-9H	• 72-D17-34-9P
• 72-D17-34-8B	• 72-D17-34-9I	
• 72-D17-34-8C	• 72-D17-34-9J	
• 72-D17-34-9C	• 72-D17-34-9K	
• 72-D17-34-9D	• 72-D17-34-9M	
• 72-D17-34-9E	• 72-D17-34-9N	
• 72-D17-34-9F	• 72-D17-34-9O	
• 72-D17-34-9G		

Connector trench segment 72-D17-34-9P extended from east to west along the exterior of Building 366 and joined the individual sanitary sewer trench segments to form a single trench survey unit. The trench segments associated with TU101 were not identified in the Design Plan (TtEC 2007c); however, the pipes were identified during the Building 366 FSS activities.

4.8.1 TU101 Removal Action Activities

Excavation of TU101 began on July 2, 2008 in trench segment 72-D17-34-9C. A total of 16 truckloads (approximately 80 cubic yards) of soil were excavated during the removal action (Table 3-3). Soil excavated from TU101 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on July 13, 2008, TU101 exhibited an exposed surface area of 204 m^2 and was 357 linear feet in length (Table 3-1). The maximum excavated TU101 depth was 4 feet bgs (Table 3-2).

A total of eight sections of pipe and an additional 30 linear feet of drain lines were excavated from TU101 and placed on plastic pending further activities during the Parcel G removal action. Piping that crumbled during excavation was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, sanitary sewer trench segment 72-D17-34-8A contained 2-inch-diameter CIP and trench segment 72-D17-34-9N contained 3-inch-diameter CIP. The piping in these trench segments was located at depths between 2 feet and 3 feet bgs. Sanitary sewer trench segments 72-D17-34-8B, -8C, -9C through -9M, and -9O contained

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4-inch-diameter CIP located at depths ranging from 2 feet to 3 feet bgs. In addition, small sections of 18-inch-diameter CIP were contained in trench segments 72-D17-34-9C, -9G, and -9H.

Sufficient sediment for sample collection and analysis was obtained from five pipe sections removed from TU101 (Table 3-6). No radioactivity above the release criteria was identified in the sediment sample analytical results for any ROC. The five pipe sections were placed in LLRW bin GFLU001262G4 for disposal since they were too narrow in diameter to properly survey. The sediment sample analytical reports are provided in Appendix D.

Radiological surveys were performed on three sections of 18-inch-diameter pipe excavated from trench segments 72-D17-34-9C, -9G, and -9H (Table 3-5). No elevated survey results were identified for these three pipe sections. As indicated in Table 3-5, the surveyed and released sections of pipe were transferred to the DON's non-radiological waste contractor in July 2008 for off-site disposal or recycling. The radiological survey reports are presented in Appendix B.

Approximately 30 linear feet of sanitary sewer CIP was removed from TU101 during the Parcel G removal action. No sediment samples were collected during removal and no radiological surveys were performed because the pipe sections were too narrow in diameter to survey properly. Because no radiological survey activities were performed, the 30 linear feet of CIP was placed in LLRW bins for disposal by the DON's radiological waste contractor.

Following the completion of excavation, 18 systematic soil samples were collected from the sidewalls and bottom of TU101 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 activity above the release limit in three soil samples at 1.5036 pCi/g, 1.9910 pCi/g, and 2.1552 pCi/g. Based on these results, roughly 11 cubic yards of soil was remediated from TU101 and placed in LLRW bin BKRU026468G3 for disposal by the DON's radiological waste contractor (Table 3-9). Following remediation, six verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

In total, 24 investigative soil samples (including systematic and verification samples) were collected prior to the 18 systematic FSS soil samples and approximately 11 cubic yards of soil was remediated from TU101 during the removal action activities. Figure 4-2 depicts the approximate locations of the contaminated soil samples prior to remediation.

4.8.2 TU101 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU101 remained in place on Parcel G following the completion of the removal action.

4.8.3 TU101 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU101 on July 19, 2008 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 4-1 depicts the FSS soil sample collection locations in TU101.

For the FSS, TU101 was defined as the sum of the trench unit and backfill material composed of radiologically processed and released excavated soil. The average net residual radioactivity concentrations for material used as backfill in TU101 were 0.040 pCi/g for Cs-137, 0.046 pCi/g for Sr-90, and 0.258 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.041 pCi/g for Cs-137, 0.068 pCi/g for Sr-90, and 0.197 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 2.152 mrem/y with an increased cancer risk of 4.093×10^{-5} for the backfill material and 1.689 mrem/y with an increased cancer risk of 3.190×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU101 SUPR provided in Appendix G.

The results of the modeling efforts determined that the potential TU101 dose due to activity concentrations greater than or equal to the MDL was 2.152 mrem/y with an increased cancer risk of 4.093×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU101 SUPR.

4.8.4 TU101 Backfill Activities

Radiologically processed and released excavated soil survey unit ES-0033 was selected for use as backfill material in TU101. Radiological information related to the processing of this excavated soil survey unit is summarized in Table 3-4 and its associated laboratory analytical results were discussed in the TU101 SUPR (Appendix G).

The RASO concurred with backfilling TU101 on August 20, 2008 and backfilling activities commenced on October 28, 2008. Approximately 94 cubic yards of soil was placed in TU101 and backfilling activities were completed on October 29, 2008. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU101.

4.9 TRENCH SURVEY UNIT 102

TU102 is located on the west side of Work Area 17 North and within the northwest interior corner of Building 366 (Figures 3-2 and 4-1). The radiological activities performed for Building 366 are summarized in Section 4.10 and detailed in the FSS reports provided in

Appendix P. TU102 connects to TU70 on the north and terminates on the east, west, and south within Building 366. TU102 is situated within IR Program Site IR-34. The chemicals of concern associated with IR-34 are listed in Table 3-10.

TU102 consists of three sanitary sewer trench segments and no storm drain trench segments. As identified on Figure 4-1, these trench segments include:

- 72-D17-34-8D
- 72-D17-34-8F
- 72-D17-34-8G

Trench segment 72-D17-34-8G was terminated at the interior utility vault on the west side of Building 366. Trench segment 72-D17-34-8D was terminated at the Building 366 support column on the west side of the structure. The trench segments associated with TU102 were not identified in the Design Plan (TtEC 2007c); however, the pipes were identified during the Building 366 FSS activities.

4.9.1 TU102 Removal Action Activities

Excavation of TU102 was initiated on July 12, 2008 in trench segment 72-D17-34-8F. A total of five truckloads (approximately 60 cubic yards) of soil were excavated during the removal action (Table 3-3). Soil excavated from TU102 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on July 25, 2008, TU102 had an exposed surface area of 67 m^2 and was 100 linear feet in length (Table 3-1). The maximum excavated TU102 depth was 4 feet bgs (Table 3-2).

A total of 73 linear feet of pipe was excavated from TU102 and placed on plastic pending further activities during the Parcel G removal action. As indicated in Table 3-2, trench segments 72-D17-34-8D, -8F, and -8G contained 4-inch-diameter CIP located at depths ranging from 2 feet to 3 feet bgs.

Sufficient sediment for sample collection and analysis was found in one pipe section excavated from trench segment 72-D17-34-8D (Table 3-6). The analytical results identified the presence of Cs-137 activity above the release limit at 0.25978 pCi/g. As indicated in Table 3-6, this pipe section was placed in LLRW bin GFLU001262G4 on July 23, 2008 for disposal. The sediment sample analytical laboratory report is provided in Appendix D.

Radiological surveys were not performed on the pipe sections removed from TU102. Because the pipe diameters were too narrow in diameter to properly survey, the pipe sections were placed in LLRW bins for disposal by the DON's radiological waste contractor.

Due to the presence of Cs-137 activity above the release limit in the sediment sample collected from trench segment 72-D17-34-8D, a total of 10 investigative soil samples were collected along the bottom of the trench and analyzed by the laboratory. None of the investigative soil samples identified the presence of radioactivity above the release criteria for any ROC.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU102 on July 27, 2008 and submitted to the laboratory for analysis by gamma spectroscopy. One soil sample identified the presence of Ra-226 above the release limit at 1.8155 pCi/g. Based on this result, approximately 2.5 cubic yards of soil was remediated on July 9, 2008. The remediated material was placed in LLRW bin BKRU026468G3 for disposal by the DON's radiological waste contractor (Table 3-9). Following remediation, three verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in these soil samples for any ROC.

In total, 31 investigative soil samples (including investigative, systematic, and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 2.5 cubic yards of soil was remediated from TU102. Figure 4-2 depicts the location of the contaminated soil sample prior to remediation.

4.9.2 TU102 Piping Remaining In Place

A total of 19 linear feet of trench segment 72-D17-34-8G was excavated from TU102 during the Parcel G removal action. The excavation was terminated at the utility vault located near the west wall on the interior of Building 366. Based on historical drawings, an estimated 6 linear feet of trench segment 72-D17-34-8G remained in place following the completion of the removal action (Table 3-8). Additional pipe could not be removed without adversely affecting the structural integrity of Building 366.

A total of 27 linear feet of trench segment 72-D17-34-8D was excavated prior to its termination at the interior Building 366 support column on the west side of the structure. Based on historical drawings, an estimated 6 linear feet of trench segment 72-D17-34-8D remained in place following the excavation activities (Table 3-8). Additional pipe could not be removed without adversely affecting the structural integrity of Building 366.

Of the 31 investigative soil samples collected from TU102, a single soil sample identified the presence of Ra-226 activity above the release limit. Approximately 2.5 cubic yards of soil was remediated and no radioactivity above the release criteria was identified in the verification soil samples. In addition, 18 systematic FSS soil samples were collected from TU102 and analyzed, with no radiological contamination identified. Based on these data, the DON concluded that the piping remaining in place in both trench segments 72-D17-34-8D and -8G were unlikely to be contaminated.

4.9.3 TU102 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU102 on July 11, 2008 and submitted to the laboratory for analysis during the Parcel G removal action. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 4-1 depicts the FSS soil sample collection locations in TU102.

TU102 was defined for the FSS as the sum of the trench unit and backfill material composed of radiologically processed and released excavated soil. The average net residual radioactivity concentrations for material used as backfill in TU102 were 0.040 pCi/g for Cs-137, 0.046 pCi/g for Sr-90, and 0.258 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.043 pCi/g for Cs-137, 0.077 pCi/g for Sr-90, and 0.322 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 1.559 mrem/y with an increased cancer risk of 3.186×10^{-5} for the backfill material and 1.940 mrem/y with an increased cancer risk of 3.966×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU102 SUPR provided in Appendix G.

The results of the modeling efforts determined that the potential TU102 dose due to activity concentrations greater than or equal to the MDL was 1.940 mrem/y with an increased cancer risk of 3.966×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU102 SUPR (Appendix G).

4.9.4 TU102 Backfill Activities

Radiologically processed and released excavated soil survey unit ES-0033 was selected for use as backfill material in TU102. Radiological information related to the processing of ES-0033 and its associated laboratory analytical results were discussed in the TU102 SUPR (Appendix G).

The RASO concurred with backfilling TU102 on August 20, 2008. Backfilling activities commenced and were completed on October 29, 2008. Approximately 33 cubic yards of soil was placed in TU102 during the backfill operations. A summary of the activities performed to support the recommended radiological free release of TU102 is provided in Table 3-1.

4.10 BUILDING 366

The following sections summarize the Building 366 FSS, provide an abbreviated history, describe the FSS results, and discuss regulatory concurrence for the unrestricted radiological release of the structure. The Building 366 FSS reports are provided in Appendix P and detail the

radiological survey activities. The location of Building 366 within Parcel G is depicted on Figures 3-3 and 4-1.

4.10.1 Description

Building 366 is situated between Cochrane and Morrell Streets on Parcel G. Formerly referred to as Building 351-B, Building 366 is a vacant, one-story, raised-ceiling structure composed of an exterior sheet metal shell with interior rooms constructed of wood and sheetrock materials. The approximately 280-foot by 130-foot structure was built over a full-floor concrete pad with isolated areas of asphalt patching.

The SFRA Redevelopment Plan (SFRA 1997) indicated that Building 366 was designated as a "mixed use" area that may include residential development. The building is currently unoccupied.

4.10.2 History

Building 366 was used by the NRDL for the Instrument Calibration and Management Engineering and Comptroller Department. In addition, the structure was used as:

- Administrative offices
- Applied Research and Technical Development branches
- Radiological Safety Branch
- Management Planning Division
- Nucleonics Division
- Instruments Evaluation Section and General Laboratory
- Chemical Research Laboratory
- Shipyard Radiography Shop
- Boat and Plastics Shop
- Navy Branch Project Officers Station

Following HPNS closure, Building 366 was leased by the DON to the SFRA and used by civilian artisans. However, the lease was terminated in 2007.

Based on past surveillance history documentation, NRDL personnel performed a survey of Building 366 in 1995 prior to moving their laboratory facilities to Building 815. The survey results did not reveal elevated count rates or exposure levels related to the presence of residual radioactive material when compared to the release limits of the period.

The DON contracted with a radiological services subcontractor in the spring of 2001 to perform an independent gamma survey of Building 366. None of the survey measurements revealed elevated count rates or exposure levels directly related to residual radioactive materials. These surveys focused on immediately accessible areas with no attempt to move or relocate unsecured items, equipment, or materials. A comprehensive radiological survey was performed in 2003 to validate the prior surveillance activities and to address the remaining area of concern expressed by regulators, members of the local community, and/or the general public. An analysis of the existing field data indicated that residual radioactivity in Building 366 was generally less than the release criteria and was similar to the background levels of radioactivity for similar HPNS site locations where radioactive material were not used. However, some evidence of small, localized areas of elevated activity remained. Detectable levels of Cs-137 activity were present in accessible areas of the structure's interior ventilation system, and detectable levels of Cs-137 and Ra-226 activity were distributed throughout interior portions of the floor drain system. Based on these results, the DON, in consultation with the RASO, determined that remedial action and FSS activities were warranted for Building 366.

Based on the history of operations documented in the HRA (NAVSEA 2004), Ra-226, Cs-137, and Sr-90 were selected as the ROCs for Building 366.

4.10.3 Final Status Survey Summary

Mobilization to perform the remedial action support survey fieldwork for Building 366 began in mid-February 2008. After reviewing the applicable plans and variety of interior Building 366 surfaces, Buildings 369, 400, and 413 were selected for use as the background or reference areas. These buildings were constructed in a similar era as that of Building 366, and none of the structures were listed as impacted in the HRA (NAVSEA 2004).

The investigation levels for alpha and beta radiation surveys were established at 100 dpm/100 cm^2 and 1,000 dpm/100 cm^2, respectively. Loose surface investigations to determine the fraction of removable activity present relative to the total activity were established at 20 percent of the values for total activity and were different than other investigation levels due to the lower release criteria.

During the pre-survey activities, trash and debris present inside Building 366 were surveyed for radiological contamination to determine proper disposal. Materials and equipment present in the building including drywall partitions, a grinder, lathes, lockers, a shelf, augers, and other miscellaneous items also were surveyed. A total of 112 items were surveyed during these activities. Only a pressure pot lid and a desk indicated the presence of alpha contamination greater than the release criteria and were placed in LLRW bins for disposal by the DON's radiological waste contractor. The remainder of the surveyed and released items were removed

from the building and placed in storage. The equipment and material survey results were provided in Appendix I of the Building 366 FSS (Appendix P).

Ventilation system surveys were initiated following the removal of the surveyed materials and equipment. Scoping surveys of the heating system intake fan, ventilation system exhaust fan, and ductwork were performed prior to dismantling the system. A total of 34 different pieces of the ventilation system were surveyed during these activities. Once the scoping surveys were completed, the ventilation system was vacuumed with equipment using a high efficiency particulate air filter. The overhead ducts and ventilation system were then removed in sections and staged pending further activities. A radiological survey was performed on each system component to ensure contamination was not being spread throughout the building. The ventilation system components were disposed of as LLRW since 100 percent of the surfaces could not be properly surveyed. The results of the ventilation system survey activities were provided in Appendix J of the Building 366 FSS (Appendix P).

Drain systems were present along the north and south sides of Building 366 and an additional drainage system was located in the northwest corner of the structure. To facilitate access for removal of the drain systems, the areas were first surveyed and some interior walls were removed. Following a review of the floor surface survey results, the concrete covering the drain systems was saw-cut to facilitate access to the drain lines. Once completed, the saw-cut concrete pieces were removed and surveyed for radioactive contamination. Three separate trench survey units resulted from the removal of the drainage systems and are identified in this RACR as TU100, TU101, and TU102. The drain system removal action was performed in accordance with the storm drain and sanitary sewer Work Plan (TtEC 2010). The FSS activities performed for the trench survey units associated with Building 366 are included in Sections 4.7, 4.8, and 4.9 of this RACR. The TU100, TU101, and TU102 SUPRs are provided in Appendix G.

Initially, Building 366 was divided into 59 Class 1 survey units, 8 Class 2 survey units, and a single Class 3 survey unit. However, to perform the remedial action support survey, it was necessary to remove the temporary walls as well as portions of the flooring material to facilitate access to the building drain lines. Following the removal of the temporary walls and flooring material, the survey units were rearranged and Survey Units 15 through 17, 19 through 23, 29 and 30, and 39 through 42 were eliminated. Building 366 was then divided into 45 Class 1 survey units, 9 Class 2 survey units, and a single Class 3 survey unit for the FSS activities. The Class 3 survey unit encompassed the exterior of the building, including the roof. The actual arrangement of the survey units was provided in the Building 366 FSS (Appendix P).

Alpha, beta, and gamma scans were performed on 100 percent of the accessible surfaces in the Class 1 survey units, 50 percent in the Class 2 survey units, and 25 percent in the Class 3 survey unit. Two alpha readings in Class 1 Survey Unit 43 and one reading in Class 2 Survey Unit 60 exceeded the release criteria; however, follow-up biased static measurements showed no activity

above the release limits. Approximately 53 alpha scan readings collected from the exterior surfaces of the building in Class 3 Survey Unit 69 were elevated. These elevated measurements were attributed to sun reflection and temperature fluctuations. In addition, 12 alpha scan readings above the release criteria were identified in this survey unit with a maximum value of 162 dpm/100 cm^2. Follow-up biased static measurements did not indicate the actual presence of activity above the release criteria. The beta scan data identified one reading in Class 1 Survey Unit 55 above the release criteria and three separate Class 2 survey units showed elevated scan readings. However, follow-up static measurements showed that activity was not actually present above the release criteria in any of these survey units.

Systematic alpha and beta static measurements were collected from discrete locations in each of the survey units. In addition, swipe samples were collected from each of these locations. The average swipe data, or removable contamination, were all less than 1.89 dpm/100 cm^2 alpha and 5 dpm/100 cm^2 beta for each Class 1, 2, and 3 survey unit. No individual swipe measurement was greater than 20 percent of the release criteria, and all swipe data were less than 20 percent of the total net residual activity identified within the survey unit. None of the alpha or beta static measurements exceeded the release criteria.

Building 366 was subjected to reviews to ensure that radiation exposures to workers, the public, and the environment met ALARA principles. These reviews were conducted for Building 366 operations, practices, and procedures with potential for individual or collective doses. Results from radiological survey activities, and air, swipe, and soil samples were used to assess the potential radiological impacts of Building 366 activities. These activities included characterization to ensure complete removal of radioactive material exceeding the release criteria. Following the completion of survey activities, qualitative radiological impacts from operations were evaluated by performing a dose and risk assessment. Based on recent estimates of dose to the public from the Building 366 survey activities, only qualitative ALARA analyses were required. Qualitative ALARA analyses for Building 366 did not result in alpha or beta measurements above the investigation levels and none of the alpha, beta, or gamma measurement results identified residual radioactivity above the release criteria for any ROC. A description of the ALARA process is presented in Section 3.2.6 of this RACR and detailed in the Building 366 FSS reports (Appendix P).

Dose modeling for Building 366 was performed using the residential scenario in RESRAD-BUILD. The maximum residual dose in Building 366 was identified in Survey Unit 59 at 0.785 mrem/y with a maximum excess lifetime cancer risk of 4.16×10^{-7}. The input parameters to RESRAD-BUILD and the final resulting dose and risk were presented in the Building 366 FSS reports (Appendix P). Based on these results, the DON recommended Building 366 for unrestricted radiological release.

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4.10.4 Regulatory Concurrence

The final FSS results for Building 366 (Appendix P) were submitted to the regulatory agencies on December 30, 2009. However, the CDPH questioned why a Class 2 survey was selected for an overhead wooden platform at Building 366 that previously housed the ventilation mechanical systems. In response, the DON performed a Class 1 survey of the wooden platform that was designated as Survey Unit 70 on February 5, 2010. The survey results did not identify residual activity above the release criteria. The results of the survey activities performed for Survey Unit 70 were presented in a separate FSS report included in Appendix P.

Concurrence with the radiological release for unrestricted use of Building 366 was obtained from the DTSC and CDPH on April 1, 2010. Copies of the DTSC letter and the CDPH memorandum are provided in Appendix X. According to statements by the EPA, their decision for radiological free release of Building 366 will be based on the data and analyses presented in this RACR.

5.0 WORK AREA 17 SOUTH

Work Area 17 South is located in the southeast corner of Parcel G (Figures 3-2, 3-3, and 5-1). It is bounded on the north by Work Area 17 North, on the east and south by Parcel D-1, and on the west by Work Area 18 South. The radiological work activities performed in Work Area 17 South included TU72 and TU73. The following sections describe the work activities completed in Work Area 17 South to support the recommended radiological release for unrestricted use of the Parcel G property.

5.1 TRENCH SURVEY UNIT 72

Situated in the northeast corner of Work Area 17 South on Parcel G, TU72 is located adjacent to the Parcel D-1 property boundary and directly east of Buildings 323, 324, 415, and 416 (Figures 3-2 and 5-1). TU72 connects to TU71 on the north and TU73 on the south. On the west, TU72 was terminated at the Parcel D-1 property boundary. No further pipe was found to the west of TU72 during the removal action activities. There are no IR Program sites associated with TU72.

TU72 is composed of six storm drain trench segments and two sanitary sewer trench segments. As identified on Figure 5-1, these trench segments include:

Storm Drain Trench Segments	Sanitary Sewer Trench Segments
• 70-D17-00-1M	• 70-D17-00-2H
• 70-D17-00-1N	• 70-D17-00-8C
• 70-D17-00-1O	
• 70-D17-00-1X	
• 70-D17-00-8B	
• 70-D17-00-8D	

Trench segment 70-D17-00-2H extended southward from TU71 into TU72 then transitioned further south into TU73. With the exception of 70-D17-00-8B, -8C, and -8D, each of the trench segments associated with TU72 was identified in the Design Plan (TtEC 2007c). Trench segments 70-D17-00-8B, -8C, and -8D were discovered during the TU72 excavation activities.

5.1.1 TU72 Removal Action Activities

Excavation of TU72 commenced on August 1, 2007 in trench segment 70-D17-00-1O. A total of 166 truckloads (approximately 1,992 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU72 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on August 28, 2007, TU72 exhibited an

exposed surface area of 935 m^2 and was 557 linear feet in length (Table 3-1). The maximum excavated TU72 depth was 11 feet bgs (Table 3-2).

During the excavation activities, a total of 38 sections of pipe and Manholes MH301 and MH302 were excavated from TU72 and placed on plastic pending further action. Piping that disintegrated during excavation was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, storm drain trench segments 70-D17-00-1M, -8B, and -8D contained 4-inch-diameter to 10-inch-diameter VCP located at depths between 6 feet and 10 feet bgs. Storm drain trench segments 70-D17-00-1N, -1O, and -1X contained 24-inch-diameter VCP located at depths ranging from 5 feet to 9 feet bgs. In addition, sanitary sewer trench segment 70-D17-00-2H contained 15-inch-diameter concrete pipe and -8C contained 10-inch-diameter VCP. The pipes in these sanitary sewer trench segments were located at 6 feet bgs.

A sufficient volume of sediment for sample collection and analysis was found in three sections of pipe and Manhole MH302 during the removal action activities (Table 3-6). The sediment samples collected from pipes excavated from trench segment 70-D17-00-1O and Manhole MH302 did not identify the presence of radioactivity above the release criteria for any ROC. One sediment sample collected from 70-D17-00-2H did not identify the presence of contamination; however, a sediment sample collected from another section of pipe from this trench segment showed the presence of Cs-137 activity above the release limit at 0.14897 pCi/g. The trench segment 70-D17-00-2H pipe section containing the contaminated sediment sample was placed in LLRW bin CVGU001124C for disposal by the DON's radiological waste contractor. The sediment sample analytical reports are provided in Appendix D.

Radiological surveys were performed on 37 sections of pipe and the materials forming Manholes MH301 and MH302 during the Parcel G removal action (Table 3-5). Elevated survey results were identified for one section of pipe excavated from trench segment 70-D17-00-1O, one section of pipe removed from trench segment -2H, and Manhole MH301. Because elevated survey results were identified, sampling and analysis was performed to eliminate the possibility of measurements in excess of 1,000 dpm/100 cm^2 being attributed to the presence of Sr-90. Solid samples were collected from the elevated pipes and the materials forming Manhole MH301 and submitted to the laboratory for Sr-90 analysis. Following a review of the data, the RASO concurred that the analytical results did not exceed the release limit. The pipe and Manhole MH301 debris was transferred to the DON's non-radiological waste contractor in September 2008 for off-site disposal or recycling. The final disposition of piping excavated from TU72 is provided in Table 3-5. The radiological survey reports are provided in Appendix B and the survey reports for potentially contaminated piping are included in Appendix C.

Due to the presence of Cs-137 contamination in one sediment sample collected from TU72 pipe, a total of 91 investigative soil samples were collected along the bottom of the trench in September 2007 and submitted to the laboratory for analysis by gamma spectroscopy. One soil

sample identified the presence of Ra-226 activity above the release limit at 1.9668 pCi/g. Based on this result, an estimated 4 cubic yards of soil was remediated from TU72. The remediated soil was placed in LLRW bin GFLU001084G3 for disposal by the DON's radiological waste contractor (Table 3-9). Following remediation, three verification soil samples were collected and analyzed. One soil sampled showed the presence of Ra-226 activity above the release limit at 1.7103 pCi/g. Approximately 3 cubic yards of soil was remediated from TU72 on October 19, 2007 (Table 3-9). Three verification soil samples were collected and analyzed following the remediation activities. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU72 in October 2007 and submitted to the laboratory for analysis. One soil sample identified the presence of Cs-137 activity above the release limit at 0.12516 pCi/g. Based on this result, roughly 3.5 cubic yards of soil was remediated from TU72 and three verification soil samples were collected on November 2, 2007. One verification soil sample identified the presence of Ra-226 activity above the release limit at 2.4945 pCi/g. On November 9, 2007, approximately 3 cubic yards of soil was remediated and three verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in these soil samples for any ROC.

An additional set of 18 systematic soil samples was collected from TU72 on November 20, 2007 and submitted to the laboratory for analysis. One soil sample identified Ra-226 contamination at 1.9416 pCi/g. Based on this result, an estimated 6 cubic yards of soil was remediated and three verification soil samples were collected. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

A third set of 18 systematic soil samples was collected from the sidewalls and bottom of TU72 on December 5, 2007 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 activity above the release limit in two soil samples at 1.6698 pCi/g and 1.7501 pCi/g. On December 11, 2007, roughly 6.5 cubic yards of soil was placed in LLRW bin BKRU025677G2 for disposal by the DON's radiological waste contractor (Table 3-9). Following remediation, six verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

In total, 166 investigative soil samples (including investigative, systematic, and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 26 cubic yards of soil was remediated from TU72 during the Parcel G removal action. Figure 5-2 depicts the approximate locations of the contaminated soil samples prior to remediation.

5.1.2 TU72 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU72 remained in place on Parcel G following the completion of the removal action.

5.1.3 TU72 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU72 on December 17, 2007 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 5-1 depicts the FSS soil sample collection locations in TU72.

For the FSS, TU72 was defined as the sum of the trench unit and backfill material composed of both radiologically processed and released excavated soil and a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU72 were 0.049 pCi/g for Cs-137, 0.057 pCi/g for Sr-90, and 0.325 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.049 pCi/g for Cs-137, 0.039 pCi/g for Sr-90, and 0.330 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.675 mrem/y with an increased cancer risk of 9.042×10^{-5} for the backfill material and 5.690 mrem/y with an increased cancer risk of 9.088×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU72 SUPR provided in Appendix H.

The results of the modeling efforts determined that the potential TU72 dose due to activity concentrations greater than or equal to the MDL was 5.690 mrem/y with an increased cancer risk of 9.088×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU72 SUPR (Appendix H).

5.1.4 TU72 Backfill Activities

In addition to a volume of imported fill, radiologically processed and released excavated soil survey units were selected for use as backfill material in TU72. The excavated soil survey units selected included:

- ES-0017
- ES-0018
- ES-0019
- ES-0020
- ES-0021
- ES-0038
- ES-0039

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU72 SUPR (Appendix H). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

The RASO concurred with backfilling TU72 on January 23, 2008 and backfilling operations commenced on February 5, 2008. An estimated 1,293 cubic yards of soil was placed in TU72 and backfilling operations were completed on February 15, 2008. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU72.

5.2 TRENCH SURVEY UNIT 73

TU73 is located in the southern portion of Work Area 17 South along Morrell Street and adjacent to the Parcel D-1 property boundary (Figures 3-2 and 5-1). TU73 connects to TU72 on the north and TU204 on the south. On the west, TU73 was terminated approximately 10 feet off of the main trunk line. No IR Program Sites are associated with TU73.

TU73 consists of two storm drain trench segments and five sanitary sewer trench segments. As identified on Figure 5-1, these trench segments include:

Storm Drain Trench Segments	Sanitary Sewer Trench Segments
• 70-D17-00-1G	• 70-D17-00-2E
• 70-D17-00-3B	• 70-D17-00-2G
	• 70-D17-00-2H
	• 70-D17-00-8E
	• 70-D17-00-8F

Trench segment 70-D17-00-2H extended southward from TU71 through TU72 and transitioned into TU73. Trench segment 70-D17-00-8E was a lateral that was terminated 10 feet off of the main trunk line. This trench segment continued beneath the adjacent construction haul road and extended into TU118 located in Work Area 18 South. A portion of this trench segment extending toward the west and beneath the haul road was not removed during the excavation activities. With the exception of sanitary sewer trench segments 70-D17-00-8E and -8F, each of the trench segments comprising TU73 was identified in the Design Plan (TtEC 2007c). Trench segments 70-D17-00-8E and -8F were found during the excavation of Manhole MH306.

5.2.1 TU73 Removal Action Activities

Excavation of TU73 began on August 6, 2007 in trench segment 70-D17-00-2H. A total of 148 truckloads (approximately 1,776 cubic yards) of soil were excavated during the removal action (Table 3-3). Soil excavated from TU73 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on August 8, 2007, TU73 had an exposed surface area of 928 m^2 and was 528 linear feet in length (Table 3-1). The maximum excavated TU73 depth was 10 feet bgs (Table 3-2).

During the removal action activities, a total of 75 sections of pipe and Manholes MH306, MH307, and MH308 were excavated from TU73 and placed on plastic pending further action. Piping that crumbled during excavation was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, storm drain trench segments 70-D17-00-1G contained 15-inch-diameter concrete pipe located at depths between 5 feet and 9 feet bgs. Sanitary sewer trench segments 70-D17-00-2E, -8E, and -8F contained 6-inch-diameter and 15-inch-diameter VCP at depths ranging between 6 feet and 10 feet bgs. In addition, sanitary sewer trench segments 70-D17-00-2G and -2H contained 15-inch-diameter concrete pipe found at depths between 5 feet and 8 feet bgs.

A sufficient volume of sediment for sample collection and analysis was found in six pipe sections during the removal action activities (Table 3-6). Three sediment samples were collected from pipe sections excavated from trench segment 70-D17-00-2G and three sediment samples were collected from pipes removed from trench segment -2H. One of the sediment samples collected from a pipe section excavated from trench segment 70-D17-00-2G identified the presence of Ra-226 activity above the release limit at 2.1683 pCi/g. This section of pipe was placed in LLRW bin GFLU001293G2 for disposal by the DON's radiological waste contractor. The sediment sample analytical results are provided in Appendix D.

Radiological surveys were performed on 74 sections of pipe removed from TU73 and the materials forming Manholes MH306, MH307, and MH308 (Table 3-5). Only one pipe section excavated from trench segment 70-D17-00-1G showed elevated survey results. Because elevated survey results were identified, sampling and analysis was performed to eliminate the possibility of measurements in excess of 1,000 dpm/100 cm^2 being attributed to the presence of Sr-90. A solid sample was collected from the elevated pipe and submitted to the laboratory for Sr-90 analysis. Following a review of the data, the RASO concurred that the analytical results did not indicate the presence of contamination above the release limit. The pipe section was transferred to the DON's non-radiological waste contractor in September 2008 for off-site disposal or recycling. The final disposition of piping excavated from TU73 is provided in Tables 3-5 and 3-6. The radiological survey reports are provided in Appendix B and the survey reports for potentially contaminated piping are included in Appendix C.

Because Ra-226 contamination was identified in a pipe sediment sample and since Cs-137 contamination was found in an upstream manhole sediment sample, a total of 97 investigative soil samples were collected along the bottom of TU73 in September 2007 and analyzed by the laboratory. No radioactivity above the release criteria was identified in the investigative soil samples for any ROC.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU73 in October 2007 and submitted to the laboratory for analysis. Two soil samples identified the presence of Ra-226 activity above the release limit at 1.8145 pCi/g and 1.9254 pCi/g. Based on these results, a

total of 32 characterization soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the characterization samples for any ROC. Roughly 26 cubic yards of soil in the vicinity of the two Ra-226 contaminated soil samples was remediated on October 26, 2007. The remediated soil was placed in LLRW bins for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation efforts, 10 verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

In total, 157 investigative soil samples (including investigative, systematic, characterization, and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 26 cubic yards of soil was remediated from TU73 during the removal action activities. Figure 5-2 depicts the approximate locations of the contaminated soil samples in TU73 prior to remediation.

5.2.2 TU73 Piping Remaining In Place

During the Parcel G removal action, a total of 67 linear feet of sanitary sewer trench segment 70-D17-00-8E was removed. In accordance with the Work Plan (TtEC 2010), this segment was terminated 10 feet from the main trunk line. Based on historical drawings, an estimated 69 linear feet of trench segment 70-D17-00-8E was left in place beneath the construction haul road (Table 3-8). Since this segment continued toward the west beyond the haul road, additional footage was removed that was associated with TU118 located in Work Area 18 South.

During the radiological activities performed for TU73, a total of 175 soil samples were collected and analyzed. Only two of these soil samples identified the presence of Ra-226 contamination at 1.8145 pCi/g and 1.9254 pCi/g. An estimated 26 cubic yards of soil was remediated from TU73 during the removal action activities based on the two Ra-226 contaminated soil samples. In addition, 6 pipe sediment samples were collected and analyzed and 75 sections of pipe and Manholes MH306, MH307, and MH308 were radiologically surveyed during the removal action activities. One sediment sample identified the presence of Ra-226 above the release limit at 2.1683 pCi/g. Each of the 75 sections of pipe and Manholes MH306, MH307, and MH308 were radiologically free released with the concurrence of the RASO and were disposed of or recycled by the DON's non-radiological waste contractor. Based on the soil and sediment sampling, remediation, and radiological survey activities performed for TU73, the DON concluded that the 69 linear feet of trench segment 70-D17-00-8E was unlikely to be contaminated.

5.2.3 TU73 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU73 on November 1, 2007 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 5-1 depicts the FSS soil sample collection locations in TU73.

TU73 was defined for the FSS as the sum of the trench unit and the backfill soil composed of both radiologically processed and released excavated soil and imported fill. The average net residual radioactivity concentrations for material used as backfill in TU73 were 0.050 pCi/g for Cs-137, 0.055 pCi/g for Sr-90, and 0.447 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.046 pCi/g for Cs-137, 0.044 pCi/g for Sr-90, and 0.298 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 7.646 mrem/y with an increased cancer risk of 1.222×10^{-4} for the backfill material and 5.150 mrem/y with an increased cancer risk of 8.222×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU73 SUPR provided in Appendix H.

The results of the modeling efforts determined that the potential TU73 dose due to activity concentrations greater than or equal to the MDL was 7.646 mrem/y with an increased cancer risk of 1.222×10^{-4}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU73 SUPR (Appendix H).

5.2.4 TU73 Backfill Activities

Radiologically processed and released excavated soil survey units were selected for use as backfill material in TU73 in addition to a volume of imported fill. The excavated soil survey units selected included:

- ES-0016
- ES-0024
- ES-0025
- ES-0027

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU73 SUPR (Appendix H). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

The RASO concurred with backfilling TU73 on November 15, 2007 and backfilling operations were initiated on November 19, 2007. Approximately 1,067 cubic yards of soil was placed in TU73 and backfilling operations were completed on December 7, 2007. A summary of the activities performed to support the recommended radiological free release of TU73 is provided in Table 3-1.

6.0 WORK AREA 18 NORTH

Work Area 18 North is located in the northwest portion of Parcel G between Morrell and Hussey Streets and south of Spear Avenue (Figures 3-2 and 6-1). It is bounded on the north by Spear Avenue and Parcel UC1, on the east by Work Area 17 North, on the south by Work Area 18 South, and on the west by Work Area 19 North. The radiological work activities performed in Work Area 18 North included TU84 through TU91, TU114, TU119 through TU121, and TU151. The following sections summarize the work activities completed in Work Area 18 North to support the recommended radiological release for unrestricted use of the Parcel G property.

6.1 TRENCH SURVEY UNIT 84

TU84 is located in the northwest corner of Work Area 18 North, south of non-radiologically impacted Building 402 and east of Hussey Street (Figures 3-2 and 6-1). TU84 connects to TU85 and TU119 on the east, TU51 on the south, and TU114 on the west. No additional piping was found to the north of TU84. TU84 is situated within IR Program Site IR-09. The chemicals of concern associated with IR-09 are listed in Table 3-10.

Originally, portions of TU114, TU119, and TU151 were each part of TU84. Over the course of numerous sampling and remediation events, it became apparent that areas on the east, south, and west ends of TU84 needed to be realigned and segregated into three separate trench survey units to facilitate the remediation and FSS activities. The specific areas segregated from TU84 to become TU114, TU119, and TU151 were depicted on Figure 3-1 of the TU84 SUPR provided in Appendix I.

TU84 is comprised of seven storm drain trench segments and one sanitary sewer trench segment. As identified on Figure 6-1, these trench segments include:

<u>Storm Drain Trench Segments</u>

- 70-D18-09-3P
- 70-D18-09-3Q
- 70-D18-09-3R
- 70-D18-09-3S
- 70-D18-09-8D
- 70-D18-09-8E
- 70-D18-09-8F

<u>Sanitary Sewer Trench Segment</u>

- 70-D18-09-4R

Trench segment 70-D18-09-3P extended toward the south and transitioned into TU151. Trench segments 70-D18-09-3S and -8F continued into TU119 on the east. Trench segment 70-D18-09-8D extended toward the west and transitioned into TU114. With the exception of trench segments 70-D18-09-8D and -8E, each of the trench segments associated with TU84 was identified in the Design Plan (TtEC 2007c). Trench segments 70-D18-09-8D and -8E were discovered during the excavation of TU84.

6.1.1 TU84 Removal Action Activities

Excavation of TU84 commenced on November 27, 2009 in trench segment 70-D18-09-4R. A total of 30 truckloads (approximately 360 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU84 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation and remediation activities, TU84 exhibited an exposed surface area of 651 m^2 and was 240 linear feet in length (Table 3-1). As indicated in Table 3-2, the maximum TU84 excavated depth was 10 feet bgs.

A total of 37 sections of pipe and Manholes MH330, MH331, MH332, and MH464 were excavated from TU84 and placed on plastic pending further activities during the Parcel G removal action. Piping that disintegrated during excavation was transferred along with the surrounding soil to RSY2 for processing. Trench segments 70-D18-09-3P, -3Q, and -3S contained 10-inch-diameter and 12-inch-diameter concrete pipe located at depths ranging from 4 feet to 7 feet bgs (Table 3-2). Trench segment 70-D18-09-3R contained 10-inch-diameter concrete-encased VCP located at depths between 4 feet and 5 feet bgs. In addition, trench segments 70-D18-09-4R and -8D contained 6-inch-diameter and 8-inch-diameter VCP and trench segments -8E and -8F contained 4-inch-diameter CIP. The pipe in these trench segments was located at depths ranging from 4 feet to 10 feet bgs.

No sediment samples were collected from the pipe sections or Manholes MH330, MH331, MH332, and MH464 during the removal action activities due to an insufficient volume of available material. Consequently, there were no sediment sample analytical results for the TU84 piping.

Radiological surveys were performed on the 37 sections of pipe removed from TU84 and the materials forming Manholes MH330, MH331, MH332, and MH464 during the Parcel G removal action (Table 3-5). None of the pipe sections or materials forming the manholes identified elevated survey results. The TU84 piping was transferred to the DON's non-radiological waste contractor for off-site disposal or recycling. The final disposition of pipes and manholes excavated from TU84 is provided in Table 3-5. The radiological survey reports are presented in Appendix B.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU84 on February 4, 2008 and analyzed by the laboratory. Seven of the soil samples identified the

presence of Ra-226 activity above the release limit ranging from 1.6633 pCi/g to 2.9857 pCi/g. Based on these results, an additional 97 soil samples were collected to further characterize the trench. The laboratory analytical results identified the presence of Ra-226 contamination in 48 soil samples ranging from 1.5075 pCi/g to 4.6849 pCi/g. On April 3, 2008, an estimated 124 cubic yards of soil was excavated from TU84 and transferred to RSY2 for processing. The soil was placed on a screening pad and assigned excavated soil survey unit ES-0091. Ra-226 activity exceeding the release limit was identified in ES-0091 ranging from 1.4908 pCi/g to 3.3510 pCi/g. Table 3-4 indicates the contamination identified and final disposition of this excavation soil survey unit.

A total of 18 systematic soil samples were collected from TU84 on April 10, 2008 and submitted to the laboratory for analysis. Six of the sample results identified Ra-226 activity above the release limit ranging from 2.0833 pCi/g to 5.8160 pCi/g. Based on these results, approximately 22.25 cubic yards of soil was remediated from TU84. The remediated soil was placed in LLRW bins for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation activities, 18 verification soil samples were collected and analyzed. The analytical results identified the continued presence of Ra-226 contamination in five of the verification soil samples ranging from 1.971 pCi/g to 3.9550 pCi/g. Approximately 6.5 cubic yards of soil was placed in LLRW bin BKRU026470G4 for disposal (Table 3-9). Although six verification soil samples were specified for collection, only three were collected due to the presence of rock formations in TU84. Two of the three verification soil samples identified the presence of Ra-226 activity above the release limit at 1.7994 pCi/g and 2.2479 pCi/g. An estimated 2.25 cubic yards of soil was remediated from TU84 on May 20, 2008. The remediated soil was placed in LLRW bin BKRU025470G4 for disposal (Table 3-9). Following remediation, three verification soil samples were collected and analyzed. Each of these soil samples identified the continued presence of Ra-226 contamination at 1.7247 pCi/g, 1.9502 pCi/g, and 2.3556 pCi/g. As indicated in Table 3-9, an additional 9.5 cubic yards of soil was placed in LLRW bin GFLU001034G6 for disposal. Three verification soil samples were collected following the remediation activities. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

A third set of 18 systematic soil samples was collected from the sidewalls and bottom of TU84 on June 2, 2008 and submitted to the laboratory for analysis. Six of these samples identified the presence of Ra-226 activity above the release limit ranging from 1.6171 pCi/g to 2.9447 pCi/g. Based on these results, approximately 128 cubic yards of soil was remediated from TU84. The remediated soil was placed in LLRW bins for disposal by the DON's radiological waste contractor (Table 3-9).

A fourth set of 18 systematic soil samples was collected from TU84 on July 21, 2008 and submitted to the laboratory for analysis. Seven of these soil samples identified the presence of Ra-226 activity above the release limit ranging from 2.8326 pCi/g to 3.7360 pCi/g. Based on

these results, roughly 205 cubic yards of soil was placed in LLRW bins for disposal by the DON's radiological waste contractor (Table 3-9).

Following the remediation of the 205 cubic yards of soil, TU84 was divided into two additional trench units identified as TU114 and TU119. The FSS activities for TU114 and TU119 are summarized in Sections 6.9 and 6.10, respectively. Following the separation of TU114 and TU119 from TU84, approximately 22 cubic yards of soil was remediated. The remediated soil was placed in LLRW bins for disposal (Table 3-9). Eight verification soil samples were collected and analyzed following the remediation activities. Two of these soil samples identified the presence of Ra-226 activity greater than the release limit at 2.0802 pCi/g and 2.8698 pCi/g. An estimated 4 cubic yards of soil was remediated from TU84 on July 13, 2209. The remediated soil was placed in LLRW bin BKRU025441G3 for disposal. Two verification soil samples were collected and analyzed with no radioactivity identified above the release criteria for any ROC.

A fifth set of 18 systematic soil samples was collected from the sidewalls and bottom of TU84 on September 15, 2009 and submitted to the laboratory for analysis. Four of these soil samples identified Ra-226 contamination ranging from 1.8689 pCi/g to 2.2581 pCi/g. Based on these results, an estimated 32.25 cubic yards of soil was remediated from the areas identified as having contamination present above the release criteria for Ra-226 (Table 3-9). Following the remediation efforts, eight verification soil samples were collected and analyzed. Two of these soil samples identified the continued presence of Ra-226 activity above the release limit at 1.5223 pCi/g and 2.1186 pCi/g. An additional 18.5 cubic yards of soil was placed in LLRW bins for disposal followed by the collection of two verification soil samples. The analytical results identified Ra-226 contamination in both soil samples at 2.3932 pCi/g and 2.5850 pCi/g. Based on these results, approximately 6.5 cubic yards of soil was placed in LLRW bin GFLU001221G4 for disposal. Two verification soil samples were collected following the remediation activities on November 9, 2009. One of these samples identified Ra-226 activity above the release limit at 2.3540 pCi/g.

As indicated in Table 3-9, an estimated 5 cubic yards of soil was remediated from TU84 on November 13, 2009. The remediated soil was placed in LLRW bins for disposal by the DON's radiological waste contractor. Following the remediation efforts, two verification soil samples were collected and analyzed. Both soil samples indicated the continued presence of Ra-226 contamination at 2.0046 pCi/g and 2.5138 pCi/g. On November 23, 2009, an additional 7.5 cubic yards of soil was placed in LLRW bins for disposal (Table 3-9). Two verification soil samples were collected and analyzed following the remediation efforts. One of these soil samples identified the presence of Ra-226 activity above the release limit at 1.8949 pCi/g and the second sample identified the presence of both Ra-226 contamination at 2.0040 pCi/g and Cs-137 contamination at 0.12271 pCi/g. Based on these results, roughly 5.5 cubic yards of soil was remediated on November 30, 2009. The remediated soil was placed in LLRW bin GFLU001191G4 followed by the collection of two verification soil samples. Both verification

soil samples identified the presence of Ra-226 activity above the release limit at 2.1247 pCi/g and 2.3944 pCi/g. An estimated 6 cubic yards of soil was remediated on December 2, 2009. The remediated soil was placed in LLRW bin GFLU001158G5 for disposal followed by the collection of two verification soil samples. Both samples identified the continued presence of Ra-226 contamination at 1.7312 pCi/g and 2.0422 pCi/g.

As indicated in Table 3-9, approximately 24 cubic yards of soil was excavated and transferred to RSY2 for processing. The soil was placed on a screening pad in RSY2 pending disposal as LLRW. Following remediation, four verification soil samples were collected from TU84 and submitted to the laboratory for analysis. The analytical results identified the continued presence of Ra-226 activity above the release limit in two samples at 1.8778 pCi/g and 1.9323 pCi/g. Based on these results, roughly 5 cubic yards of soil was remediated on December 15, 2009 followed by the collection of two verification soil samples. The laboratory analytical results did not identify the presence of radioactivity greater than the release criteria for any ROC.

A sixth set of 18 systematic soil samples was collected from TU84 on January 4, 2010 and submitted to the laboratory for analysis. Seven of the soil samples identified the presence of Ra-226 activity above the release limit ranging from 1.6391 pCi/g to 2.7383 pCi/g. Based on these results, approximately 25 cubic yards of soil was placed in LLRW bins for disposal by the DON's radiological waste contractor and roughly 57 cubic yards was excavated and transferred to RSY2 pending disposal as LLRW. Following the remediation activities, a total of five verification soil samples were collected from TU84 and analyzed. One soil sample identified the continued presence of Ra-226 contamination at 1.5082 pCi/g. Approximately 3 cubic yards of soil was placed in LLRW BKRU026414G11 for disposal (Table 3-9). One verification soil sample was collected and analyzed following the remediation activities. The analytical results identified Ra-226 activity above the release limit at 1.5738 pCi/g. An estimated 15.25 cubic yards of soil was remediated from TU83 in February 2010 followed by the collection of one verification soil sample. No radioactivity above the release criteria was identified in the verification soil sample for any ROC.

As identified in Table 3-9, an estimated 60 cubic yards of soil was remediated and placed in LLRW bins for disposal by the DON's radiological waste contractor to ensure that no residual radioactivity above the release criteria remained in TU84. The final FSS soil samples were collected following this remediation event.

In total, 275 investigative soil samples (including systematic, characterization, and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 794 cubic yards of soil was remediated from TU84 during the Parcel G removal action. Figure 6-3 depicts the approximate locations of the contaminated soil samples in TU84 prior to remediation. The locations of the contaminated soil samples prior to remediation that originally were part of TU84

but later became part of TU114, TU119, and TU151 are depicted with these trench survey units, as appropriate.

6.1.2 TU84 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU84 remained in place on Parcel G following the completion of the removal action.

6.1.3 TU84 Final Status Survey Summary

The final 18 FSS soil samples were collected from TU84 in March 2010 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 6-1 depicts the FSS soil sample collection locations in TU84.

TU84 was defined for the FSS as the sum of the trench unit and backfill material composed of imported fill. The average net residual radioactivity concentrations for material used as backfill were 0.053 pCi/g for Cs-137, 0.070 pCi/g for Sr-90, and 0.373 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.034 pCi/g for Cs-137, 0.140 pCi/g for Sr-90, and 0.315 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.228 mrem/y with an increased cancer risk of 8.715×10^{-5} for the backfill material and 4.608 mrem/y with an increased cancer risk of 7.597×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 4 and 5 of the TU84 SUPR provided in Appendix I.

The results of the modeling efforts determined that the potential TU84 dose due to activity concentrations greater than or equal to the MDL was 5.228 mrem/y with an increased cancer risk of 8.715×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU84 SUPR (Appendix I).

6.1.4 TU84 Backfill Activities

Imported fill was selected as the appropriate backfill material for TU84. The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

Concurrence with backfilling TU84 was obtained from the RASO on April 22, 2010 and backfilling operations were initiated on April 26, 2010. Approximately 1,080 cubic yards of imported fill was placed in TU84 to grade followed by the application of road base material over

the backfilled trench. Backfilling operations were completed for TU84 on May 3, 1010. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU84.

6.2 TRENCH SURVEY UNIT 85

TU85 is located in the western portion of Work Area 18 North to the east of Hussey Street and south of non-radiologically impacted Building 402 (Figures 3-2 and 6-1). TU85 connects to TU119 on the north and east, and TU84 on the west. No additional pipe was found to the south of TU85 during the Parcel G removal action. TU85 is situated within IR Program Site IR-09. The chemicals of concern associated with IR-09 are listed in Table 3-10.

TU85 is composed of four sanitary sewer trench segments and no storm water drain trench segments. As identified on Figure 6-1, these trench segments include:

- 70-D18-09-4R
- 70-D18-09-8A
- 70-D18-09-8B
- 70-D18-09-8C

Trench segment 70-D18-09-4R extended eastward from TU84 and transitioned into TU85. Only trench segment 70-D18-09-4R was identified in the Design Plan (TtEC 2007c). The remaining trench segments were found during the excavation activities.

6.2.1 TU85 Removal Action Activities

Excavation of TU85 was initiated on November 20, 2007 in trench segment 70-D18-09-4R. A total of 88 truckloads (approximately 1,056 cubic yards) of soil were excavated during the removal action (Table 3-3). Soil excavated from TU85 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on December 6, 2007, TU85 exhibited an exposed surface area of 907 m^2 and was 415 linear feet in length (Table 3-1). As indicated in Table 3-2, the maximum excavated TU85 depth was 18 feet bgs.

A total of 13 sections of pipe were excavated from TU85 and placed on plastic pending further activities during the Parcel G removal action. Piping that crumbled during excavation was transferred along with the surrounding soil to RSY2 for processing. No manholes were excavated from TU85. As indicated in Table 3-2, each of the trench segments associated with TU85 contained 8-inch-diameter VCP located at depths ranging from 5 feet to 17 feet bgs.

Insufficient sediment was available in the piping excavated from TU85 for sample collection and analysis. Consequently, there were no sediment sample analytical results available for this trench survey unit.

Radiological surveys were performed on 13 sections of pipe during the removal action activities (Table 3-5). No elevated results were identified for the pipe sections surveyed. The TU85 pipe sections were transferred to the DON's non-radiological waste contractor for off-site disposal or recycling. The disposition of each pipe section is provided in Table 3-5. The radiological survey reports are presented in Appendix B.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU85 on February 14, 2008 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 activity above the release limit in one soil sample at 1.7225 pCi/g. To define the extent of contamination, 15 characterization soil samples were collected on February 20, 2008 and submitted to the laboratory for analysis. The analytical results identified Ra-226 activity greater than the release limit in six soil samples ranging from 1.6414 pCi/g to 4.1906 pCi/g. Based on these results, an estimated 5.5 cubic yards of soil was remediated from TU85 on March 11, 2008. The remediated soil was placed in LLRW bin BKRU025624G4 for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation activities, four verification soil samples were collected and analyzed. Three of these soil samples identified the continued presence of Ra-226 contamination at 2.0908 pCi/g, 3.2244 pCi/g, and 3.7937 pCi/g. Approximately 7.5 cubic yards of soil was remediated from TU85 on March 13, 2008. The remediated soil was placed in LLRW bin GFLU001023G3 for disposal (Table 3-9). Four verification soil samples were collected and analyzed following the remediation efforts. Each of these four soil samples identified Ra-226 activity exceeding the release limit ranging from 2.2647 pCi/g to 3.3621 pCi/g.

Roughly 13.75 cubic yards of soil was remediated from TU85. The remediated soil was placed in LLRW bins for disposal by the DON's radiological waste contractor (Table 3-9). Four verification soil samples were collected from TU85 following the remediation activities and submitted to the laboratory for analysis. The analytical results identified the continued presence of Ra-226 contamination in each of the four soil samples ranging from 1.7188 pCi/g to 3.8074 pCi/g. Based on these results, approximately 12 cubic yards of soil was placed in LLRW bins for disposal on April 14, 2008 and four verification soil samples were collected. The analytical results identified Ra-226 activity exceeding the release limit in three of these samples at 2.1814 pCi/g, 3.8043 pCi/g, and 4.1482 pCi/g. Based on these results, an additional 9.75 cubic yards of soil was placed in LLRW bins for disposal (Table 3-9).

A second set of 18 systematic soil samples was collected from TU85 on April 24, 2008 and submitted to the laboratory for analysis. One soil sample identified the presence of Ra-226 activity above the release limit at 2.0762 pCi/g. On April 30, 2008, approximately 5.5 cubic yards of soil was placed in LLRW bin BKRU026219G5 for disposal by the DON's radiological waste contractor (Table 3-9). Three verification soil samples were collected and analyzed following the remediation activities. The analytical results identified Ra-226 contamination in one soil sample at 3.3654 pCi/g. Based on this result, approximately 5 cubic yards of soil was

remediated from TU85 on May 3, 2008. The remediated soil was placed in LLRW bin MHFU001646G2 for disposal (Table 3-9). Following remediation, three verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

In total, 73 investigative soil samples (including systematic, characterization, and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 59 cubic yards of soil was remediated from TU85 during the Parcel G removal action. Figure 6-2 depicts the approximate locations of the contaminated soil samples prior to remediation.

6.2.2 TU85 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU85 remained in place on Parcel G following the completion of the removal action.

6.2.3 TU85 Final Status Survey Summary

The final 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU85 on May 15, 2008 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 6-1 depicts the FSS soil sample collection locations in TU85.

For the FSS, TU85 was defined as the sum of the trench unit and backfill material composed of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU85 were 0.053 pCi/g for Cs-137, 0.070 pCi/g for Sr-90, and 0.373 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.039 pCi/g for Cs-137, 0.103 pCi/g for Sr-90, and 0.340 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 6.397 mrem/y with an increased cancer risk of 1.022×10^{-4} for the backfill material and 5.957 mrem/y with an increased cancer risk of 9.472×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 4 and 5 of the TU85 SUPR provided in Appendix I.

The results of the modeling efforts determined that the potential TU85 dose due to activity concentrations greater than or equal to the MDL was 6.397 mrem/y with an increased cancer risk of 1.022×10^{-4}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU85 SUPR (Appendix I).

6.2.4 TU85 Backfill Activities

Imported fill was selected for use as the appropriate backfill material in TU85. The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

Concurrence with backfilling TU85 was obtained from the RASO on June 3, 2008 and backfilling operations commenced the same day. Approximately 1,487 cubic yards of soil was placed in TU85 to grade followed by the application of road base material over the backfilled trench. Backfilling operations were completed on June 5, 2008. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU85.

6.3 TRENCH SURVEY UNIT 86

TU86 is located in the southwest corner of Work Area 18 North between Cochrane and Hussey Streets (Figures 3-2 and 6-1). TU86 connects to TU151 on the north and TU87 on the south. No additional pipe was found to the east or west of TU86. TU86 is situated within IR Program Site IR-09. The chemicals of concern associated with IR-09 are listed in Table 3-10.

TU86 is composed of nine storm drain trench segments and no sanitary sewer trench segments. As identified on Figure 6-1, these trench segments include:

- 70-D18-09-3I
- 70-D18-09-3J
- 70-D18-09-3K
- 70-D18-09-3L
- 70-D18-09-3M
- 70-D18-09-3N
- 70-D18-09-3O
- 70-D18-09-3V
- 70-D18-09-8H

Trench segment 70-D18-09-3I continued toward the south into TU87. With the exception of 70-D18-09-8H, each of the trench segments associated with TU86 was identified in the Design Plan (TtEC 2007c). Trench segment 70-D18-09-8H was found during the excavation of trench segment -3N.

6.3.1 TU86 Removal Action Activities

Excavation of TU86 was initiated on December 10, 2007 in trench segments 70-D18-09-3N and -3O. A total of 54 truckloads (approximately 648 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU86 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on December 12, 2007, TU86 had an exposed surface area of 670 m^2 and was 398 linear feet in length (Table 3-1). As indicated in Table 3-2, the maximum excavated TU86 depth was 10 feet bgs.

A total of 58 sections of pipe and Manholes MH333, MH334, MH335, MH336, MH337, MH338, MH466, and MH467 were excavated from TU86 and placed on plastic pending further activities during the Parcel G removal action. Piping that disintegrated during removal was transferred with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, Trench segments 70-D18-09-3I and -3O contained 10-inch-diameter and 12-inch-diameter concrete pipe located at depths ranging from 6 feet to 9 feet bgs. Trench segment 70-D18-09-8H contained 2-inch-diameter PVC pipe located at depths of 3 feet to 4 feet bgs. The remaining trench segments contained 8-inch-diameter CMP located at depths ranging from 1 foot to 8 feet bgs.

A sufficient volume of sediment for sample collection and analysis was obtained from Manholes MH334, MH337, MH338, and MH466 during the Parcel G removal action (Table 3-6). No sediment samples were collected from the excavated pipe sections or Manholes MH333, MH335, MH336, or MH467 due to an insufficient volume of available material. No radioactivity above the release criteria was identified in the sediment samples collected from Manholes MH334 and MH446. The sediment sample analytical results for Manholes MH337 and MH338 identified the presence of Cs-137 at 0.23724 pCi/g and 0.21991 pCi/g, respectively. Both MH337 and MH338 were placed in LLRW bin GFLU001115G2 for disposal by the DON's radiological waste contractor (Table 3-9). The sediment sample analytical results are provided in Appendix D.

Radiological surveys were performed for 58 sections of pipe and the materials forming Manholes MH333, MH334, MH335, MH336, MH466, and MH467 during the Parcel G removal action (Table 3-5). No elevated results were identified for any of the TU86 pipe sections or manholes surveyed. As indicated in Table 3-5, the surveyed and released pipe sections and manhole debris were transferred to the DON's non-radiological waste contractor for off-site disposal or recycling. The radiological survey reports are included in Appendix B.

Due to the presence of Cs-137 contamination in the sediment samples collected from Manholes MH337 and MH338, a total of 46 characterization soil samples were collected along the bottom of TU86 and submitted to the laboratory on February 14, 2008 for analysis. The analytical results identified the presence of Ra-226 activity above the release limit in 10 of these samples ranging from 1.5350 pCi/g to 2.6207 pCi/g. Based on these results, approximately 13.25 cubic yards of soil was placed in LLRW bins for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation activities, 16 verification soil samples were collected and analyzed. Three of these soil samples identified Ra-226 contamination at 1.7941 pCi/g, 2.4817 pCi/g, and 4.0296 pCi/g. An additional 6 cubic yards of soil was remediated on March 11, 2008. The remediated soil was placed in LLRW bin BKRU025624G4 for disposal and five verification soil samples were collected. The laboratory analytical results identified the continued presence of Ra-226 activity above the release limit in three of these samples at 1.9047 pCi/g, 2.0386 pCi/g, and 2.1209 pCi/g.

Approximately 3.75 cubic yards of soil was remediated from TU86 on March 13, 2008. The remediated soil was placed in LLRW bin GFLU001023G3 for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation efforts, four verification soil samples were collected and analyzed. Two of these soil samples showed the continued presence of Ra-226 contamination at 2.3737 pCi/g and 2.5433 pCi/g. An additional 4.5 cubic yards of soil was remediated on March 24, 2008 followed by the collection of four verification soil samples. Ra-226 contamination was found in one soil sample at 2.339 pCi/g. Based on this result, and additional 3 cubic yards of soil was placed in an LLRW bin for disposal by the DON's radiological waste contractor. One verification soil sample was collected and analyzed with no radioactivity identified above the release criteria for any ROC.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU86 on May 2, 2008 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 activity above the release limit in two of these samples at 1.9509 pCi/g and 2.1030 pCi/g. Based on these results, approximately 15.5 cubic yards of soil was placed in LLRW bins for disposal (Table 3-9). Following this remediation effort, six verification soil samples were collected and analyzed. The analytical results identified the continued presence of Ra-226 contamination in one of these samples at 2.0300 pCi/g. Approximately 6 cubic yards of soil was remediated from TU86 on May 27, 2008. The remediated soil was placed in LLRW bin GFLU001204G5 for disposal by the DON's radiological waste contractor (Table 3-9). Three verification soil samples were collected and analyzed following the remediation activities. The analytical results identified Ra-226 contamination in two of these soil samples at 2.2760 pCi/g and 2.6301 pCi/g. Based on these results, an additional 4 cubic yards of soil was remediated and three verification soil samples were collected and analyzed. The analytical results identified the continued presence of Ra-226 contamination in one soil sample at 2.4263 pCi/g.

Approximately 4 cubic yards of soil was remediated from TU86 on June 5, 2008. The remediated soil was placed in LLRW bin GFLU001204G5 for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation efforts, three verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

A second set of 18 systematic soil samples was collected from TU86 on June 12, 2008 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 activity above the release criteria in two soil samples at 2.0777 pCi/g and 2.7227 pCi/g. Based on these results, approximately 8 cubic yards of soil was remediated on June 25, 2008. Six verification soil samples were collected and analyzed following the remediation activities. No radioactivity above the release criteria was identified in these soil samples for any ROC.

A third set of 18 systematic soil samples was collected from the sidewalls and bottom of TU86 on August 14, 2008 and submitted to the laboratory for analysis. The analytical results showed

Ra-226 activity above the release limit in two samples at 1.9396 pCi/g and 1.9646 pCi/g. Based on these results, an additional 6.75 cubic yards of soil was placed in LLRW bin GFLU001195G5 for disposal (Table 3-9). Six verification soil samples were collected following the remediation efforts. The analytical results did not identify the presence of radioactivity greater than the release criteria for any ROC.

In total, 157 investigative soil samples (including characterization, verification, and systematic samples) were collected prior to the 18 systematic FSS soil samples and an estimated 75 cubic yards of soil was remediated from TU86 during the removal action activities. Figure 6-4 depicts the approximate locations of the contaminated soil samples prior to remediation.

6.3.2 TU86 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU86 remained in place on Parcel G following the completion of the removal action.

6.3.3 TU86 Final Status Survey Summary

During the FSS activities for TU86, 18 systematic soil samples were collected on September 3, 2008 and submitted to the laboratory for analysis. No radioactivity exceeding the release criteria was identified for any ROC. Figure 6-1 depicts the FSS soil sample collection locations in TU86.

TU86 was defined for the FSS as the sum of the trench unit and the backfill soil composed of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU86 were 0.053 pCi/g for Cs-137, 0.070 pCi/g for Sr-90, and 0.373 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.061 pCi/g for Cs-137, 0.102 pCi/g for Sr-90, and 0.199 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.315 mrem/y with an increased cancer risk of 8.828×10^{-5} for the backfill material and 3.073 mrem/y with an increased cancer risk of 5.034×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 4 and 5 of the TU86 SUPR provided in Appendix I.

The results of the modeling efforts determined that the potential TU86 dose due to activity concentrations greater than or equal to the MDL were 5.315 mrem/y with an increased cancer risk of 8.828×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU86 SUPR (Appendix I).

6.3.4 TU86 Backfill Activities

Imported fill was selected as the appropriate backfill material for TU86. The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

The RASO concurred with backfilling TU86 on October 14, 2008 and backfilling operations were initiated on October 15, 2008. Approximately 702 cubic yards of soil was placed in TU86 to grade followed by the application of road base material over the backfilled trench. Backfilling operations for TU86 were completed on October 16, 2008. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU86.

6.4 TRENCH SURVEY UNIT 87

TU87 is located in the southwest corner of Work Area 18 North, just east of Hussey Street and north of radiologically surveyed and released Building 411 (Figures 3-2 and 6-1). The radiological work performed for Building 411 is summarized in Section 9.15 of this RACR and detailed in the FSS provided in Appendix V. TU87 connects to TU86 on the north, TU80 on the west, and terminates on the south adjacent to the north side of Building 411. No piping was found to the east of Manholes MH344 or MH345. TU87 is situated within IR Program Site IR-09. The chemicals of concern associated with IR-09 are listed in Table 3-10.

TU87 is composed of 10 storm drain trench segments and no sanitary sewer trench segments. As identified on Figure 6-1, these trench segments include:

- 70-D18-09-3A
- 70-D18-09-3B
- 70-D18-09-3C
- 70-D18-09-3D
- 70-D18-09-3E
- 70-D18-09-3F
- 70-D18-09-3G
- 70-D18-09-3H
- 70-D18-09-3I
- 70-D18-09-3W

Trench segment 70-D18-09-3I continued toward the south from TU86 into TU87 where it terminated at Manhole MH341. Each of the trench segments associated with TU87 was identified in the Design Plan (TtEC 2007c).

6.4.1 TU87 Removal Action Activities

Excavation of TU87 was initiated on December 12, 2007 in trench segment 70-D18-09-3D. A total of 55 truckloads (approximately 660 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU87 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on May 9, 2008, TU87 exhibited an

exposed surface area of 669 m^2 and was 357 linear feet in length (Table 3-1). The maximum excavated TU87 depth was 12 feet bgs (Table 3-2).

A total of 61 sections of pipe and Manholes MH339 through MH345 were excavated from TU87 and placed on plastic pending further activities during the Parcel G removal action. Piping that crumbled during excavation was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, trench segments 70-D18-09-3A, -3B, -3D, and -3I contained 10-inch-diameter to 15-inch-diameter concrete pipe located at depths ranging from 4 feet to 11 feet bgs. Trench segment 70-D18-09-3W contained 4-inch-diameter CIP located at depths between 10 feet and 12 feet bgs. The remaining trench segments contained 8-inch-diameter CMP located at depths ranging from 2 feet to 5 feet bgs.

A sufficient volume of sediment was available in Manholes MH340, MH468, and MH469 for sample collection and analysis (Table 3-6). None of the analytical results identified the presence of radioactivity greater than the release criteria for any ROC. The sediment sample analytical reports are provided in Appendix D.

Radiological surveys were performed for 61 sections of pipe and the materials forming Manholes MH339 through MH345 during the Parcel G removal action (Table 3-5). Elevated survey results were identified for Manholes MH340 and MH342 and the materials forming both manholes were placed in LLRW bins for disposal by the DON's radiological waste contractor. The remaining surveyed and released manhole debris and the 61 sections of pipe were transferred to the DON's non-radiological waste contractor for off-site disposal or recycling. The final disposition of the pipe sections and manholes excavated from TU87 is identified in Tables 3-5 and 3-6. The radiological survey reports are provided in Appendix B.

6.4.2 TU87 Piping Remaining In Place

A total of 6 linear feet of trench segment 70-D18-09-3W was excavated from TU87 prior to its termination at Manhole MH458 within the 10-foot buffer zone on the north side of Building 411. Based on historical drawings, an estimated 10 linear feet of pipe and Manhole MH458 remained in place on Parcel G following the completion of the removal action (Table 3-8). No additional pipe or Manhole MH458 could be excavated without adversely impacting the structural integrity of Building 411. Because no sediment sample analytical results identified the presence of contamination and none of the soil samples collected from TU87 were contaminated, the DON concluded that the piping remaining in place was unlikely to be contaminated.

6.4.3 TU87 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU87 on August 15, 2008 and submitted to the laboratory for analysis. The analytical results did not

identify the presence of radioactivity above the release criteria for any ROC. Figure 6-1 depicts the TU87 FSS soil sample collection locations.

TU87 was defined for the FSS as the sum of the trench unit and backfill material composed of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU87 were 0.053 pCi/g for Cs-137, 0.070 pCi/g for Sr-90, and 0.373 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.043 pCi/g for Cs-137, 0.102 pCi/g for Sr-90, and 0.197 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.310 mrem/y with an increased cancer risk of 8.822×10^{-5} for the backfill material and 3.010 mrem/y with an increased cancer risk of 4.929×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 4 and 5 of the TU87 SUPR provided in Appendix I.

The results of the modeling efforts determined that the potential TU87 dose due to activity concentrations greater than or equal to the MDL was 5.310 mrem/y with an increased cancer risk of 8.822×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU87 SUPR (Appendix I).

6.4.4 TU87 Backfill Activities

Imported fill was selected as the appropriate backfill material for TU87. The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

Concurrence with backfilling TU87 was obtained from the RASO on October 14, 2008 and backfilling operations commenced on October 16, 2008. Approximately 710 cubic yards of soil was placed in TU87 to grade followed by the application of road base material over the backfilled trench. Backfilling operations were completed on October 17, 2008. A summary of the activities performed to support the recommended radiological free release of TU87 is provided in Table 3-1.

6.5 TRENCH SURVEY UNIT 88

TU88 is located at the north end of Work Area 18 North on the east side of Cochrane Street and west of non-radiologically impacted Buildings 302 and 303 (Figures 3-2 and 6-1). TU88 connects to TU121 on the north, TU89 on the south and west, and TU120 and TU121 on the east. Concrete-encased natural gas, steam, condensate, salt and fresh water, and air lines are located on the west side of Building 303 and adjacent to TU88. In addition, concrete-encased

salt and fresh water, air, natural gas, and electrical lines traverse TU88 from east to west. These pipelines were removed during the storm drain and sanitary sewer removal action. Physically, TU88 is situated within IR Program Site IR-33. The chemicals of concern associated with IR-33 are listed in Table 3-10.

TU88 consists of six storm drain trench segments and eight sanitary sewer trench segments. As identified on Figure 6-1, these trench segments include:

Storm Drain Trench Segments	Sanitary Sewer Trench Segments
• 70-D18-33-3X	• 70-D18-33-4R
• 70-D18-33-4B	• 70-D18-33-4S
• 70-D18-33-4C	• 70-D18-33-4W
• 70-D18-33-4D	• 70-D18-33-5B
• 70-D18-33-4E	• 70-D18-33-6C
• 70-D18-33-6A	• 70-D18-33-8A
	• 70-D18-33-8B
	• 70-D18-33-8C

Trench segments 70-D18-33-4R, -8A, -8B, and -8C extended toward the west and transitioned into TU89. Trench segments 70-D18-33-4E and -5B continued into TU121. Trench segment 70-D18-33-4S transitioned into TU120. With the exception of 70-D18-33-8A, -8B, and -8C, each of the trench segments associated with TU88 was identified in the Design Plan (TtEC 2007c). Trench segments 70-D18-33-8A, -8B, and -8C were discovered during the excavation of TU88. Although identified in the Design Plan, trench segment 70-D18-33-3W was not found during the excavation activities after several attempts.

6.5.1 TU88 Removal Action Activities

Excavation of TU88 was initiated on January 14, 2008 in trench segment 70-D18-33-4D. A total of 74 truckloads (approximately 888 cubic yards) of soil were excavated during the removal action (Table 3-3). Soil excavated from TU88 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on February 5, 2008, TU88 exhibited an exposed surface area of 690 m^2 and was 403 linear feet in length (Table 3-1). The maximum excavated TU88 depth was 7 feet bgs (Table 3-2).

Five sections of pipe and Manholes MH319, MH320, MH322, MH326, and MH327 were excavated from TU88 and placed on plastic pending further activities during the Parcel G removal action. Piping that crumbled during excavation was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, trench segments 70-D18-

33-3X and -6A contained 10-inch-diameter concrete pipe located at depths between 4 feet and 5 feet bgs. Trench segments 70-D18-33-4W and -6C contained 4-inch-diameter and 8-inch-diameter CIP located at depths ranging from 4 feet to 6 feet bgs. The remaining trench segments contained 4-inch-diameter to 10-inch-diameter VCP located at depths of 4 feet to 6 feet bgs.

A sufficient volume of sediment for sample collection and analysis was obtained from Manholes MH319 and MH322 during the removal action activities (Table 3-6). Insufficient sediment was available from the excavated pipe sections or Manholes MH320, MH326 or MH327 for sample collection. The sediment sample analytical results did not identify the presence of radioactivity greater than the release criteria for any ROC. The sediment sample analytical reports are included in Appendix D.

A solid sample was collected from the materials forming Manhole MH322 during the removal action activities on January 24, 2008. This solid sample was collected because the composition of MH322 appeared to be firebrick. The solid sample analytical results identified the presence of Ra-226 activity above the release limit at 3.7731 pCi/g. The materials forming Manhole MH322 were placed in LLRW bin GFLU001279G4 on February 29, 2008 for disposal by the DON's radiological waste contractor (Tables 3-5 and 3-6). A copy of the solid sample analytical results is provided in Appendix C.

Radiological surveys were performed on five sections of pipe excavated from trench segment 70-D18-33-4W and the materials forming Manholes MH319, MH320, MH326, and MH327 with no elevated results identified. The surveyed and released pipe sections and manholes were transferred to the DON's non-radiological waste contractor for off-site disposal or recycling. The radiological survey reports are provided in Appendix B.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU88 on February 21, 2008 and submitted to the laboratory for analysis. One soil sample identified the presence of Ra-226 activity above the release limit at 1.8175 pCi/g. To further identify the possible extent of contamination, 43 characterization soil samples were collected from TU88 on March 3, 2008 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 contamination in two soil samples at 2.5672 pCi/g and 2.7378 pCi/g. Based on these results, approximately 9 cubic yards of soil was remediated from TU88 on March 12, 2008. The remediated soil was placed in LLRW bin GFLU001013G4 for disposal by the DON's radiological waste contractor (Table 3-9). Six verification soil samples were collected and analyzed following the remediation efforts. One of these soil samples identified the presence of Ra-226 activity above the release limit at 2.5741 pCi/g. Approximately 3 cubic yards of soil was remediated from TU88 on March 17, 2008 followed by the collection of three verification soil samples. The analytical results identified the presence of Ra-226 contamination at 2.6075 pCi/g in one soil sample. An additional 3 cubic yards of soil was placed in LLRW bin GFLU001031G4 for disposal on March 20, 2008 (Table 3-9). A total of three verification soil

samples were collected and analyzed following the remediation efforts. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

A second set of 18 systematic soil samples was collected from TU88 on March 28, 2008 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 activity above the release limit in three of these samples at 1.8584 pCi/g, 2.3650 pCi/g, and 2.4251 pCi/g. Based on these results, an estimated 11.75 cubic yards of soil was remediated on April 8, 2008 (Table 3-9). Following the remediation efforts, nine verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in these soil samples for any ROC.

In total, 100 investigative soil samples (including systematic, characterization, and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 26.75 cubic yards of soil was remediated during the TU88 removal action activities. Figure 6-2 depicts the approximate locations of the TU88 contaminated soil samples prior to remediation.

6.5.2 TU88 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU88 remained in place on Parcel G following the completion of the removal action.

6.5.3 TU88 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU88 on April 15, 2008 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 6-1 depicts the FSS soil sample collection locations in TU88.

For the FSS, TU88 was defined as the sum of the trench unit and backfill material composed of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU88 were 0.053 pCi/g for Cs-137, 0.070 pCi/g for Sr-90, and 0.373 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.045 pCi/g for Cs-137, 0.092 pCi/g for Sr-90, and 0.141 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.406 mrem/y with an increased cancer risk of 8.946×10^{-5} for the backfill material and 2.275 mrem/y with an increased cancer risk of 3.691×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 4 and 5 of the TU88 SUPR provided in Appendix I.

The results of the modeling efforts determined that the potential TU88 dose due to activity concentrations greater than or equal to the MDL was 5.406 mrem/y with an increased cancer

risk of 8.946×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU88 SUPR (Appendix I).

6.5.4 TU88 Backfill Activities

Imported fill was selected as the appropriate backfill material for TU88. The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

The RASO concurred with backfilling TU88 on May 2, 2008 and backfilling operations commenced on May 3, 2008. Backfilling operations were completed on May 6, 2008 with approximately 1,328 cubic yards of soil placed in TU88. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU88.

6.6 TRENCH SURVEY UNIT 89

TU89 is located in the north central portion of Work Area 18 North on the west side of Cochrane Street and east of non-radiologically impacted Buildings 402 and 420 (Figures 3-2 and 6-1). TU89 connects to TU122 on the north, TU88 on the east, TU90 on the south, and TU119 on the west. TU89 is situated within IR Program Site IR-33. The chemicals of concern associated with IR-33 are listed in Table 3-10.

TU89 consists of one storm drain trench segment and seven sanitary sewer trench segments. As identified on Figure 6-1, these trench segments include:

Storm Drain Trench Segment	Sanitary Sewer Trench Segments
• 70-D18-33-3U	• 70-D18-33-4P
	• 70-D18-33-4R
	• 70-D18-33-4V
	• 70-D18-33-8A
	• 70-D18-33-8B
	• 70-D18-33-8C
	• 70-D18-33-8X

Trench segments 70-D18-33-4R, -8A, -8B, and -8C transitioned from TU88 into TU89. Trench segment 70-D18-33-3U continued into TU119. With the exception of trench segments 70-D18-33-8A, -8B, -8C, and -8X, each of the trench segments associated with TU88 was identified in the Design Plan (TtEC 2007c). These trench segments were found during the excavation

activities. Although 70-D18-33-3W was identified in the Design Plan, this trench segment could not be found during the removal action after several attempts.

6.6.1 TU89 Removal Action Activities

Excavation of TU89 commenced on January 15, 2008 in trench segment 70-D18-33-4V. A total of 103 truckloads (approximately 1,236 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU89 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on February 7, 2008, TU89 had an exposed surface area of 926 m^2 and was 475 linear feet in length (Table 3-1). The maximum TU89 excavated depth was 10 feet bgs (Table 3-2).

The majority of the TU89 piping disintegrated upon removal and was transferred along with the surrounding soil to RSY2 for processing. One section of pipe and Manhole MH321 were excavated from TU89 and placed on plastic pending further activities during the Parcel G removal action. As indicated in Table 3-2, trench segment 70-D18-33-3U contained 10-inch-diameter concrete pipe located at depths between 4 feet and 5 feet bgs. Trench segment 70-D18-33-4P contained 12-inch-diameter steel pipe and -4V contained 18-inch-diameter steel and VCP. The pipes in these trench segments were located at depths ranging from 4 feet to 9 feet bgs. The remaining trench segments contained 6-inch-diameter to 10-inch-diameter VCP located at depths ranging from 4 feet to 6 feet bgs.

An insufficient volume of sediment existed in the piping excavated from TU89 for sample collection and analysis. Consequently, no sediment sample analytical results were available for this trench survey unit.

Radiological surveys were performed for one pipe section excavated from trench segment 70-D18-33-8A and the materials forming Manhole MH321 (Table 3-5). No elevated results were identified for the TU89 piping surveyed. Both the surveyed and released pipe section and Manhole MH321 debris were transferred to the DON's non-radiological waste contractor for off-site disposal or recycling. The radiological survey reports are provided in Appendix B.

6.6.2 TU89 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU89 remained in place on Parcel G following the completion of the removal action.

6.6.3 TU89 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU89 on March 3, 2008 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 6-1 depicts the FSS soil sample collection locations in TU89.

TU89 was defined for the FSS as the sum of the trench unit and the backfill soil composed of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU89 were 0.053 pCi/g for Cs-137, 0.070 pCi/g for Sr-90, and 0.373 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.044 pCi/g for Cs-137, 0.077 pCi/g for Sr-90, and 0.183 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 6.484 mrem/y with an increased cancer risk of 1.034×10^{-4} for the backfill material and 3.376 mrem/y with an increased cancer risk of 5.331×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 4 and 5 of the TU89 SUPR provided in Appendix I.

The results of the modeling efforts determined that the potential TU89 dose due to activity concentrations greater than or equal to the MDL was 6.484 mrem/y with an increased cancer risk of 1.034×10^{-4}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU89 SUPR (Appendix I).

6.6.4 TU89 Backfill Activities

Imported fill was selected as the appropriate backfill soil for TU89. The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

Concurrence with backfilling TU89 was obtained from the RASO on May 7, 2008 and backfilling operations were initiated on May 10, 2008. Approximately 1,958 cubic yards of soil was placed in TU89 to grade followed by the application of road base material over the backfilled trench. Backfilling operations for TU89 were completed on May 15, 2008. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU89.

6.7 TRENCH SURVEY UNIT 90

TU90 is located in the central portion of Work Area 18 North on the west side of Cochrane Street and east of non-radiologically impacted Building 418 (Figures 3-2 and 6-1). TU90 connects to TU89 on the north, TU91 on the east, and TU98 on the south. On the west, TU90 was terminated on the west side of Building 418 adjacent to an active freshwater line and fire hydrant. Physically, TU90 is situated within IR Program Site IR-33. The chemicals of concern associated with IR-33 are listed in Table 3-10.

TU90 is composed of one storm drain trench segment and three sanitary sewer trench segments. As identified on Figure 6-1, these trench segments include:

Storm Drain Trench Segment	Sanitary Sewer Trench Segments
• 70-D18-33-8E	• 70-D18-33-4O
	• 70-D18-33-4P
	• 70-D18-33-4Q

Trench segment 70-D18-33-4O transitioned into TU98 on the south and -8E continued into TU91 on the east. Trench segment 70-D18-33-4P extended toward the south from TU89 and transitioned into TU90 where it terminated at Manhole MH348. With the exception of 70-D18-33-8E, the trench segments associated with TU90 were identified in the Design Plan (TtEC 2007c). Trench segment 70-D18-33-8E was discovered during excavation of trench segment 70-D18-33-4P.

6.7.1 TU90 Removal Action Activities

Excavation of TU90 was initiated on February 7, 2008 in trench segment 70-D18-33-4P. A total of 50 truckloads (approximately 600 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU90 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on July 19, 2008, TU90 had an exposed surface area of 328 m^2 and was 154 linear feet in length (Table 3-1). The maximum excavated TU90 depth was 10 feet bgs (Table 3-2).

The majority of the piping excavated from TU90 disintegrated upon removal and was transferred along with the surrounding soil to RSY2 for processing. During the excavation activities, one pipe section and Manhole MH348 were placed on plastic pending further activities. As identified in Table 3-2, trench segments 70-D18-33-4O and -4P contained 8-inch-diameter and 12-inch-diameter steel pipe located at depths ranging from 5 feet to 9 feet bgs. Trench segments 70-D18-33-4Q and -8E contained 4-inch-diameter CIP located at depths between 4 feet and 8 feet bgs.

A sufficient volume of sediment was available in one pipe section excavated from trench segment 70-D18-33-4P. Two sediment samples from this pipe were submitted to the laboratory for analysis (Table 3-6). No radioactivity above the release criteria was identified in either sediment sample. The sediment sample analytical results are included in Appendix D.

Radiological surveys were performed on one section of pipe excavated from trench segment 70-D18-33-4P and the materials forming Manhole MH348 with no elevated results identified (Table 3-5). The surveyed and released TU90 piping was transferred to the DON's

non-radiological waste contractor for disposal or recycling. The radiological survey reports are presented in Appendix B.

6.7.2 TU90 Piping Remaining In Place

A total of 20 linear feet of trench segment 70-D18-33-4Q was excavated prior to its termination adjacent to an active freshwater linear and fire hydrant near non-radiologically impacted Building 418. Based on historical drawings, an estimated 18 linear feet of trench segment 70-D18-33-4Q remained in place following the completion of the Parcel G removal action (Table 3-8). No additional pipe could be excavated between Building 418 and the active freshwater lines and fire hydrant without adversely affecting their structural integrity. Because this sanitary sewer line was associated with a non-radiologically impacted building, the DON concluded that the piping remaining in place was unlikely to be contaminated.

6.7.3 TU90 Final Status Survey Summary

A total of 18 systematic soil samples were collected from the sidewalls and bottom of TU90 on August 4, 2008 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 6-1 depicts the FSS soil sample collection locations in TU90.

For the FSS, TU90 was defined as the sum of the trench unit and backfill material composed of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU90 were 0.053 pCi/g for Cs-137, 0.070 pCi/g for Sr-90, and 0.373 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.033 pCi/g for Cs-137, 0.081 pCi/g for Sr-90, and 0.280 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 3.711 mrem/y with an increased cancer risk of 6.721×10^{-5} for the backfill material and 2.811 mrem/y with an increased cancer risk of 5.074×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 4 and 5 of the TU90 SUPR provided in Appendix I.

The results of the modeling efforts determined that the potential TU90 dose due to activity concentrations greater than or equal to the MDL was 3.711 mrem/y with an increased cancer risk of 6.721×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU90 SUPR (Appendix I).

6.7.4 TU90 Backfill Activities

Imported fill was selected as the appropriate backfill soil for TU90. The radiological and chemical analytical reports for the imported fill used in TU90 were provided in Attachment 1 of the SUPRA (Appendix A).

The RASO concurred with backfilling TU90 on September 5, 2008 and backfilling operations commenced on September 8, 2008. Approximately 451 cubic yards of soil was placed in TU90 to grade followed by the application of road base material over the backfilled trench. Backfilling operations were completed for TU90 on September 9, 2008. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU90.

6.8 TRENCH SURVEY UNIT 91

TU91 is located in the southern portion of Work Area 18 North on the east side of Cochrane Street and west of radiologically surveyed and released Building 366 (Figures 3-2 and 6-1). The radiological activities performed for Building 366 are summarized in Section 4.10 of this RACR and detailed in the FSS reports provided in Appendix P. TU91 connects to TU97 on the south, TU90 and TU98 on the west, and terminated at Manholes MH346 and MH347 and on the east. During excavation, TU91 was terminated at the condensate and steam pipelines running parallel and adjacent to the west side of Building 366. TU91 is situated within IR Program Site IR-33. The chemicals of concern associated with IR-33 are listed in Table 3-10.

TU91 is composed of 11 storm drain trench segments and no sanitary sewer trench segments. As identified on Figure 6-1, these trench segments include:

- 70-D18-33-1M
- 70-D18-33-2T
- 70-D18-33-2U
- 70-D18-33-2V
- 70-D18-33-2X
- 70-D18-33-2Y
- 70-D18-33-2Z
- 70-D18-33-8D
- 70-D18-33-8E
- 70-D18-33-8F
- 70-D18-33-8G

Trench segment 70-D18-33-8E extended toward the east from TU90 and transitioned into TU91 where it terminated at Manhole MH346. Trench segments 70-D18-33-2T, -2U, and -8G continued toward the west into TU98. With the exception of 70-D18-33-8D, -8E, -8F, and -8G, each of the trench segments associated with TU91 was identified in the Design Plan (TtEC 2007c). Trench segments 70-D18-33-8D, -8E, -8F, and -8G were found during excavation of Manholes MH346, MH349, and MH350.

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6.8.1 TU91 Removal Action Activities

Excavation of TU91 was initiated on February 7, 2008 in trench segment 70-D18-33-2X. A total of 53 truckloads (approximately 636 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU91 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on July 15, 2008, TU91 exhibited an exposed surface area of 718 m^2 and was 313 linear feet in length (Table 3-1). The maximum excavated TU91 depth was 14 feet bgs (Table 3-2).

A total of 81 sections of pipe and Manholes MH346, MH347, MH349, MH350, and MH353 were removed from TU91 and placed on plastic pending further activities during the Parcel G removal action. Piping that crumbled during excavation was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, trench segments 70-D18-33-1M and -2X contained 15-inch-diameter and 18-inch-diameter concrete pipe located at depths ranging from 5 feet to 13 feet bgs. Trench segments 70-D18-33-8D, -8E, -8F, and -8G contained 4-inch-diameter and 8-inch-diameter CIP located at depths ranging from 5 feet to 9 feet bgs. The remaining trench segments contained 4-inch-diameter to 12-inch-diameter VCP located at depths between 4 feet and 12 feet bgs.

A sufficient volume of sediment for sample collection and analysis was obtained from one pipe excavated from trench segment 70-D18-33-1M and Manhole MH347 (Table 3-6). No other sediment samples were collected due to an insufficient volume of available material. The sediment sample analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. The sediment sample analytical reports are provided in Appendix D.

Radiological surveys were performed on 81 sections of pipe and the materials forming Manholes MH346, MH347, MH349, MH350, and MH353 with no elevated results identified (Table 3-5). The 81 surveyed and released sections of pipe and manhole debris were transferred to the DON's non-radiological waste contractor for off-site disposal or recycling. The radiological survey reports are presented in Appendix B.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU91 on August 7, 2008 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 activity above the release limit in four of the systematic samples ranging from 1.7229 pCi/g to 2.8293 pCi/g. Based on these results, approximately 86 cubic yards of soil was remediated from TU91 on August 28, 2008 and an additional 90 cubic yards of soil was remediated on August 29, 2008. The remediated soil was placed in LLRW bins for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation efforts, nine verification soil samples were collected and analyzed. None of the analytical results identified radioactivity above the release criteria for any ROC.

A second set of 18 systematic soil samples was collected on September 16, 2008 and submitted to the laboratory for analysis. Seven of these samples identified the presence of Ra-226 activity above the release limit ranging from 2.1157 pCi/g to 3.2371 pCi/g. Based on these results, approximately 15.25 cubic yards of soil was placed in LLRW bins for disposal (Table 3-9). Fourteen verification soil samples were collected following the remediation efforts and submitted to the laboratory for analysis. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

In total, 59 investigative soil samples (including systematic and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 208 cubic yards of soil was remediated from TU91 during the removal action. Figure 6-2 depicts the approximate locations of the contaminated soil samples in TU91 prior to remediation.

6.8.2 TU91 Piping Remaining In Place

Trench segment 70-D18-33-8F was a storm drain line extending from the roof of radiologically surveyed and released Building 366 to Manhole MH350. A total of 17 linear feet of trench segment 70-D18-33-8F was excavated prior to its termination adjacent to the condensate and steam pipe lines that paralleled the west side of Building 366. Based on historical drawings, an estimated 29 linear feet of this storm drain trench segment remained in placed following the completion of the removal action (Table 3-8). Additional pipe could not be removed without adversely affecting the condensate and steam pipelines and the structural integrity of Building 366. Based on the radiological history of Building 366, there is no potential for radiological contamination to have been transferred from the building to the roof storm drains and from there to the storm drain sewers. Consequently, the DON determined that roof drain pipes are not radiologically impacted and may be left in place.

6.8.3 TU91 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU91 on January 21, 2009 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 6-1 depicts the final FSS soil sample collection locations in TU91.

TU91 was defined for the FSS as the sum of the trench unit and the backfill material composed of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU91 were 0.053 pCi/g for Cs-137, 0.070 pCi/g for Sr-90, and 0.373 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.038 pCi/g for Cs-137, 0.101 pCi/g for Sr-90, and 0.314 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.534 mrem/y with an increased cancer risk of 9.111×10^{-5} for the backfill material and 4.769 mrem/y with an increased cancer risk of 7.804×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 4 and 5 of the TU91 SUPR provided in Appendix I.

The results of the modeling efforts determined that the potential TU91 dose due to activity concentrations greater than or equal to the MDL was 5.534 mrem/y with an increased cancer risk of 9.111×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU91 SUPR (Appendix I).

6.8.4 TU91 Backfill Activities

Imported fill was selected as the appropriate backfill soil for TU91. The radiological and chemical analytical reports for the imported fill used in TU91 were provided in Attachment 1 of the SUPRA (Appendix A).

Concurrence with backfilling TU91 was obtained from the RASO on March 24, 2009 and backfilling operations were initiated on March 26, 2009. Approximately 815 cubic yards of soil was placed in TU91 and backfilling operations were completed on March 31, 2009. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU91.

6.9 TRENCH SURVEY UNIT 114

TU114 is located in the western portion of Work Area 18 North just southeast of non-radiologically impacted Building 402 and east of Hussey Street (Figures 3-2 and 6-1). TU81, TU84, and TU114 bordered the HPNS Pickling Vault on the west, east, and north. The former HPNS Pickling Vault was located immediately south of TU114. Previously, areas on the east and south side of TU114 were associated with TU84. However, during the TU84 FSS activities, these areas were integrated into TU114 to facilitate remediation efforts.

TU114 connects to TU84 on the east and south and TU81 on the west. No piping was found to the north of TU114. Physically, TU114 is situated within IR Program Site IR-09. The chemicals of concern associated with IR-09 are listed in Table 3-10.

TU114 is composed of two storm drain trench segments and no sanitary sewer trench segments. As identified on Figure 6-1, these trench segments include:

- 70-D18-09-8D
- 70-D19-09-8A

Trench segment 70-D18-09-8D extended west from TU84 and transitioned into TU114. Neither of the two trench segments were identified in the Design Plan (TtEC 2007c), but were discovered during the removal action activities.

6.9.1 TU114 Removal Action Activities

Excavation of TU114 began on November 28, 2007 in trench segment 70-D19-09-8A. A total of 12 truckloads (approximately 144 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU114 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on November 29, 2007, TU114 exhibited an exposed surface area of 173 m^2 and was 68 linear feet in length (Table 3-1). The maximum excavated TU114 depth was 4 feet bgs (Table 3-2).

The piping removed from TU114 disintegrated upon excavation. Consequently, there were no sediment sample analytical results or radiological survey results available for this trench unit. As indicated in Table 3-2, both storm drain trench segments 70-D18-09-8D and 70-D19-09-8A contained 6-inch-diameter VCP located at a depth of approximately 3.5 feet bgs.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU114 on September 23, 2008 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 activity above the release limit in two soil samples at 1.7296 pCi/g and 2.4853 pCi/g. Scan surveys were used to direct the remediation of approximately 60 cubic yards of soil from TU114 on October 1 and 2, 2008 (Table 3-9). Following the remediation activities, three verification soil samples were collected and analyzed. One of the verification samples identified the presence of Ra-226 contamination at 2.5417 pCi/g. Based on this result, an additional 13 cubic yards of soil was placed in LLRW bins for disposal by the DON's radiological waste contractor (Table 3-9). Six verification soil samples were collected from TU114 following the remediation activities. None of these soil samples identified the presence of radioactivity above the release criteria for any ROC.

A second set of 18 systematic soil samples was collected from TU114 on January 30, 2009 and submitted to the laboratory for analysis. Four of the systematic samples identified the presence of Ra-226 activity above the release limit ranging from 1.7785 pCi/g to 2.3768 pCi/g. Based on these results, approximately 15.5 cubic yards of soil was placed in LLRW bins for disposal (Table 3-9). Following remediation, 12 verification soil samples were collected and analyzed. The analytical results identified Ra-226 contamination in one of the verification soil samples at 2.0977 pCi/g. Based on this result, roughly 18 cubic yards of soil was remediated and three verification soil samples were collected. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

A third set of 18 systematic soil samples was collected from the sidewalls and bottom of TU114 on July 16, 2009 and submitted to the laboratory for analysis. The analytical results identified

the continued presence of Ra-226 activity above the release limit at 1.5369 pCi/g and 1.5783 pCi/g. Approximately 20 cubic yards of soil was remediated from TU114 on July 23, 2009 (Table 3-9). A total of four verification soil samples were collected following the remediation efforts. None of the verification soil samples identified contamination above the release criteria for any ROC.

A fourth set of 18 systematic soil samples was collected from TU114 on July 28, 2009 and submitted to the laboratory for analysis. Four of the systematic soil samples identified the presence of Ra-226 activity above the release limit ranging from 1.5980 pCi/g to 2.1193 pCi/g. Based on these results, an estimated 30 cubic yards of soil was remediated from TU114 (Table 3-9). Following the remediation efforts, eight verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

A fifth set of 18 systematic soil samples was collected from the sidewalls and bottom of TU114 on September 2, 2009 and submitted to the laboratory for analysis. Five of the soil samples identified the continued presence of Ra-226 contamination ranging from 1.5467 pCi/g to 2.0531 pCi/g. Based on these results, roughly 16.5 cubic yards of soil was remediated on October 30, 2009 (Table 3-9). A total of 10 verification soil samples were collected and analyzed following the remediation activities. Six of these soil samples identified Ra-226 activity above the release limit ranging from 1.5309 pCi/g to 2.1645 pCi/g. As indicated in Table 3-9, approximately 15 cubic yards of soil was remediated from TU114 on October 30, 2009. A total of six verification soil samples were collected and analyzed following the remediation activities. Four of these soil samples identified Ra-226 activity above the release limit ranging from 2.0093 pCi/g to 3.6085 pCi/g. An additional 8.5 cubic yards of soil was remediated on November 13, 2009 (Table 3-9). Six verification soil samples were collected following the remediation activities. Four of these samples identified Ra-226 activity above the release limit ranging from 1.5663 pCi/g to 2.5887 pCi/g. Based on these results, an estimated 13 cubic yards of soil was remediated and two verification soil samples were collected on November 18, 2009. The analytical results identified the presence of Ra-226 contamination in one soil sample at 2.6751 pCi/g. Based on this result, an additional 5 cubic yards of soil was placed in LLRW bin GFLU001191G4 (Table 3-9). Following the remediation efforts, two verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

A sixth set of 18 systematic soil samples was collected from TU114 on December 3, 2009 and submitted to the laboratory for analysis. Two of the systematic samples identified the presence of Ra-226 activity above the release limit at 1.6729 pCi/g and 2.3307 pCi/g. Based on these results, an estimated 30 cubic yards of soil was remediated and transferred to RSY2 pending disposal as LLRW. Four verification soil samples were collected and analyzed following the

remediation efforts. None of these soil samples identified the presence of contamination above the release criteria for any ROC.

In total, 174 investigative soil samples (including systematic and verification soil samples) were collected prior to the 18 systematic FSS soil samples and an estimated 244.5 cubic yards of soil was remediated from TU114 during the Parcel G removal action. Figure 6-5 depicts the approximate locations of the contaminated soil samples in TU114 prior to remediation. Fourteen of the contaminated soil samples depicted on Figure 6-5 show the original TU84 sample identification numbers because these samples were obtained prior to separating TU114 from TU84.

6.9.2 TU114 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU114 remained in place on Parcel G following the completion of the removal action.

6.9.3 TU114 Final Status Survey Summary

During the FSS activities for TU114, a total of 18 systematic soil samples were collected on December 14, 2009 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 6-1 depicts the FSS soil sample collection locations in TU114.

TU114 was defined for the FSS as the sum of the trench unit and the backfill soil composed of both radiologically processed and released excavated soil and imported fill. The average net residual radioactivity concentrations for material used as backfill in TU114 were 0.035 pCi/g for Cs-137, 0.164 pCi/g for Sr-90, and 0.096 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.032 pCi/g for Cs-137, 0.185 pCi/g for Sr-90, and 0.217 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 0.895 mrem/y with an increased cancer risk of 1.647×10^{-5} for the backfill material and 1.811 mrem/y with an increased cancer risk of 3.425×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU114 SUPR provided in Appendix I.

The results of the modeling efforts determined that the potential TU114 dose due to activity concentrations greater than or equal to the MDL was 1.811 mrem/y with an increased cancer risk of 3.425×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU114 SUPR (Appendix I).

6.9.4 TU114 Backfill Activities

Radiologically processed and released excavated soil survey unit ES-0229 was selected for use as backfill material in TU114 in addition to a volume of imported fill. Radiological information related to the processing of this excavated soil survey unit and the associated laboratory analytical results were discussed in the TU114 SUPR (Appendix I). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

Concurrence with backfilling TU114 was obtained from the RASO on January 27, 2010 and backfilling operations commenced on April 28, 2010. Approximately 355 cubic yards of soil was placed in TU114 to grade, followed by the application of road base material over the backfilled trench. Backfilling operations were completed on April 29, 2010. A summary of the activities performed to support the recommended radiological free release of TU114 is provided in Table 3-1.

6.10 TRENCH SURVEY UNIT 119

TU119 is located in the northwest portion of Work Area 18 North along Cochrane Street, north of non-radiologically impacted Building 419 and south of non-radiologically impacted Building 420 (Figures 3-2 and 6-1). TU119 connects to TU89 on the east and south, and TU84 and TU85 on the west. Previously, areas on the west side of TU119 were associated with TU84. However, during the TU84 FSS activities, these areas were integrated into TU119 to facilitate remediation efforts. No piping was found to the north of TU119 during the removal action activities. The western portion of TU119 is situated within IR Program Site IR-09 and the eastern portion is located within IR Program Site IR-33. The chemicals of concern associated with IR-09 and IR-33 are listed in Table 3-10.

TU119 consists of six storm drain trench segments and one sanitary sewer trench segment. As identified on Figure 6-1, these trench segments include:

<u>Storm Drain Trench Segments</u>

- 70-D18-09-3S
- 70-D18-09-3T
- 70-D18-09-3U
- 70-D18-09-8F
- 70-D18-09-8G
- 70-D18-33-3U

<u>Sanitary Sewer Trench Segment</u>

- 70-D18-33-4R

Trench segments 70-D18-09-3S and -8F extended eastward from TU84 and transitioned into TU119. Trench segments 70-D18-33-3U and -4R continued toward the west into TU88 and

TU89. Trench segment 70-D18-33-4R was joined to TU119 with the excavation of a shallow connector trench. With the exception of 70-D18-09-8F and -8G, each of the TU119 trench segments was identified in the Design Plan (TtEC 2007c). Trench segment 70-D18-09-8F was found during excavation of TU84 to the west and trench segment 70-D18-09-8G was found during the removal of Manhole MH465 in TU119.

6.10.1 TU119 Removal Action Activities

Excavation of TU119 was initiated on November 30, 2007 in trench segments 70-D18-09-3S and -8F. A total of 53 truckloads (approximately 636 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU119 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on July 18, 2008, TU119 exhibited an exposed surface area of 579 m^2 and was 374 linear feet in length (Table 3-1). The maximum excavated TU119 depth was 7 feet bgs (Table 3-2).

A total of 30 sections of pipe and Manholes MH328, MH329, and MH465 were excavated from TU119 and placed on plastic pending further activities during the Parcel G removal action. Piping that disintegrated during excavation was transferred along with the surrounding soil to RSY2 for processing. As identified in Table 3-2, trench segments 70-D18-09-3S, -3U, and -8G contained 10-inch-diameter and 12-inch-diameter concrete pipe located at depths between 5 feet and 6 feet bgs. Trench segments 70-D18-09-3T and 70-D18-33-4R contained 8-inch-diameter VCP located at depths ranging from 4 feet to 6 feet bgs. In addition, trench segment 70-D18-09-8F contained 4-inch-diameter CIP located at a depth of approximately 2 feet bgs and trench segment 70-D18-33-3U contained 10-inch-diameter concrete pipe located at depths between 5 feet and 6 feet bgs (Table 3-2).

Sufficient sediment for sample collection and analysis was identified in one section of pipe excavated from trench segment 70-D18-33-3U (Table 3-6). The analytical results identified the presence of Cs-137 activity above the release limit at 0.17784 pCi/g. This section of pipe was placed in LLRW bin BKRU026026G5 for disposal by the DON's radiological waste contractor on August 28, 2008. The sediment sample analytical report is provided in Appendix D.

Radiological surveys were performed on 29 sections of pipe and the materials forming Manholes MH328, MH329, and MH465 during the Parcel G removal action (Table 3-5). None of the piping excavated from TU119 showed elevated survey results. The final disposition of the TU119 sections of pipe and Manholes MH328, MH329, and MH465 debris is provided in Table 3-5. The radiological survey reports are presented in Appendix B.

Due to the presence of Cs-137 activity above the release limit in one section of pipe excavated from trench segment 70-D18-33-3U, a total of 51 investigative soil samples were collected in January 2009 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 activity above the release limit in five soil samples ranging from 1.8136 pCi/g

to 3.2420 pCi/g. In addition, one soil sample identified the presence of Cs-137 contamination at 0.11563 pCi/g. Based on these results, an estimated 12 cubic yards of soil was placed in LLRW bin BKRU026115G2 for disposal by the DON's radiological waste contractor (Table 3-9). Nine verification soil samples were collected from TU119 following the remediation activities on February 3, 2009. No radioactivity above the release criteria was identified in the verification samples for any ROC.

A total of 18 systematic soil samples were collected from the sidewalls and bottom of TU119 on April 20, 2009 and submitted to the laboratory for analysis. Because one soil sample identified the presence of Ra-226 activity above the release limit at 2.5556 pCi/g, approximately 3.75 cubic yards of soil was remediated (Table 3-9). A total of two verification soil samples were collected and analyzed following the remediation efforts. No radioactivity above the release criteria was identified in these soil samples for any ROC.

A second set of 18 systematic soil samples was collected from TU119 on May 7, 2009 and submitted to the laboratory for analysis. Two soil samples identified the presence of Ra-226 activity above the release limit at 1.7818 pCi/g and 2.3052 pCi/g. Based on these results, roughly 8.25 cubic yards of soil was remediated from TU119. The remediated soil was placed in LLRW bin GFLU001260G2 for disposal by the DON's radiological waste contractor (Table 3-9). Six verification soil samples were collected and analyzed following the remediation activities. No contamination was identified in the verification soil samples for any ROC.

In total, 104 investigative soil samples (including characterization, systematic, and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 24 cubic yards of soil was remediated from TU119 during the Parcel G removal action. Figure 6-2 depicts the approximate locations of the contaminated TU119 soil samples prior to remediation. Four of the contaminated soil samples depicted on Figure 6-2 show the original TU84 sample identification numbers because these samples were obtained prior to separating TU119 from TU84.

6.10.2 TU119 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU119 remained in place on Parcel G following the completion of the removal action.

6.10.3 TU119 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU119 on May 27, 2009 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 6-1 depicts the FSS soil sample collection locations in TU119.

For the FSS, TU119 was defined as the sum of the trench unit and backfill material composed of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU119 were 0.053 pCi/g for Cs-137, 0.070 pCi/g for Sr-90, and 0.373 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.050 pCi/g for Cs-137, 0.225 pCi/g for Sr-90, and 0.234 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 4.898 mrem/y with an increased cancer risk of 8.290×10^{-5} for the backfill material and 3.530 mrem/y with an increased cancer risk of 5.790×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 4 and 5 of the TU119 SUPR provided in Appendix I.

The results of the modeling efforts determined that the potential TU119 dose due to activity concentrations greater than or equal to the MDL was 4.898 mrem/y with an increased cancer risk of 8.290×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU119 SUPR (Appendix I).

6.10.4 TU119 Backfill Activities

Imported fill was selected as the appropriate backfill material for TU119. The radiological and chemical analytical reports for the imported fill used in TU119 were provided in Attachment 1 of the SUPRA (Appendix A).

Concurrence with backfilling TU119 was obtained from the RASO on August 14, 2009 and backfilling operations were initiated on August 18, 2009. Approximately 582 cubic yards of soil was placed in TU119 to grade followed by the application of road base material over the backfilled trench. Backfilling operations for TU119 were completed on August 19, 2009. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU119.

6.11 TRENCH SURVEY UNIT 120

TU120 is located in the eastern portion of Work Area 18 North just east of Cochrane Street and between non-radiologically impacted Buildings 303 and 363 (Figures 3-2 and 6-1). TU120 connects to TU68 on the east and TU88 on the west. On the north, TU120 was terminated near the south side of Building 303 and on the south near Building 363. Portions of TU120 are situated within IR Program Site IR-33. The chemicals of concern associated with IR-33 are listed in Table 3-10.

TU120 is composed of one storm drain trench segment and six sanitary sewer trench segments. As identified on Figure 6-1, these trench segments include:

Storm Drain Trench Segment	Sanitary Sewer Trench Segments
• 70-D18-33-3Y	• 70-D18-00-4S
	• 70-D18-00-4T
	• 70-D18-00-4U
	• 70-D18-00-8F
	• 70-D18-33-4S
	• 70-D18-33-8W

Trench segment 70-D18-33-4S extended westward from TU88 and transitioned into TU120. With the exception of 70-D18-00-8F and 70-D18-33-8W, each of the trench segments associated with TU120 was identified in the Design Plan (TtEC 2007c). Trench segment 70-D18-00-8F was found during excavation of Manhole MH325 and trench segment 70-D18-33-8W was found during excavation of trench segment 70-D18-33-4S. Although identified in the Design Plan (TtEC 2007c), storm drain trench segments 70-D18-33-3X, -3Z, and -4A and Manholes MH323 and MH324 were not removed during the TU120 excavation activities due to their proximity to and/or location within Building 303.

6.11.1 TU120 Removal Action Activities

Excavation of TU120 was initiated on September 17, 2008 in trench segment 70-D18-00-4S. A total of 65 truckloads (approximately 780 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU120 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on September 20, 2008, TU120 had an exposed surface area of 762 m^2 and was 427 linear feet in length (Table 3-1). The maximum excavated TU120 depth was 10 feet bgs (Table 3-2).

The majority of the piping excavated from TU120 crumbled upon removal and was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, the TU120 trench segments contained 6-inch-diameter to 8-inch-diameter VCP located at depths ranging from 2 feet to 9 feet bgs.

An insufficient volume of sediment was available in the TU120 pipes or Manhole MH325 for sample collection and analysis. Consequentially, there are no sediment sample analytical results available for TU120. A radiological survey was performed on the materials forming Manhole MH325 during the Parcel G removal action (Table 3-5). The survey results did not indicate the presence of potential contamination. Manhole MH325 debris was transferred to the DON's non-

radiological waste contractor for disposal or recycling on March 14, 2008. The radiological survey reports are provided in Appendix B.

6.11.2 TU120 Piping Remaining In Place

A total of 65 linear feet of sanitary sewer trench segment 70-D18-00-4U and 65 linear feet of trench segment -8F were excavated from the main trunk line toward non-radiologically impacted Building 363 prior to their termination within the 10-foot buffer zone to the north of the structure. Based on historical drawings, an estimated 10 linear feet of each of these trench segments remained in place on Parcel G following the completion of the removal action. No additional piping could be removed without adversely affecting the structural integrity of Building 363.

Trench segment 70-D18-33-3Y was excavated from Manhole MH325 toward the southwest until it was terminated just prior to Manhole MH324 near the 10-foot buffer zone on the south side of non-radiologically impacted Building 303. MH324 could not be removed due to its proximity to the building. Storm drain trench segment 70-D18-33-3Z extended from Manhole MH324 into Building 303 where it connected to Manhole MH323. Manhole MH323 and the majority of trench segment 70-D18-33-3Z are located within Building 303 and were not removed during the Parcel G removal action. Based on historical drawings, an estimated 19 linear feet of trench segment 70-D18-33-3Z remained in place following the excavation activities (Table 3-8). In addition, storm drain trench segment 70-D18-33-3X extends westward from Manhole MH323 on the interior of Building 303 to the exterior of the structure on the west. Storm drain trench segment 70-D18-33-4A continues northward from trench segment 70-D18-33-3X beneath Building 303 and terminates at non-radiologically impacted Building 302. Based on historical drawings, approximately 55 linear feet of trench segment 70-D18-33-4A and about 176 linear feet of trench segment -3X remained in place on Parcel G following the completion of the removal action (Table 3-8).

A total of 27 linear feet of trench segment 70-D18-33-8W was excavated prior to its termination within the 10-foot buffer zone on the south side of non-radiologically impacted Building 303. Based on historical drawings, approximately 10 linear feet of this trench segment remained in place following the completion of the Parcel G removal action (Table 3-8).

No radioactivity above the release criteria was identified in the soil samples collected from TU120 and the radiological survey results for the materials forming Manhole MH325 did not indicate the presence of contamination. In addition, Buildings 302, 303, and 363 have never been associated with the use or storage of radioactive materials. Based on this information, the DON concluded that the piping left in place on Parcel G was unlikely to be contaminated.

6.11.3 TU120 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU120 on January 8, 2009 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 6-1 depicts the FSS soil sample collection locations in TU120.

For the FSS, TU120 was defined as the sum of the trench unit and the backfill material composed of radiologically processed and released excavated soil and a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU120 were 0.052 pCi/g for Cs-137, 0.086 pCi/g for Sr-90, and 0.289 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.044 pCi/g for Cs-137, 0.101 pCi/g for Sr-90, and 0.342 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 4.563 mrem/y with an increased cancer risk of 7.419×10^{-5} for the backfill material and 5.363 mrem/y with an increased cancer risk of 8.721×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU120 SUPR provided in Appendix I.

The results of the modeling efforts determined that the potential TU120 dose due to activity concentrations greater than or equal to the MDL was 5.363 mrem/y with an increased cancer risk of 8.721×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU120 SUPR (Appendix I).

6.11.4 TU120 Backfill Activities

In addition to a volume of imported fill, radiologically processed and released excavated soil survey units were selected for use as backfill material in TU120. The excavated soil survey units selected included:

- ES-0155
- ES-0158

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU120 SUPR (Appendix I). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

Concurrence with backfilling TU120 was obtained from the RASO on February 11, 2009 and backfilling operations were initiated on March 14, 2009. Approximately 719 cubic yards of soil

was placed in TU120 to grade followed by the application of road base material over the backfilled trench. Backfilling operations for TU120 were completed on March 18, 2009. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU120.

6.12 TRENCH SURVEY UNIT 121

TU121 is located on the north side of Work Area 18 North, just south of Spear Avenue and Parcel UC1 and north and west of non-radiologically impacted Building 302 (Figures 3-2 and 6-1). TU121 was terminated at the Parcel UC1 property boundary on the north and east, and at the concrete embedded steam lines associated with Building 302 on the south. TU121 connects to TU88 and TU122 on the west. The western portion of TU121 is situated within IR Program Site IR-33. The chemicals of concern associated with IR-33 are listed in Table 3-10.

TU121 consists of nine storm drain trench segments and five sanitary sewer trench segments. As identified on Figure 6-1, these trench segments include:

Storm Drain Trench Segments

- 70-D18-00-4F
- 70-D18-00-4H
- 70-D18-00-4I
- 70-D18-00-4J
- 70-D18-00-4K
- 70-D18-00-8D
- 70-D18-00-8E
- 70-D18-33-4E
- 70-D18-33-8U

Sanitary Sewer Trench Segments

- 70-D18-00-4X
- 70-D18-33-5B
- 70-D18-33-5C
- 70-D18-33-6C
- 70-D18-33-8V

Trench segments 70-D18-33-4E and -5B extended toward the east from TU88 and transitioned into TU121. A shallow connector trench was excavated between trench segments 70-D18-33-5B, -5C, and -6C to incorporate these small segments on the west side of Building 301 into TU121. With the exception of trench segments 70-D18-00-8D, -8E, 70-D18-33-8U, and -8V, each of the TU121 trench segments was identified in the Design Plan (TtEC 2007c). Trench segments 70-D18-00-8D, -8E, 70-D18-33-8U, and -8V were found during the excavation activities. Although storm drain trench segment 70-D18-33-8Y was identified in the Design Plan, it was not removed during the TU121 excavation activities due to its proximity to Building 302.

6.12.1 TU121 Removal Action Activities

Excavation of TU121 began on July 22, 2008 in trench segments 70-D18-33-4E and -5C. A total of 42 truckloads (approximately 504 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU121 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on December 4, 2008, TU121 exhibited an exposed surface area of 638 m^2 and was 647 linear feet in length (Table 3-1). The maximum excavated TU121 depth was 10 feet bgs (Table 3-2).

A total of 10 sections of pipe and Manholes MH315, MH316, MH317, and MH474 were excavated from TU121 and placed on plastic pending further activities during the Parcel G removal action. Piping that crumbled during excavation was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, trench segments 70-D18-00-4F and -4K contained 12-inch-diameter and 21-inch-diameter concrete pipe located at depths between 3 feet and 4 feet bgs. Trench segments 70-D18-00-4H and -8E contained 8-inch-diameter and 18-inch-diameter CMP located at depths ranging from 2 feet to 9 feet bgs. Trench segments 70-D18-00-4I, -4J, -8D, 70-D18-33-4E, -5B, and -8U contained 4-inch-diameter to 12-inch-diameter VCP located at depths between 3 feet and 6 feet bgs. In addition, trench segments 70-D18-00-4X, 70-D18-33-5C, -6C, and -8V contained 3-inch-diameter to 8-inch-diameter CIP located at depths ranging from 1 foot to 6 feet bgs.

Sufficient sediment for sample collection and analysis was obtained from five pipe sections excavated from trench segment 70-D18-33-6C, and Manholes MH315 and MH474 (Table 3-6). The sediment samples collected from the pipe sections and Manhole MH474 did not identify the presence of contamination; however, the sediment sample collected from Manhole MH315 identified the presence of Cs-137 activity above the release limit at 0.2051 pCi/g. Manhole MH315 was placed in LLRW bin GFLU001052G6 on October 14, 2008 for disposal by the DON's radiological waste contractor. The sediment sample analytical reports are provided in Appendix D.

Radiological surveys were performed on five sections of pipe and the materials forming Manholes MH316, MH317, and MH474 during the Parcel G removal action (Table 3-5). No surveys were performed on pipe sections excavated from trench segment 70-D18-33-6C due to the narrow pipe diameter that precluded the performance of proper surface scans. None of the pipe sections or manholes surveyed identified elevated results. The surveyed and released TU121 piping was transferred to the DON's non-radiological waste contractor for off-site disposal or recycling. The final disposition of the pipe sections and manhole debris removed from TU121 is provided in Tables 3-5 and 3-6. The radiological survey reports are presented in Appendix B.

Due to the presence of Cs-137 contamination in the sediment sample collected from Manhole MH315, a total of 82 investigative soil samples were collected from TU121 on December 18,

2008 and submitted to the laboratory for analysis. Two soil samples identified the presence of Ra-226 above the release limit at 2.1108 pCi/g and 2.1116 pCi/g. Based on these results, roughly 2.5 cubic yards of soil was remediated from TU121. The remediated soil was placed in LLRW bin GFLU001163G8 for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation activities, six verification soil samples were collected on January 16, 2009 and analyzed. The analytical results did not identify the presence of radioactivity above the release criteria for any ROC.

In total, 88 investigative soil samples (including characterization and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 2.5 cubic yards of soil was remediated from TU121 during the Parcel G removal action. Figure 6-2 depicts the approximate locations of the contaminated soil samples in TU121 prior to remediation.

6.12.2 TU121 Piping Remaining In Place

Based on historical drawings, approximately 10 linear feet of trench segment 70-D18-33-8Y extends between Manhole MH315 and Building 302. This storm drain trench segment was not excavated during the Parcel G removal action due to its proximity to non-radiologically impacted Building 302. An estimated 10 linear feet of trench segment 70-D18-33-8Y remained in place following the completion of the removal action (Table 3-8).

A total of 10 linear feet of trench segment 70-D18-33-8U and another 10 linear feet of trench segment -8V were removed on the west side of Building 302 during the TU121 excavation activities. Based on historical drawings, an estimated 10 linear feet of each of these trench segments was left in place within the 10-foot buffer zone surrounding Building 302 (Table 3-8). Additional pipe could not be removed without adversely affecting the integrity of the structure.

During the TU121 excavation activities, 30 linear feet of trench segment 70-D18-33-5B and 25 linear feet of -5C were removed prior to their termination on the west side of Building 302. Trench segment 70-D18-33-5B was terminated near the concrete encased steam lines at the southwest corner of Building 302 and -5C was terminated at the concrete electrical vault on the west side of the structure. Based on historical drawings, an estimated 23 linear feet of trench segment 70-D18-33-5B and approximately 18 linear feet of -5C remained in place on Parcel G following the completion of the removal action (Table 3-8). Additional piping could not be removed without adversely affecting the structural integrity of Building 302.

Based on the information and data obtained during the performance of the FSS activities for TU121, the DON concluded that the piping remaining in place on Parcel G following the removal action was unlikely to be contaminated.

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6.12.3 TU121 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU121 on January 24, 2009 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 6-1 depicts the FSS soil sample collection locations in TU121.

For the FSS, TU121 was defined as the sum of the trench unit and the backfill material composed of both radiologically processed and released excavated soil and a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU121 were 0.048 pCi/g for Cs-137, 0.068 pCi/g for Sr-90, and 0.307 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.032 pCi/g for Cs-137, 0.105 pCi/g for Sr-90, and 0.185 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 4.289 mrem/y with an increased cancer risk of 7.158×10^{-5} for the backfill material and 2.756 mrem/y with an increased cancer risk of 4.532×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU121 SUPR provided in Appendix I.

The results of the modeling efforts determined that the potential TU121 dose due to activity concentrations greater than or equal to the MDL was 4.289 mrem/y with an increased cancer risk of 7.158×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU121 SUPR (Appendix I).

6.12.4 TU121 Backfill Activities

In addition to a volume of imported fill, radiologically processed and released excavated soil survey units were selected for use as backfill material in TU121. The excavated soil survey units selected included:

- ES-0154
- ES-0166

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU121 SUPR (Appendix I). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

The RASO concurred with backfilling TU121 on March 24, 2009 and backfilling operations commenced on March 31, 2009. Approximately 442 cubic yards of soil was placed in TU121

and backfilling operations were completed on April 2, 2009. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU121.

6.13 TRENCH SURVEY UNIT 151

TU151 is located in the western portion of Work Area 18 North and runs east of and parallel to Hussey Street (Figures 3-2 and 6-1). TU151 connects to TU84 on the north and TU86 on the south. Previously, a small area on the north side of TU151 was associated with TU84. However, during the TU84 FSS activities, this area was integrated into TU151 to facilitate remediation efforts. No piping was located to the east or west of this trench unit. The entire length of TU151 is situated within IR Program Site IR-09. The chemicals of concern associated with IR-09 are listed in Table 3-10.

TU151 consists of one storm drain trench segment and no sanitary sewer trench segments. This trench segment is identified on Figure 6-1 as 70-D18-09-3P. As identified in the Design Plan (TtEC 2007c), trench segment 70-D18-09-3P extended southward from TU84 and continued through the entire length of TU151.

6.13.1 TU151 Removal Action Activities

Excavation of TU151 commenced on November 28, 2007 in trench segment 70-D18-09-3P. A small portion on the north end of TU151 was associated with TU84 prior to its integration into TU151. A total of 22 truckloads (approximately 264 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU151 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on December 11, 2007, TU151 had an exposed surface area of 185 m^2 and was 113 linear feet in length (Table 3-1). The maximum excavated TU151 depth was 6 feet bgs (Table 3-2).

A total of 39 sections of pipe were excavated from TU151 and placed on plastic pending further activities during the Parcel G removal action. Piping that crumbled during excavation was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, trench segment 70-D18-09-3P contained 12-inch-diameter concrete pipe located at depths between 4 feet and 5 feet bgs.

An insufficient volume of sediment was available for sample collection in TU151. Consequentially, there are no sediment sample analytical results available for TU151.

Radiological surveys were performed on 39 sections of pipe excavated from TU151 (Table 3-5). Only one pipe section showed elevated survey results and was placed in LLRW bin GFLU001043G7 for disposal by the DON's radiological waste contractor. The final disposition of piping excavated from TU151 is identified in Table 3-5. The radiological survey reports are provided in Appendix B.

One soil sample (70-PDT-084-178) collected from the area of TU151 that was previously part of TU84 identified the presence of Ra-226 activity above the release limit at 1.6171 pCi/g However, this sample point was remediated prior to the separation of the two trench units.

6.13.2 TU151 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU151 remained in place on Parcel G following the completion of the removal action.

6.13.3 TU151 Final Status Survey Summary

A total of 18 systematic soil samples were collected from the sidewalls and bottom of TU151 on November 20, 2009 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 6-1 depicts the FSS soil sample collection locations in TU151.

For the FSS, TU151 was defined as the sum of the trench unit and the backfill soil composed of both radiologically processed and released excavated soil and imported fill. The average net residual radioactivity concentrations for material used as backfill in TU151 were 0.034 pCi/g for Cs-137, 0.150 pCi/g for Sr-90, and 0.218 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.043 pCi/g for Cs-137, 0.245 pCi/g for Sr-90, and 0.220 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 1.842 mrem/y with an increased cancer risk of 3.479×10^{-5} for the backfill material and 1.945 mrem/y with an increased cancer risk of 3.625×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU151 SUPR provided in Appendix I.

The results of the modeling efforts determined that the potential TU151 dose due to activity concentrations greater than or equal to the MDL was 1.945 mrem/y with an increased cancer risk of 3.625×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU151 SUPR (Appendix I).

6.13.4 TU151 Backfill Activities

In addition to a volume of imported fill, radiologically processed and released excavated soil survey unit ES-0221 was selected for use as backfill material in TU151. Radiological information related to the processing of ES-0221 and its associated laboratory analytical results were discussed in the TU151 SUPR (Appendix I). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

Concurrence with backfilling TU151 was obtained from the RASO on December 14, 2009 and backfilling operations were initiated on April 29, 2010. Approximately 156 cubic yards of soil was placed in TU151 to grade followed by the application of road base material over the backfilled trench. Backfilling operations were completed for TU151 on April 30, 2010. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU151.

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7.0 WORK AREA 18 SOUTH

Work Area 18 South is located in the southeastern portion of Parcel G, just west of Cochrane Street and north of 3rd Avenue (Figures 3-2, 3-3, and 7-1). It is bounded on the north by Work Area 18 North, on the east by Work Area 17 South, on the south by Parcel D-1, and on the west by Work Area 19 South. The radiological work activities performed in Work Area 18 South included TU95 through TU99, TU115, TU117, TU118, TU153, Building 351, Building 351A, and the Buildings 317/364/365 Site. The following sections summarize the work activities completed in Work Area 18 South to support the recommended radiological release for unrestricted use of the Parcel G property.

7.1 TRENCH SURVEY UNIT 95

TU95 is located in the southern portion of Work Area 18 South on Cochrane Street, west of the radiologically surveyed and released Buildings 317/364/365 Site and east of radiologically surveyed and released Building 411 (Figures 3-2 and 7-1). The radiological survey activities for the Buildings 317/364/365 Site are summarized in Section 7.12 of this RACR and detailed in the FSS report provided in Appendix S. The radiological survey activities for Building 411 are summarized in Section 9.15 of this RACR and the details are presented in the FSS report provided in Appendix V. TU95 connects to TU97 on the north, TU153 on the east, TU99 on the south, and TU93 and TU96 on the west. The majority of the TU95 trench segments are situated within IR Program Site IR-33. The chemicals of concern associated with IR-33 are listed in Table 3-10.

TU95 consists of 10 storm drain trench segments and a single sanitary sewer trench segment. As identified on Figure 7-1, these trench segments include:

Storm Drain Trench Segments

- 70-D18-00-1G
- 70-D18-00-2K
- 70-D18-33-1F
- 70-D18-33-1G
- 70-D18-33-2L
- 70-D18-33-2M
- 70-D18-33-2N
- 70-D18-33-8O
- 70-D18-33-8R
- 70-D18-33-8T

Sanitary Sewer Trench Segment

- 70-D18-33-8S

Trench segments 70-D18-33-2M, -8L, and -8R transitioned into TU96 and -2N extended into TU97. With the exception of 70-D18-33-8O, -8R, and -8T, each of the trench segments associated with TU97 was identified in the Design Plan (TtEC 2007c). Trench segments 70-D18-33-8O, -8R, and -8T were found during the excavation activities.

7.1.1 TU95 Removal Action Activities

Excavation of TU95 commenced on May 15, 2008 in trench segment 70-D18-33-2N. A total of 61 truckloads (approximately 732 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU95 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on July 23, 2008, TU95 had an exposed surface area of 698 m^2 and was 362 linear feet in length (Table 3-1). The maximum excavated TU95 depth was 11 feet bgs (Table 3-2).

A total of 83 sections of pipe and Manholes MH357, MH358, and MH363 were excavated and placed on plastic pending further activities during the Parcel G removal action. Piping that crumbled during excavation was transferred with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, trench segments 70-D18-00-1G, 70-D18-33-1G, and -2N contained 21-inch-diameter and 24-inch-diameter concrete pipe located at depths ranging from 6 feet to 9 feet bgs. Trench segment 70-D18-00-2K contained 10-inch-diameter CMP and trench segment 70-D18-33-8O contained 4-inch-diameter steel pipe. The pipes in these trench segments were located at depths between 3 feet and 9 feet bgs. The remaining trench segments contained 6-inch-diameter to 8-inch-diameter VCP located at depths ranging from 3 feet to 10 feet bgs.

A sufficient volume of sediment was available for sample collection and analysis in two sections of pipe excavated from trench segment 70-D18-00-1G, four sections of pipe excavated from trench segment 70-D18-33-1G, one section of pipe excavated from trench segment 70-D18-33-2N, and Manhole MH357 (Table 3-6). The analytical results for the pipe sections excavated from trench segments 70-D18-00-1G and 70-D18-33-1G and Manhole MH357 identified the presence of Cs-137 contamination ranging from 0.20513 pCi/g to 0.87795 pCi/g. The analytical results for the sediment sample collected from one pipe section excavated from trench segment 70-D18-33-2N identified the presence of both Ra-226 at 1.5820 pCi/g and Cs-137 at 0.19316 pCi/g. Each of these pipe sections and Manhole MH357 debris was placed in LLRW bins for disposal by the DON's radiological waste contractor. The sediment sample analytical reports are provided in Appendix D.

Radiological surveys were performed on 76 sections of pipe and the materials forming Manholes MH358 and MH363 during the Parcel G removal action (Table 3-5). Elevated survey results were identified for three sections of pipe excavated from trench segment 70-D18-33-2N. These three sections of pipe were placed in LLRW bins for disposal by the DON's radiological waste contractor. The surveyed and released pipe sections and manhole debris were transferred to the

DON's non-radiological waste contractor for off-site disposal or recycling. Tables 3-5 and 3-6 identify the final disposition of the TU95 piping. The radiological survey reports for TU95 are included in Appendix B.

Due to the presence of Cs-137 and Ra-226 contamination in sediment samples collected from TU95 piping, a total of 76 investigative soil samples were collected along the bottom of TU95 on June 30, 2008. No radioactivity above the release criteria was identified in these investigative soil samples for any ROC.

7.1.2 TU95 Piping Remaining In Place

During the excavation of TU95, a total of 30 linear feet of trench segment 70-D18-33-8T was excavated prior to its termination at the 10-foot buffer zone on the west side of Building 411. Based on historical drawings, an estimated 10 linear feet of pipe remained in place on Parcel G following the completion of the removal action (Table 3-8). No additional piping could be removed without adversely affecting the structural integrity of Building 411. This storm drain trench segment drains the roof of Building 411. Based on the radiological history of Building 411, there was no potential for radiological contamination to have been transferred from the building to the roof storm drains and from there to the storm drain sewers. Consequently, the DON determined that roof drain pipes were not radiologically impacted and trench segment 70-D18-33-8T could be left in place within the 10-foot safety buffer.

7.1.3 TU95 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU95 on July 29, 2008 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 7-1 depicts the FSS soil sample collection locations in TU95.

TU95 was defined for the FSS as the sum of the trench unit and the backfill material composed of radiologically processed and released excavated soil. The average net residual radioactivity concentrations for material used as backfill in TU95 were 0.049 pCi/g for Cs-137, 0.042 pCi/g for Sr-90, and 0.375 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.047 pCi/g for Cs-137, 0.056 pCi/g for Sr-90, and 0.138 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.383 mrem/y with an increased cancer risk of 8.926×10^{-5} for the backfill material and 2.151 mrem/y with an increased cancer risk of 3.520×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU95 SUPR included in Appendix J.

The results of the modeling efforts determined that the potential TU95 dose due to activity concentrations greater than or equal to the MDL was 5.383 mrem/y with an increased cancer risk of 8.926×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU95 SUPR (Appendix J).

7.1.4 TU95 Backfill Activities

Radiologically processed and released excavated soil survey units were selected for use as backfill material in TU95. The excavated soil survey units selected included:

- ES-0032
- ES-0035
- ES-0036
- ES-0107

Radiological information related to the processing of these soil excavated survey units is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU95 SUPR (Appendix J).

The RASO concurred with backfilling TU95 on September 5, 2008 and backfilling operations were initiated on September 9, 2008. Approximately 809 cubic yards of soil was placed in TU95 and backfilling operations were completed on September 11, 2008. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU95.

7.2 TRENCH SURVEY UNIT 96

TU96 is located in the central portion of Work Area 18 South on the west side of Cochrane Street and immediately west of radiologically surveyed and released Building 411 (Figures 3-2 and 7-1). The radiological survey activities for Building 411 are summarized in Section 9.15 of this RACR and detailed in the FSS report provided in Appendix V. TU96 connects to TU98 on the north, TU97 on the east, and TU95 on the southeast. On the west, TU96 was terminated within the 10-foot buffer zone on the east side of Building 411. TU96 is physically situated within IR Program Site IR-33. The chemicals of concern associated with IR-33 are listed in Table 3-10.

TU96 is composed of nine storm drain trench segments and three sanitary sewer trench segments. As identified on Figure 7-1, these trench segments include:

Storm Drain Trench Segments

- 70-D18-33-2M
- 70-D18-33-2O
- 70-D18-33-2P
- 70-D18-33-2R
- 70-D18-33-8L
- 70-D18-33-8M
- 70-D18-33-8O
- 70-D18-33-8Q
- 70-D18-33-8R

Sanitary Sewer Trench Segments

- 70-D18-33-4M
- 70-D18-33-4O
- 70-D18-33-8P

Trench segments 70-D18-33-2M, -8L, and -8R transitioned from TU95 into TU96. Trench segments 70-D18-33-2O, -2P, and -8M extended toward the east and continued into TU97. Trench segment 70-D18-33-4O transitioned toward the north into TU98. Trench segments 70-D18-33-2M, -2O, -2P, -2R, -4M, and -4O were identified in the Design Plan (TtEC 2007c). The remaining trench segments were discovered during the excavation activities. Although identified in the Design Plan, sanitary sewer trench segment 70-D18-33-4N was not found during the excavation of TU96 after several attempts. In addition, trench segments 70-D18-33-4L and -4X were not removed due to their proximity to Building 411.

7.2.1 TU96 Removal Action Activities

Excavation of TU96 was initiated on May 13, 2008 in trench segment 70-D18-33-4O. A total of 79 truckloads (approximately 948 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU96 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on May 26, 2008, TU96 had an exposed surface area of 825 m^2 and was 416 linear feet in length (Table 3-1). The maximum excavated TU96 depth was 11 feet bgs (Table 3-2).

A total of nine sections of pipe and Manholes MH354, MH355, and MH356 were excavated from TU96 and placed on plastic pending further activities during the Parcel G removal action. Piping that crumbled during excavation was transferred along with the surrounding soil to RSY2 for processing. As identified in Table 3-2, trench segments 70-D18-33-8L and -8O contained 4-inch-diameter steel pipe located at depths ranging from 3 feet to 5 feet bgs. Trench segment 70-D18-33-8M contained 4-inch-diameter CIP located at depths of 2 feet to 3 feet bgs. The remaining trench segments contained 6-inch-diameter to 12-inch-diameter VCP located at depths ranging from 2 feet to 10 feet bgs.

An insufficient volume of sediment was available in the TU96 piping for sample collection and analysis. Consequently, there were no sediment sample analytical results for TU96.

Radiological surveys were performed on nine sections of pipe and the materials forming Manholes MH354, MH355, and MH356 (Table 3-5). No elevated results were identified during the survey activities. Each of the pipe sections and the manhole debris was transferred to the DON's non-radiological waste contractor for off-site disposal or recycling. The radiological survey reports are provided in Appendix B.

7.2.2 TU96 Piping Remaining In Place

A number of trench segments and manholes were not removed during the TU96 excavation activities due to their location within the 10-foot buffer zone on the west side of Building 411. Based on historical drawings, approximately 17 linear feet of storm drain trench segment 70-D18-33-4X extends at an angle to the west of Manhole MH354 and terminates at the natural gas and air tanks located adjacent to Building 411 (Table 3-8). This trench segment remained in place following the completion of the removal action.

A total of 29 linear feet of trench segment 70-D18-33-2P and 29 linear feet of -2O were excavated prior to termination at Manholes MH471 and MH472, respectively. Both manholes are located immediately adjacent to the west side of Building 411. Trench segment 70-D18-33-2P angles from Manhole MH471 toward the north and parallels the west side of Building 411. Because of the angle and of this trench segment and proximity to Building 411, an estimated 50 linear feet of trench segment 70-D18-33-2P remained in place following the completion of the removal action. Based on historical drawings, approximately 10 linear feet of trench segment 70-D18-33-2O remained in place following excavation. Additional piping and Manholes MH471 and MH472 could not be removed without adversely affecting the structural integrity of Building 411.

A total of 23 linear feet of trench segment 70-D18-33-8M was excavated prior to its termination at the front steps of Building 411. In addition, a total of 4 linear feet of trench segment 70-D18-33-8O, 14 linear feet of trench segment -2M, 23 linear feet of trench segment -8Q, and 15 linear feet of trench segment -8R were excavated prior to their termination near the west wall of Building 411. Based on historical drawings, an estimated 10 linear feet of trench segment 70-D18-33-8M, 10 linear feet of trench segment -8O, 2 linear feet of trench segment -2M, 10 linear feet of trench segment -8Q, and 6 linear feet of trench segment -8R remained in place on Parcel G following the completion of the removal action (Table 3-8). These trench segments remained in place due to their location within 10 feet of Building 411 or the front steps to the structure. Manhole MH473 also was left in place due to its proximity to the west wall of Building 411.

Trench segment 70-D18-33-4L parallels the west wall of Building 411 approximately 5 feet from the structure. Based on historical drawings, an estimated 118 linear feet of this trench segment remained in place on Parcel G following the completion of the removal action (Table 3-8).

The piping and manholes left in place on Parcel G could not be removed without adversely affecting the structural integrity of Building 411. Because no contamination was found during the FSS activities in the trench and since none of the radiological surveys performed on pipe sections or Manholes MH354, MH355, or MH356 excavated from TU96, the DON concluded that the piping remaining in place was unlikely to be contaminated.

7.2.3 TU96 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU96 on August 13, 2008 and submitted to the laboratory for analysis. The analytical results did not identify the presence of radioactivity above the release criteria for any ROC. Figure 7-1 depicts the FSS soil sample collection locations in TU96.

For the FSS, TU96 was defined as the sum of the trench unit and the backfill soil composed of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU96 were 0.053 pCi/g for Cs-137, 0.070 pCi/g for Sr-90, and 0.373 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.039 pCi/g for Cs-137, 0.085 pCi/g for Sr-90, and 0.197 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 6.023 mrem/y with an increased cancer risk of 9.742×10^{-5} for the backfill material and 3.363 mrem/y with an increased cancer risk of 5.383×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 4 and 5 of the TU96 SUPR included in Appendix J.

The results of the modeling efforts determined that the potential TU96 dose due to activity concentrations greater than or equal to the MDL was 6.023 mrem/y with an increased cancer risk of 9.742×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU96 SUPR (Appendix J).

7.2.4 TU96 Backfill Activities

Imported fill was selected as the appropriate backfill material for TU96. The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

Concurrence with backfilling TU96 was obtained from the RASO on October 3, 2008 and backfilling operations commenced on October 6, 2008. Approximately 764 cubic yards of soil was placed in TU96 to grade followed by the application of road base material over the backfilled trench. Backfilling operations for TU96 were completed on October 9, 2008. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU96.

7.3 TRENCH SURVEY UNIT 97

TU97 is located in the central portion of Work Area 18 South on the east side of Cochrane Street and west of radiologically surveyed and released Buildings 351 and 351A (Figures 3-2 and 7-1). A summary of the radiological work performed for Building 351 is provided in Section 7.10 of this RACR and detailed in the FSS report provided in Appendix Q. A summary of the radiological work performed for Building 351A is included in Section 7.11 of this RACR and detailed in the FSS report provided in Appendix R. TU97 connects to TU91 on the north, TU115 on the east, TU95 on the south and west, and TU96 on the west. A steam line raceway parallels Cochrane Street between TU97 and Building 351A and an electrical vault is located on the east side of Building 351 between TU97 and the structure. TU97 is physically situated in both IR Program Sites IR-33 and IR-34. The chemicals of concern associated with IR-33 and IR-34 are listed in Table 3-10.

TU97 is composed of 12 storm drain trench segments and no sanitary sewer trench segments. As identified on Figure 7-1, these trench segments include:

- 70-D18-33-2N
- 70-D18-33-2O
- 70-D18-33-2P
- 70-D18-33-2Q
- 70-D18-33-2S
- 70-D18-33-8J
- 70-D18-33-8K
- 70-D18-33-8M
- 70-D18-33-8N
- 70-D18-34-2S
- 70-D18-34-8J
- 70-D18-34-8K

Trench segments 70-D18-33-2O, -2P, and -8M transitioned from TU96 into TU97 and -2N extended from TU95 into TU97. The majority of the TU97 trench segments were identified in the Design Plan (TtEC 2007c). Trench segments 70-D18-33-8J, -8K, -8M, -8N and 70-D18-34-8J and -8K were discovered during the excavation activities. Although identified in the Design Plan, trench segments 70-D18-33-4N and 70-D18-34-2Q were not found during the excavation activities after several attempts and were likely removed by the DON in the past.

7.3.1 TU97 Removal Action Activities

Excavation of TU97 was initiated on May 10, 2008 in trench segment 70-D18-33-2N. A total of 61 truckloads (approximately 732 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU97 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on December 8, 2008, TU97 exhibited an exposed surface area of 623 m^2 and was 317 linear feet in length (Table 3-1). The maximum excavated TU97 depth was 11 feet bgs (Table 3-2).

A total of 55 sections of pipe were excavated from TU97 and placed on plastic pending further activities during the Parcel G removal action. No manholes were removed from TU97 during the excavation activities. Piping that crumbled during excavation was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, trench segment 70-D18-33-2N contained 21-inch-diameter concrete pipe located at depths ranging from 7 feet to 9 feet bgs. The remaining trench segments contained 4-inch-diameter to 10-inch-diameter VCP located at depths between 2 feet and 9 feet bgs.

A sufficient volume of sediment for sample collection and analysis was available in six pipe sections excavated from trench segment 70-D18-33-2N (Table 3-6). The sediment sample analytical results for one section of pipe did not identify the presence of radioactivity above the release criteria for any ROC. Two sediment samples collected from this trench segment identified Cs-137 contamination at 0.23328 pCi/g and 0.1970 pCi/g. The analytical results for three of the sediment samples collected from this trench segment identified the presence of both Ra-226 contamination at 1.8063 pCi/g, 2.0191 pCi/g, and 3.4019 pCi/g and Cs-137 contamination at 0.17977 pCi/g, 0.26294 pCi/g, and 0.26670 pCi/g. The pipe sections that contained the contaminated sediment samples were placed in LLRW bins for disposal by the DON's radiological waste contractor. The analytical results for the sediment samples collected from TU97 piping are included in Appendix D.

Radiological surveys were performed on 50 sections of pipe excavated from TU97 during the Parcel G removal action (Table 3-5). None of the pipe sections surveyed identified elevated results. These surveyed and released pipe sections were transferred to the DON's non-radiological waste contractor for off-site disposal or recycling. The radiological survey reports for TU97 are provided in Appendix B.

Due to the presence of Cs-137 and Ra-226 contamination in sediment samples collected from TU97 pipes, a total of 79 investigative soil samples were collected along the bottom of the trench in August 2008 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 activity above the release limit in six soil samples ranging from 1.8799 pCi/g to 2.4089 pCi/g. Based on these results, an estimated 5.5 cubic yards of soil was remediated. The remediated soil was placed in LLRW GFLU001234G7 for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation efforts, seven verification

soil samples were collected and analyzed. Five of the soil sample analytical results identified Ra-226 contamination ranging from 2.0566 pCi/g to 2.8007 pCi/g. An additional 12 cubic yards of soil was remediated from TU97 on October 8, 2008 (Table 3-9). Six verification soil samples were collected following the remediation activities and submitted to the laboratory for analysis. The analytical results identified the continued presence of Ra-226 contamination in three soil samples at 2.1179 pCi/g, 2.4435 pCi/g, and 2.9211 pCi/g. Based on these results, roughly 11.25 cubic yards of soil was placed in LLRW bin GFLU001200G8 for disposal on April 9, 2009 followed by the collection of six verification soil samples. One soil sample identified the presence of Ra-226 activity above the release limit at 1.736 pCi/g.

Approximately 2 cubic yards of soil was remediated from TU97 on April 17, 2009. The remediated soil was placed in LLRW bin BFLU000349G9 for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation activities, a total of three verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU97 on May 4, 2009 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 activity above the release limit in one soil sample at 1.9909 pCi/g. Based on this result, an estimated 2 cubic yards of soil was placed in LLRW bin GFLU001260G2 for disposal (Table 3-9). Three verification soil samples were collected following the remediation activities and submitted to the laboratory for analysis. The analytical results identified Ra-226 contamination in two soil samples at 2.0114 pCi/g and 2.0771 pCi/g. Based on these results, an additional 2.75 cubic yards of soil was remediated from TU97 on May 27, 2009 followed by the collection of three verification soil samples. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

In total, 125 investigative soil samples (including investigative, verification, and systematic samples) were collected from TU97 prior to the 18 systematic FSS soil samples and an estimated 35.5 cubic yards of soil was remediated during the removal action activities. Figure 7-2 depicts the approximate locations of the contaminated soil samples prior to remediation.

7.3.2 TU97 Piping Remaining In Place

A total of 22 linear feet of storm drain trench segment 70-D18-34-8J was excavated during the removal action prior to its termination near the Building 351 electrical vault. Based on historical drawings, approximately 31 linear feet of this trench segment remained in place on Parcel G following the completion of the removal action (Table 3-8). Additional piping could not be removed without adversely affecting the structural integrity of Building 351 and the electrical vault.

During the Parcel G removal action, a total of 13 linear feet of storm drain trench segment 70-D18-33-8N was excavated prior to its termination at the steam line raceway that paralleled the west side of Building 351A. Based on historical drawings, an estimated 50 linear feet of this trench segment remained in placed on Parcel G following the completion of the removal action (Table 3-8). No additional pipe could be removed without adversely affecting the structural integrity of the steam pipe raceway and Building 351A.

7.3.3 TU97 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU97 on June 8, 2009 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 7-1 depicts the FSS soil sample collection locations in TU97.

TU97 was defined for the FSS as the sum of the trench unit and the backfill material composed of both radiologically processed and released excavated soil and imported fill. The average net residual radioactivity concentrations for material used as backfill in TU97 were 0.048 pCi/g for Cs-137, 0.064 pCi/g for Sr-90, and 0.305 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.047 pCi/g for Cs-137, 0.220 pCi/g for Sr-90, and 0.058 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 4.196 mrem/y with an increased cancer risk of 7.027×10^{-5} for the backfill material and 1.395 mrem/y with an increased cancer risk of 2.118×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU97 SUPR provided in Appendix J.

The results of the modeling efforts determined that the potential TU97 dose due to activity concentrations greater than or equal to the MDL was 4.196 mrem/y with an increased cancer risk of 7.027×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU97 SUPR (Appendix J).

7.3.4 TU97 Backfill Activities

Radiologically processed and released excavated soil survey unit ES-0037 was selected for use as backfill material in TU97 in addition to a volume of imported fill. Radiological information related to the processing of ES-0037 is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU97 SUPR (Appendix J). The radiological and chemical analytical reports for the imported fill used in TU97 were provided in Attachment 1 of the SUPRA (Appendix A).

The RASO concurred with backfilling TU97 on August 5, 2009 and backfilling operations commenced on August 6, 2009. Approximately 556 cubic yards of soil was placed in TU97 and backfilling operations were completed on August 10, 2009. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU97.

7.4 TRENCH SURVEY UNIT 98

TU98 is located at the north end of Work Area 18 South along the west side of Cochrane Street and immediately east of radiologically surveyed and released Building 411 (Figures 3-2 and 7-1). The radiological survey activities performed for Building 411 are summarized in Section 9.15 of this RACR and detailed in the FSS report provided in Appendix V. TU98 connects to TU90 on the north, TU91 on the east, and TU96 on the south. On the west, TU98 terminates adjacent to the east side of Building 411. TU98 is physically situated within IR Program Site IR-33. The chemicals of concern associated with IR-33 are listed in Table 3-10.

TU98 is composed of six storm drain trench segments and one sanitary sewer trench segment. As identified on Figure 7-1, these trench segments include:

Storm Drain Trench Segments

- 70-D18-33-2T
- 70-D18-33-2U
- 70-D18-33-2W
- 70-D18-33-8G
- 70-D18-33-8H
- 70-D18-33-8I

Sanitary Sewer Trench Segment

- 70-D18-33-4O

Trench segments 70-D18-33-2T, -2U, and -8G transitioned from TU91 into TU98 and trench segment -4O continued into TU96. With the exception of 70-D18-33-8G, 8H, and -8I, each of the trench segments associated with TU97 was identified in the Design Plan (TtEC 2007c). Trench segments 70-D18-33-8G, -8H, and -8I were discovered during the excavation activities. Although identified in the Design Plan, trench segments 70-D18-33-6B, -6D, and -6E and Manholes MH351 and MH352 were not removed during the excavation of TU97 due to their proximity to the east side of Building 411.

7.4.1 TU98 Removal Action Activities

Excavation of TU98 commenced on May 9, 2008 in trench segment 70-D18-33-2W. A total of 73 truckloads (approximately 876 cubic yards) of soil were excavated during the removal action (Table 3-3). Soil excavated from TU98 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on July 17, 2008, TU98 had an exposed surface area of

560 m^2 and was 253 linear feet in length (Table 3-1). The maximum excavated TU98 depth was 11 feet bgs (Table 3-2).

The majority of the piping excavated from TU98 crumbled during removal and was transferred along with the surrounding soil to RSY2 for processing. Two sections of pipe removed from TU98 were placed on plastic pending further activities during the Parcel G removal action. As indicated in Table 3-2, trench segments 70-D18-33-8H and -8I contained 6-inch-diameter and 8-inch-diameter concrete-encased VCP located at depths ranging from 6 feet to 9 feet bgs. Trench segment 70-D18-33-8G contained 8-inch-diameter CIP located at depths between 5 feet and 7 feet bgs. The remainder of the trench segments contained 4-inch-diameter to 12-inch-diameter VCP located at depths between 5 feet and 10 feet bgs.

An insufficient volume of sediment was available in the piping excavated from TU98 for sample collection and analysis. Consequently, there were no sediment sample analytical results for TU98.

Radiological surveys were performed on one section of pipe excavated from trench segment 70-D18-33-8H and one section of pipe excavated from -8I (Table 3-5). No elevated results were identified for the sections of pipe surveyed during the removal action activities. Both sections of pipe were transferred to the DON's non-radiological waste contractor for off-site disposal or recycling. The radiological survey reports are provided in Appendix B.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU98 on August 21, 2008 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 activity above the release limit in four of these samples ranging from 1.7536 pCi/g to 2.7581 pCi/g. To further define the extent of possible contamination, an additional 29 characterization soil samples were collected from those areas where the Ra-226 contamination had been identified in TU98. The analytical results for the characterization soil samples identified Ra-226 contamination in five soil samples ranging from 1.5349 pCi/g to 3.7863 pCi/g. Based on these results, an estimated 21 cubic yards of soil was placed in LLRW bins for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation efforts, a total of 10 verification soil samples were collected and analyzed. Two of these soil samples identified the continued presence of Ra-226 contamination at 1.5407 pCi/g and 2.7153 pCi/g.

Approximately 6 cubic yards of soil was remediated from TU98 on January 26, 2009. The remediated soil was placed in LLRW bin GFLU001081G9 for disposal by the DON's radiological waste contractor (Table 3-9). Three verification soil samples were collected following the remediation activities and submitted to the laboratory for analysis. No radioactivity above the release criteria was identified in these verification soil samples.

A second set of 18 systematic soil samples was collected from TU98 on February 4, 2009 and submitted to the laboratory for analysis. The analytical results identified Ra-226 contamination in one soil sample at 2.6197 pCi/g. Based on this result, roughly 8.25 cubic yards of soil was placed in LLRW bins for disposal (Table 3-9). Three verification soil samples were collected following the remediation efforts and submitted to the laboratory for analysis. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

A third set of 18 systematic soil samples was collected from the sidewalls and bottom of TU98 on April 16, 2009 and submitted to the laboratory for analysis. The analytical results identified the continued presence of Ra-226 activity above the release limit in two soil samples at 1.4940 pCi/g and 2.0095 pCi/g. Based on these results, approximately 8.75 cubic yards of soil was remediated on April 24, 2009 (Table 3-9). Following the remediation efforts, four verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

A fourth set of 18 systematic soil samples was collected from TU98 on May 6, 2009 and submitted to the laboratory for analysis. The analytical results identified Ra-226 contamination in two soil samples at 2.0348 pCi/g and 2.5478 pCi/g. Based on these results, approximately 11 cubic yards of soil was remediated and a total of four verification soil samples were collected. No radioactivity above the release criteria was identified in the verification samples.

In total, 125 investigative soil samples (including systematic, characterization, and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 55 cubic yards of soil was remediated during the TU98 removal action activities. Figure 7-2 depicts the approximate locations of the contaminated soil samples in TU98 prior to remediation.

7.4.2 TU98 Piping Remaining In Place

A total of 30 linear feet of storm drain trench segment 70-D18-33-2W was excavated prior to its termination within the 10-foot buffer zone on the east side of Building 411. Based on historical drawings, an estimated 10 linear feet of this trench segment remained in place following the completion of the Parcel G removal action (Table 3-8). Additional pipe could not be removed without adversely affecting the structural integrity of Building 411.

A total of 23 linear feet of storm drain trench segment 70-D18-33-2T was excavated prior to its termination at the 10-foot buffer zone on the east side of Building 411. Based on historical drawings, approximately 10 linear feet of this trench segment remained in place following the completion of the Parcel G removal action (Table 3-8). No additional pipe could be removed without adversely affecting the structural integrity of Building 411.

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Storm drain trench segments 70-D18-33-6B and -6E were located within 10 feet of the eastern Building 411 wall and could not be removed without adversely affecting the integrity of the structure. Based on historical drawings, an estimated 10 linear feet of each of these trench segments remained in place following the removal action (Table 3-8). In addition, trench segment 70-D18-33-6D runs parallel to the east wall of Building 411 and could not be removed. Approximately 31 linear feet of this trench segment remained in place following the completion of the removal action (Table 3-8).

Manholes MH351 and MH352 are located within the 10-foot buffer zone on the east side of Building 411. These manholes could not be removed without adversely affecting the structural integrity of Building 411 (Table 3-8).

7.4.3 TU98 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU98 on June 8, 2009 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 7-1 depicts the FSS soil sample collection locations in TU98.

For the FSS, TU98 was defined as the sum of the trench unit and the backfill material composed of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU98 were 0.053 pCi/g for Cs-137, 0.070 pCi/g for Sr-90, and 0.373 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.043 pCi/g for Cs-137, 0.190 pCi/g for Sr-90, and 0.141 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 4.811 mrem/y with an increased cancer risk of 8.177×10^{-5} for the backfill material and 2.234 mrem/y with an increased cancer risk of 3.632×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 4 and 5 of the TU98 SUPR provided in Appendix J.

The results of the modeling efforts determined that the potential TU98 dose due to activity concentrations greater than or equal to the MDL was 4.811 mrem/y with an increased cancer risk of 8.177×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU98 SUPR (Appendix J).

7.4.4 TU98 Backfill Activities

Imported fill was selected for use as the appropriate backfill material in TU98. The radiological and chemical analytical reports for the imported fill used in TU98 were provided in Attachment 1 of the SUPRA (Appendix A).

The RASO concurred with backfilling TU98 on August 4, 2009, and backfilling operations commenced on August 5, 2009. Approximately 596 cubic yards of soil was placed in TU98 and backfilling operations were completed on August 10, 2009. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU98.

7.5 TRENCH SURVEY UNIT 99

TU99 is located at the south central end of Work Area 18 South along Cochrane Street and immediately adjacent to the east side of Building D-A (Figures 3-2 and 7-1). TU99 connects to TU95 on the north, TU94 on the west, and TU204 on the south. No additional piping was found to the east of TU99. A small portion on the west side of TU99 is situated within IR Program Site IR-44. The chemicals of concern associated with IR-44 are listed in Table 3-10.

TU99 is composed of six storm drain trench segments and no sanitary sewer trench segments. As identified on Figure 7-1, these trench segments include:

- 70-D18-00-1H
- 70-D18-00-1I
- 70-D18-00-1J
- 70-D18-00-1K
- 70-D18-00-1L
- 70-D18-44-1L

Trench segment 70-D18-44-1L extended toward the west and transitioned into TU94 on Work Area 19 South. Each of the trench segments associated with TU99 was identified in the Design Plan (TtEC 2007c).

7.5.1 TU99 Removal Action Activities

Excavation of TU99 was initiated on August 8, 2008 in trench segment 70-D18-44-1L. A total of 54 truckloads (approximately 648 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU99 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on August 14, 2008, TU99 had an exposed surface area of 545 m^2 and was 250 linear feet in length (Table 3-1). The maximum excavated TU99 depth was 11 feet bgs (Table 3-2).

A total of 78 sections of pipe and Manholes MH364, MH365, and MH366 were excavated from TU99 and placed on plastic pending further activities during the Parcel G removal action. Piping that crumbled during excavation was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, trench segments 70-D18-00-1H and -1J contained

24-inch-diameter concrete pipe located at depths ranging from 7 feet to 9 feet bgs. Trench segments 70-D18-00-1I and -1K contained 8-inch-diameter VCP located at depths of 7 feet to 10 feet bgs. In addition, trench segments 70-D18-00-1L and 70-D18-44-1L contained 10-inch-diameter and 12-inch-diameter CMP located at depths ranging from 7 feet to 9 feet bgs.

Sufficient sediment for sample collection and analysis was obtained from nine sections of pipe during the excavation of TU99 (Table 3-6). A sediment sample collected from one section of pipe excavated from trench segment 70-D18-44-1L did not indicate the presence of radioactivity above the release criteria for any ROC; however, seven of the sediment samples identified the presence of Cs-137 activity above the release limit ranging from 0.25371 pCi/g to 0.81112 pCi/g. One of the sediment samples collected from a pipe excavated from trench segment 70-D18-00-1H showed both Cs-137 and Ra-226 contamination at 0.59296 pCi/g and 1.7856 pCi/g, respectively. Each of the pipe sections that contained a contaminated sediment sample was placed in LLRW bin BKRU026026G5 for disposal by the DON's radiological waste contractor. The sediment sample analytical reports are included in Appendix D.

Radiological surveys were performed on 70 sections of pipe and the materials forming Manholes MH364, MH365, and MH366 during the Parcel G removal action (Table 3-5). The survey results for 13 sections of pipe identified the presence of elevated activity. These pipe sections were placed in LLRW BKRU026006G2 for disposal by the DON's radiological waste contractor. The surveyed and released pipe sections and MH364, MH365, and MH366 were transferred to the DON's non-radiological waste contractor for off-site disposal or recycling. The final disposition of the TU99 piping is provided in Tables 3-5 and 3-6. The radiological survey reports are included in Appendix B.

Due to the presence of Cs-137 and Ra-226 contamination in TU99 sediment samples, a total of 54 investigative soil samples were collected along the bottom of the trench in September 2008 and submitted to the laboratory for analysis. The analytical results identified the presence of Cs-137 activity above the release limit in two soil samples at 0.12161 pCi/g and 0.22519 pCi/g and Ra-226 activity above the release limit in one soil sample at 1.6488 pCi/g. Based on these results, an estimated 13 cubic yards of soil was remediated from TU99 on October 4, 2008. The remediated soil was placed in LLRW bin BKRU026470G6 for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation activities, nine verification soil samples were collected and analyzed. The analytical results identified the presence of Cs-137 activity above the release limit in one soil sample at 0.73012 pCi/g. Approximately 2 cubic yards of soil was remediated from TU99 on October 9, 2008 (Table 3-9). Following the remediation efforts, three verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU99 on October 23, 2008 and submitted to the laboratory for analysis. The analytical results identified

the presence of Cs-137 activity above the release limit in two samples at 0.17978 pCi/g and 0.30580 pCi/g and Ra-226 in one soil sample above the release limit at 1.9637 pCi/g. Approximately 11 cubic yards of soil was remediated from TU99 on October 30, 2008. The remediated soil was placed in LLRW bin BKRU025624G7 for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation activities, nine verification soil samples were collected and analyzed. One of these soil samples identified the continued presence of Cs-137 at 0.22133 pCi/g. Based on this result, an additional 3 cubic yards of soil was remediated from TU99 followed by the collection of three verification soil samples. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

A second set of 18 systematic soil samples was collected from TU99 on November 13, 2008 and submitted to the laboratory for analysis. Two of these samples identified the presence of Cs-137 activity above the release limit at 0.34158 pCi/g and 0.55463 pCi/g. Based on these results, an estimated 6.75 cubic yards of soil was placed in LLRW bins for disposal by the DON's radiological waste contractor (Table 3-9). A total of four verification soil samples were collected following the remediation activities. The analytical results identified the continued presence of Cs-137 activity above the release limit in one soil sample at 1.0335 pCi/g. Approximately 6 cubic yards of soil was placed in LLRW bin GFLU001109G7 on January 26, 2009 followed by the collection of three verification soil samples. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

A third set of 18 systematic soil samples was collected from the sidewalls and bottom of TU99 on February 2, 2009 and submitted to the laboratory for analysis. The analytical results identified Cs-137 contamination in one soil sample at 0.3210 pCi/g and Ra-226 activity above the release limit at 2.2193 pCi/g. Based on these results, roughly 25 cubic yards of soil was remediated from TU99 (Table 3-9). Following the remediation efforts, six verification soil samples were collected and analyzed. The analytical results did not identify the presence of contamination in the verification soil samples for any ROC.

A fourth set of 18 systematic soil samples was collected from TU99 on April 23, 2009 and submitted to the laboratory for analysis. The analytical results identified the presence of Cs-137 activity above the release limit in one soil sample at 0.18506 pCi/g. Based on this result, approximately 5.25 cubic yards of soil was placed in LLRW bin DB1138D2 on May 4, 2009 for disposal (Table 3-9). Two verification soil samples were collected and analyzed following the remediation activities. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

A fifth set of 18 systematic soil samples was collected from the sidewalls and bottom of TU99 on May 13, 2009 and submitted to the laboratory for analysis. Two soil samples identified the presence of Cs-137 activity above the release limit at 0.22596 pCi/g and 0.72268 pCi/g. Based on these

results, roughly 6 cubic yards of soil was remediated on May 19, 2009. The remediated soil was placed in LLRW bin GFLU001225G2 for disposal (Table 3-9). Following the remediation efforts, six verification soil samples were collected and analyzed. The analytical results identified the continued presence of Cs-137 contamination in two soil samples at 0.20052 pCi/g and 0.24087 pCi/g. Based on these results, an estimated 25 cubic yards of soil was remediated from TU99 (Table 3-9). Six additional verification soil samples were collected following the remediation activities. The analytical results identified Cs-137 contamination in three of these samples at 0.16899 pCi/g, 0.31784 pCi/g, and 0.41355 pCi/g.

An additional 24.5 cubic yards of soil was placed in LLRW bin GFLU001130G8 for disposal (Table 3-9). Following the remediation activities, a total of three verification soil samples were collected and analyzed on June 18, 2009. The analytical results identified continued Cs-137 contamination in two soil samples at 0.20101 pCi/g and 0.36485 pCi/g. Based on these results, an additional 7.5 cubic yards of soil was remediated on June 30, 2009. The remediated soil was placed in LLRW bin GFLU001049G10 for disposal by the DON's radiological waste contractor (Table 3-9). A total of four verification soil samples were collected and analyzed; however, Cs-137 contamination was identified in two of the samples at 0.12371 pCi/g and 0.12955 pCi/g. Roughly 28.75 cubic yards of soil was remediated from TU99 on July 13, 2009 followed by the collection of four additional verification soil samples. The analytical results identified the presence of Cs-137 activity above the release limit in one soil sample at 0.13981 pCi/g. Based on this result, approximately 16.5 cubic yards of soil was remediated and two verification soil samples were collected on July 17, 2009. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

In total, 208 investigative soil samples (including investigative, systematic, and verification samples) were collected from TU99 prior to the 18 systematic FSS soil samples and an estimated 180 cubic yards of soil was remediated during the removal action activities. Figure 7-2 depicts the approximate locations of the contaminated soil samples prior to remediation.

7.5.2 TU99 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU99 remained in place on Parcel G following the completion of the removal action.

7.5.3 TU99 Final Status Survey Summary

During the FSS activities, a total of 18 systematic soil samples were collected from the sidewalls and bottom of TU99 on July 27, 2009 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 7-1 depicts the FSS soil sample collection locations in TU99.

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TU99 was defined for the FSS as the sum of the trench unit and the backfill material composed of both radiologically processed and released excavated soil and a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU99 were 0.044 pCi/g for Cs-137, 0.067 pCi/g for Sr-90, and 0.246 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.048 pCi/g for Cs-137, 0.160 pCi/g for Sr-90, and 0.013 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 3.191 mrem/y with an increased cancer risk of 5.420×10^{-5} for the backfill material and 0.600 mrem/y with an increased cancer risk of 8.640×10^{-6} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU99 SUPR provided in Appendix J.

The results of the modeling efforts determined that the potential TU99 dose due to activity concentrations greater than or equal to the MDL was 3.191 mrem/y with an increased cancer risk of 5.420×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU99 SUPR (Appendix J).

7.5.4 TU99 Backfill Activities

Radiologically processed and released excavated soil survey units were selected for use as backfill material in TU99 in addition to a volume of imported fill. The excavated soil survey units selected included:

- ES-0144
- ES-0145

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU99 SUPR (Appendix J). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

Concurrence with backfilling TU99 was obtained from the RASO on September 18, 2009 and backfilling operations commenced on September 21, 2009. Approximately 720 cubic yards of soil was placed in TU99 and backfilling operations were completed on September 22, 2009. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU99.

7.6 TRENCH SURVEY UNIT 115

TU115 is located in the northern portion of Work Area 18 South, within the western portion of radiologically surveyed and released Building 351 (Figures 3-2, 3-3, and 7-1). The radiological activities performed for Building 351 are summarized in Section 7.10 of this RACR and detailed in the FSS provided in Appendix Q. TU115 extends from the north wall on the interior of Building 351 to the interior south wall and connects to TU97 on the exterior of the western side of the structure. TU115 is situated within IR Program Site IR-34. The chemicals of concern associated with IR-34 are listed in Table 3-10.

TU115 consists of five sanitary sewer trench segments and no storm drain trench segments. As identified on Figure 7-1, these trench segments include:

- 72-D18-34-8A
- 72-D18-34-8B
- 72-D18-34-8C
- 72-D18-34-8D
- 72-D18-34-8E

Trench segment 72-D18-34-8A terminated at the interior north wall of Building 351 and -8D terminated at the south wall of the structure. On the west, trench segment 72-D18-34-8D terminated at the electrical vault on the interior of the structure. In addition, trench segment 72-D18-34-8D continued westward to the exterior of Building 351 and then connected to TU97. Although the trench segments associated with TU115 were not identified in the Design Plan (TtEC 2007c), they were found during the Building 351 FSS activities.

In addition to the established storm drain and sanitary sewer release limits for Cs-137, Ra-226, and Sr-90 (Table 2-2), Th-232 was selected as a ROC for TU115. The remediation goal for Th-232 residential reuse soil samples was established at 1.69 pCi/g (Table 2-2). A detailed discussion of the release criteria was included in the TU115 SUPR provided in Appendix J.

7.6.1 TU115 Removal Action Activities

Excavation of TU115 began on September 2, 2008 in trench segment 72-D18-34-8A. A total of 20 truckloads (approximately 240 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU115 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on October 2, 2008, TU115 had an exposed surface area of 290 m^2 and was 285 linear feet in length (Table 3-1). The maximum excavated TU115 depth was 5 feet bgs (Table 3-2).

A total of 1,824 linear feet of pipe was excavated from TU115 and placed on plastic pending further activities during the Parcel G removal action. Each of the sanitary sewer trench segments contained a mixture of 3-inch-diameter to 6-inch-diameter CIP located at depths ranging between 1 foot and 5 feet bgs (Table 3-2).

An insufficient volume of sediment was available in the pipe sections removed from TU115 for sample collection and analysis. In addition, the narrow diameter of the pipes precluded the performance of radiological surface surveys. Consequentially, no sediment sample analytical results or radiological survey results were available for the pipes removed from TU115. Because no radiological surface scans or static measurements could be performed, the removed pipe sections were placed in LLRW bins for disposal by the DON's radiological waste contractor.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU115 on October 7, 2008 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 above the release limit at 1.9266 pCi/g and 2.953 pCi/g. To further characterize the possible extent of contamination, 28 characterization samples were collected and analyzed. The laboratory results identified Ra-226 contamination in 16 of these characterization soil samples ranging from 1.6389 pCi/g to 3.3319 pCi/g. Based on these results, roughly 18 cubic yards of soil was placed in LLRW bins for disposal by the DON's radiological waste contractor (Table 3-9). A total of 12 verification soil samples were collected and analyzed following the completion of the remediation activities. The analytical results identified the continued presence of Ra-226 activity above the release limit in one of the verification soil samples at 1.7478 pCi/g. Approximately 3 cubic yards of soil was remediated from TU115 on November 5, 2008 and three verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

A second set of 18 systematic soil samples was collected from TU115 on November 12, 2008 and submitted to the laboratory for analysis. Three of these soil samples identified the presence of Ra-226 activity above the release limit at 1.7122 pCi/g, 2.0180 pCi/g, and 2.7123 pCi/g. Based on these results, roughly 5 cubic yards of soil was placed in LLRW bins for disposal by the DON's radiological waste contractor (Table 3-9).

A third set of 18 systematic soil samples was collected from the sidewalls and bottom of TU115 on November 20, 2008 and submitted to the laboratory for analysis. Seven of these systematic soil samples identified Ra-226 contamination ranging from 1.9869 pCi/g to 2.7694 pCi/g. An additional 13.75 cubic yards of soil was remediated from TU115 based on the systematic soil sample results (Table 3-9). Following the remediation efforts, a total of 14 verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

A fourth set of 18 systematic soil samples was collected from TU115 and submitted to the laboratory for analysis. Two of these soil samples indicated the continued presence of Ra-226 activity above the release limit at 2.2285 pCi/g and 2.3285 pCi/g. Based on these results, an estimated 6 cubic yards of soil was remediated from TU115 in January 2009 (Table 3-9). Following the remediation efforts, four verification soil samples were collected and analyzed.

No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

In total, 133 investigative soil samples (including systematic, characterization, and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 45.75 cubic yards of soil was remediated from TU115 during the removal action activities. Figure 7-2 depicts the approximate locations of the contaminated soil samples prior to remediation.

7.6.2 TU115 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU115 remained in place on Parcel G following the completion of the removal action.

7.6.3 TU115 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU115 in January 2009 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 7-1 depicts the FSS soil sample collection locations in TU115.

TU115 was defined for the FSS as the sum of the trench unit and the backfill material composed of both radiologically processed and released excavated soil and a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill were 0.042 pCi/g for Cs-137, 0.060 pCi/g for Sr-90, 0.224 pCi/g for Ra-226, and 0.537 pCi/g for Th-232. The trench unit average net residual radioactivity concentrations were 0.042 pCi/g for Cs-137, 0.075 pCi/g for Sr-90, 0.337 pCi/g for Ra-226, and 0.507 pCi/g for Th-232. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 7.060 mrem/y with an increased cancer risk of 1.244×10^{-4} for the backfill material and 7.696 mrem/y with an increased cancer risk of 1.387×10^{-4} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU115 SUPR provided in Appendix J.

The results of the modeling efforts determined that the potential TU115 dose due to activity concentrations greater than or equal to the MDL was 7.696 mrem/y with an increased cancer risk of 1.387×10^{-4}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU115 SUPR (Appendix J).

7.6.4 TU115 Backfill Activities

Radiologically processed and released excavated soil survey units were selected for use as backfill material in TU115 in addition to a volume of imported fill. The excavated soil survey units selected included:

- ES-0033
- ES-0108

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU115 SUPR (Appendix J). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

Concurrence to backfill TU115 was obtained from the RASO on April 8, 2009 and backfilling activities began on April 10, 2009. Approximately 250 cubic yards of soil was placed in TU115 and backfilling was completed on April 15, 2009. A summary of the activities performed to support the recommended radiological free release of TU115 is provided in Table 3-1.

7.7 TRENCH SURVEY UNIT 117

TU117 is located in the southeast corner of Work Area 18 South near the intersection of 3rd Avenue and Morrell Street (Figures 3-2 and 7-1). The west side of TU117 extends along the eastern border of the radiologically surveyed and released Buildings 317/364/365 Site. The radiological work activities performed for the Buildings 317/364/365 Site are summarized in Section 7.12 of this RACR and detailed in the FSS report provided in Appendix S. TU117 connects to TU118 on the north and terminates at Manhole MH362 on the south. No piping was identified to the west of TU117. On the east, TU117 was terminated near the railroad tracks approximately 26 feet from the main trunk line. The southern portion of TU117 is situated within IR Program Site IR-71. The chemicals of concern associated with IR-71 are listed in Table 3-10.

TU117 is composed of four storm drain trench segments and no sanitary sewer trench segments. As identified on Figure 7-1, these trench segments include:

- 70-D17-00-8H
- 70-D18-00-1A
- 70-D18-00-8C
- 70-D18-71-1A

Trench segment 70-D18-00-1A extended northward and transitioned into TU118. With the exception of 70-D17-00-8H, each of the trench segments associated with TU117 was identified

in the Design Plan (TtEC 2007c). Trench segment 70-D17-00-8H was found during the TU117 and TU118 excavation activities.

7.7.1 TU117 Removal Action Activities

Excavation of TU117 was initiated on August 18, 2008 in trench segment 70-D18-71-1A. A total of 28 truckloads (approximately 336 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU117 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on August 19, 2008, TU117 exhibited an exposed surface area of 335 m^2 and was 112 linear feet in length (Table 3-1). The maximum excavated TU117 depth was 6 feet bgs (Table 3-2).

The majority of the pipe excavated from TU117 crumbled during excavation and was transferred along with the surrounding soil to RSY2 for processing. One pipe section and Manholes MH362 and MH477 were excavated from TU117 and placed on plastic pending further activities during the Parcel G removal action. As indicated in Table 3-2, trench segment 70-D17-00-8H contained 10-inch-diameter steel pipe located at depths ranging from 4 feet to 5 feet bgs. Trench segments 70-D18-00-1A and 70-D18-71-1A contained 8-inch-diameter CMP located at depths between 3 feet and 7 feet bgs. In addition, trench segment 70-D18-00-8C contained 8-inch-diameter VCP located at depths between 4 feet and 5 feet bgs.

An insufficient volume of sediment was available in the TU117 piping for sample collection and analysis. Consequentially, there were no sediment sample analytical results associated with TU117. Radiological surveys were performed on one section of pipe excavated from trench segment 70-D17-00-8H as well as the materials forming Manholes MH362 and MH477 (Table 3-5). None of the survey results indicated the presence of potential contamination. The final disposition of the pipe section and two manholes excavated from TU117 is provided in Table 3-5. The radiological survey reports are presented in Appendix B.

7.7.2 TU117 Piping Remaining In Place

A total of 26 linear feet of trench segment 70-D17-00-8H was excavated prior to its termination near the railroad tracks and Morrell Street. In accordance with the Work Plan (TtEC 2010), additional pipe was not removed because the remaining pipe was more than 10 feet of the main trunk line and had originated at non-impacted Building 324 to the north. No contamination was identified in the TU117 soil samples and the radiologically surveyed pipe section from this trench segment did not indicate the presence of contamination. Because no contamination was identified for TU117, the DON concluded that the remaining 102 linear feet of trench segment 70-D17-00-8H was unlikely to be contaminated (Table 3-8).

7.7.3 TU117 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU117 on November 3, 2008 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 7-1 depicts the FSS soil sample collection locations in TU117.

For the FSS, TU117 was defined as the sum of the trench unit and the backfill material composed of both radiologically processed and released excavated soil and a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU117 were 0.051 pCi/g for Cs-137, 0.039 pCi/g for Sr-90, and 0.439 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.048 pCi/g for Cs-137, 0.074 pCi/g for Sr-90, and 0.277 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 4.327 mrem/y with an increased cancer risk of 7.856×10^{-5} for the backfill material and 2.826 mrem/y with an increased cancer risk of 5.088×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU117 SUPR provided in Appendix J.

The results of the modeling efforts determined that the potential TU117 dose due to activity concentrations greater than or equal to the MDL was 4.327 mrem/y with an increased cancer risk of 7.856×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU117 SUPR (Appendix J).

7.7.4 TU117 Backfill Activities

In addition to a volume of imported fill, radiologically processed and released excavated soil survey unit ES-0034 was selected for use as backfill material in TU117. Radiological information related to the processing of ES-0034 is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU117 SUPR (Appendix J). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

The RASO concurred with backfilling TU117 on February 11, 2009. Approximately 265 cubic yards of soil was placed in TU117 to grade followed by the application of road base material over the backfilled trench. Backfilling operations commenced and were completed on March 12, 2009. A summary of the activities performed to support the recommended radiological free release of TU117 is provided in Table 3-1.

7.8 TRENCH SURVEY UNIT 118

TU118 is located in the southeast portion of Work Area 18 South just west and south of non-radiologically impacted Building 324 and immediately east of the radiologically surveyed and released Buildings 317/364/365 Site (Figures 3-2 and 7-1). The west side of TU118 extends along the eastern border of the Buildings 317/364/365 Site. The radiological work performed for the Buildings 317/364/365 Site is summarized in Section 7.12 of this RACR and is detailed in the FSS report provided in Appendix S. TU118 connects to TU117 on the south and TU153 on the west. This trench unit was terminated on the north within 10 feet of Building 324 and on the east at the railroad tracks near Morrell Street. TU118 is not situated within an IR Program Site.

TU118 is composed of four storm drain trench segments and two sanitary sewer trench segments. As identified on Figure 7-1, these trench segments include:

Storm Drain Trench Segments	Sanitary Sewer Trench Segments
• 70-D17-00-8I	• 70-D17-00-8E
• 70-D18-00-1A	• 70-D18-00-8A
• 70-D18-00-1B	
• 70-D18-00-1C	

Storm drain trench segment 70-D18-00-1A extended northward from TU117 and transitioned into TU118. Trench segments 70-D18-00-1A, -1B, and -1C were identified in the Design Plan (TtEC 2007c). Trench segment 70-D17-00-8I was found during excavation of TU73 and trench segments 70-D17-00-8E and 70-D18-00-8A were found during excavation of TU118. Although identified in the Design Plan, trench segment 70-D18-00-4P (located south of non-radiologically impacted Buildings 323 and 324) was not excavated during the Parcel G removal action due to its proximity to the structures.

7.8.1 TU118 Removal Action Activities

Excavation of TU118 began on August 28, 2007 in trench segment 70-D17-00-8E. A total of 63 truckloads (approximately 756 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU118 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on August 19, 2008, TU118 had an exposed surface area of 712 m^2 and was 387 linear feet in length (Table 3-1). The maximum excavated TU118 depth was 10 feet bgs (Table 3-2).

A total of 16 sections of pipe and Manholes MH360 and MH361 were excavated from TU118 and placed on plastic pending further activities during the Parcel G removal action. Piping that disintegrated during excavation was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, trench segments 70-D17-00-8E, 70-D18-00-1B, -1C, and

-8A contained 4-inch-diameter to 8-inch-diameter VCP located at depth ranging from 1 foot to 10 feet bgs. Trench segment 70-D17-00-8I contained 10-inch-diameter steel pipe and trench segment 70-D18-00-1A contained 8-inch-diameter CMP. The pipes in these two trench segments were found at depths between 5 feet and 7 feet bgs.

Sufficient sediment for sample collection and analysis was obtained from two sections of pipe excavated from trench segment 70-D17-00-8I (Table 3-6). No sediment samples were collected from the remaining sections of TU118 pipe or manholes. The sediment sample analytical results did not identify the presence of radioactivity above the release criteria for any ROC. The sediment sample analytical reports are provided in Appendix D.

Radiological surveys were performed on 16 sections of pipe and the materials forming Manholes MH360 and MH361 during the Parcel G removal action (Table 3-5). No elevated survey results were identified for these pipes or manholes. The final disposition of the pipe sections and the materials forming Manholes MH360 and MH361 is provided in Table 3-5. The radiological survey reports are presented in Appendix B.

7.8.2 TU118 Piping Remaining In Place

During the excavation of TU118, a total of 77 linear feet of trench segment 70-D18-00-1B was excavated prior to its termination within the 10-foot buffer zone to the south of non-radiologically impacted Building 324. Based on historical drawings, approximately 10 linear feet of this trench segment was left in place on Parcel G following the completion of the removal action (Table 3-8). Because no contaminated sediment samples, soil samples, or elevated survey results were identified in TU118 and since the pipe emanated from a non-impacted building, the DON concluded that the 10 feet of pipe remaining in place was unlikely to be contaminated.

A total of 122 linear feet of trench segment 70-D17-00-8I was excavated prior to being terminated near the railroad tracks and Morrell Street. Based on historical drawings, an estimated 88 linear feet of this trench segment was left in place extending beneath the railroad tracks and Morrell Street to the east where it transitioned into TU73 (Table 3-8). Since no contamination was found during the TU118 activities and because this trench segment was terminated more than 10 feet from the main trunk line, the DON concluded that the trench segment 70-D17-00-8I pipes left in place on Parcel G were unlikely to be contaminated.

Trench segment 70-D18-00-4P was not excavated during the Parcel G removal action. This trench segment runs north and south along the west side of non-radiologically impacted Buildings 323 and 324 and approximately 10 feet from the foundations of these structures. Based on historical drawings, an estimated 109 linear feet of trench segment 70-D18-00-4P remained in place on Parcel G following the completion of the removal action. Because this trench segment is located 10 feet from the building foundations, it could not be removed without adversely affecting the integrity of the structures. The DON concluded that trench segment

70-D18-00-4P was unlikely to be contaminated because Buildings 323 and 324 have never been associated with the use or storage of radioactive materials and because no contamination was identified during the TU118 FSS activities.

7.8.3 TU118 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU118 on November 3, 2008 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 7-1 depicts the FSS soil sample collection locations in TU118.

TU118 was defined for the FSS as the sum of the trench unit and the backfill material composed of radiologically processed and released excavated soil. The average net residual radioactivity concentrations for material used as backfill in TU118 were 0.042 pCi/g for Cs-137, 0.067 pCi/g for Sr-90, and 0.175 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.034 pCi/g for ^{137}Cs-137, 0.087 pCi/g for Sr-90, and 0.247 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 2.715 mrem/y with an increased cancer risk of 4.436×10^{-5} for the backfill material and 3.762 mrem/y with an increased cancer risk of 6.155×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU118 SUPR provided in Appendix J.

The results of the modeling efforts determined that the potential TU118 dose due to activity concentrations greater than or equal to the MDL was 3.762 mrem/y with an increased cancer risk of 6.155×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU118 SUPR (Appendix J).

7.8.4 TU118 Backfill Activities

Radiologically processed and released excavated soil survey units were selected for use as backfill material in TU118. The excavated soil survey units selected included:

- ES-0146
- ES-0148

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU118 SUPR (Appendix J).

The RASO concurred with backfilling TU118 on February 11, 2009 and backfilling operations commenced on March 13, 2009. Approximately 708 cubic yards of soil was placed in TU118 to grade followed by the application of road base material over the backfilled trench. Backfilling operations for TU118 were completed on March 14, 2009. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU118.

7.9 TRENCH SURVEY UNIT 153

TU153 is located in the central portion of Work Area 18 South and is situated within the radiologically surveyed and released Buildings 317/364/365 Site just south of former Building 364 (Figures 3-2 and 7-1). The radiological work performed for the Buildings 317/364/365 Site is summarized in Section 7.12 of this RACR and detailed in the FSS report provided in Appendix S. TU153 originates at Cochrane Street and extends eastward toward Morrell Street where it connects to TU118 on the east and south. TU153 connects to TU95 on the west.

TU153 is composed of eight storm drain trench segments and no sanitary sewer trench segments. As identified on Figure 7-1, these trench segments include:

- 70-D18-00-1D
- 70-D18-00-1F
- 70-D18-00-8G
- 70-D18-00-8H
- 70-D18-00-8I
- 70-D18-00-8J
- 70-D18-33-1D
- 70-D18-33-1E

Trench segments 70-D18-00-1D, -1F, and 70-D18-33-1D were identified in the Design Plan (TtEC 2007c). Trench segments 70-D18-00-8G, -8G, 70-D18-33-1D, and -1E were found during the removal action activities.

One additional ROC was identified for TU153 due to its location within the footprint of the radiologically surveyed and released Buildings 317/364/365 Site. The ROCs for TU153 included Cs-137, Pu-239, Ra-226, and Sr-90. As identified in the TU153 SUPR (Appendix J) and as indicated in Table 2-2, the defined Pu-239 remediation goal for residential reuse soil samples was 2.59 pCi/g.

7.9.1 TU153 Removal Action Activities

Excavation of TU153 commenced on June 15, 2009 in trench segment 70-D18-00-1D. A total of 49 truckloads (approximately 588 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU153 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on June 18, 2009, TU153 had an exposed surface area of 558 m^2 and was 368 linear feet in length (Table 3-1). The maximum excavated TU153 depth was 9 feet bgs (Table 3-2).

The majority of the piping excavated from TU153 disintegrated upon removal and was transferred along with the surrounding soil to RSY2 for processing. As identified in Table 3-2, trench segment 70-D18-33-1E contained 6-inch-diameter CIP located at depths between 3 feet and 5 feet bgs. The remainder of the TU153 trench segments contained 6-inch-diameter and 10-inch-diameter VCP located at depths ranging from 3 feet to 8 feet bgs.

Manholes MH359, MH479, and MH480 were excavated, crushed, and the debris placed in LLRW bins for disposal during the Parcel G removal action (Table 3-5). No sediment samples were collected from the manholes or any piping associated with TU153. With the concurrence of the DON, radiological survey activities were not performed on the piping excavated from TU153 due to the limited quantity removed and to expedite fieldwork activities. The disposition of the materials forming Manholes MH359, MH479, and MH480 is provided in Table 3-5.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU153 on July 10, 2009 and submitted to the laboratory for analysis. The analytical results identified the presence of Cs-137 activity above the release limit in one soil sample at 0.19665 pCi/g. Based on this result, an estimated 6 cubic yards of soil was remediated from TU153 on July 16, 2009. The remediated soil was placed in LLRW bin BKRU026454G9 for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation activities, three verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

A second set of 18 systematic soil samples was collected from TU153 on July 22, 2009 and submitted to the laboratory for analysis. The analytical results identified the presence of Cs-137 activity above the release limit in one soil sample at 0.14877 pCi/g. Based on this result, an additional 6 cubic yards of soil was placed in LLRW bin GFLU001210G9 for disposal (Table 3-9). Three verification soil samples were collected and analyzed following the remediation activities. One sample identified the continued presence of Cs-137 contamination at 0.35353 pCi/g. Approximately 5.5 cubic yards of soil was remediated followed by the collection of two verification soil samples. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

A third set of systematic soil samples was collected from the sidewalls and bottom of TU153 on August 7, 2009 and submitted to the laboratory for analysis. The analytical results identified the presence of Cs-137 activity above the release limit in two samples at 0.14645 pCi/g and 0.18699 pCi/g. Based on these results, an additional 4 cubic yards of soil was remediated on August 14, 2009. The remediated soil was placed in LLRW bin BKRU012993G8 for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation efforts, four verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

In total, 66 investigative soil samples (including systematic and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 21.5 cubic yards of soil was remediated from TU153 during the Parcel G removal action activities. Figure 7-2 depicts the approximate locations of the contaminated soil samples prior to remediation.

7.9.2 TU153 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU153 remained in place on Parcel G following the completion of the removal action.

7.9.3 TU153 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU153 on August 21, 2009 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 7-1 depicts the FSS soil sample collection locations in TU153.

TU153 was defined for the FSS as the sum of the trench unit and the backfill material composed of both radiologically processed and released excavated soil and a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU153 were 0.050 pCi/g for Cs-137, 0.156 pCi/g for Sr-90, 0.207 pCi/g for Ra-226, and 0.011 pCi/g for Pu-239. The trench unit average net residual radioactivity concentrations were 0.040 pCi/g for Cs-137, 0.145 pCi/g for Sr-90, 0.146 pCi/g for Ra-226, and 0.029 pCi/g for Pu-239. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 2.972 mrem/y with an increased cancer risk of 4.931×10^{-5} for the backfill material and 2.189 mrem/y with an increased cancer risk of 3.593×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU153 SUPR provided in Appendix J.

The results of the modeling efforts determined that the potential TU153 dose due to activity concentrations greater than or equal to the MDL was 2.972 mrem/y with an increased cancer risk of 4.931×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in TU153 SUPR (Appendix J).

7.9.4 TU153 Backfill Activities

In addition to a volume of imported fill, radiologically processed and released excavated soil survey units were selected for use as backfill material in TU153. The excavated soil survey units selected included:

- ES-0175
- ES-0225

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU153 SUPR (Appendix J). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

The RASO concurred with backfilling TU153 on September 23, 2009 and backfilling operations were initiated on September 24, 2009. Approximately 493 cubic yards of soil was placed in TU153 to grade followed by the application of road base material over the backfilled trench. Backfilling operations were completed on September 25, 2009. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU153.

7.10 BUILDING 351

The following sections summarize the Building 351 FSS activities, provide an abbreviated history, describe the FSS results, and discuss regulatory concurrence for the unrestricted radiological release of the structure. The Building 351 FSS is provided in Appendix Q and details the radiological survey activities. The location of Building 351 within Parcel G is depicted on Figures 3-3 and 7-1.

7.10.1 Description

Building 351 is located between Cochrane and Morrell Streets and adjacent to Building 351A. Constructed in 1945 and enlarged at a later date, Building 351 is a World War II era reinforced-concrete shop with approximately 3,448 m^2 of floor space. The core structure is three stories high with a flat roof and the northwest corner is a five-story tower.

Building 351 is currently vacant and unoccupied. As indicated in the SFRA Redevelopment Plan (SFRA 1997), the planned future reuse of the property is "mixed use" that may include residential development.

7.10.2 History

According to the HRA, Volume II (NAVSEA 2004), Building 351 was used for a variety of operations including:

- Electronics work area/shop
- Optical laboratories
- Navy Bureau of Medicine and Surgery (BUMED) storeroom
- Machine shop (located on the first floor)

- Sampling laboratory
- General research laboratories
- Biological research laboratories

In addition, the structure was used by NRDL as the Materials and Accounts Division, Technical Information Division, Office Services Branch, Thermal Branch, Engineering Division, and library. In March 1955, the NRDL consolidated the majority of its facilities into Building 815 and performed radiological surveys of the buildings formerly used for free release to the shipyard's use and control. These surveys were performed in Buildings 313, 313A, 322, 351, 351A, 366, 506, 507, 508, and 510. The NRDL documentation confirmed that these buildings were surveyed and released for unrestricted use during the transfer of operations to Building 815. Although no site-specific survey or decontamination procedures were found in the documentation, all NRDL buildings were required to be thoroughly surveyed and decontaminated prior to abandonment or release for unrestricted use under existing AEC guidelines. For final clearance, former NRDL facilities were required to meet the residual activity levels established by BUMED for decontamination of Navy facilities and equipment. After HPNS closure, Building 351 remained vacant.

The DON contracted with a radiological services subcontractor in the spring of 2002 to perform a MARSSIM (NUREG-1575; DoD et al. 2000) Class 3 survey of Building 351. No contamination was found inside Building 351 during the Class 3 survey activities. However, based on the initial classification of the building, this survey was later considered inadequate for the DON to recommend unrestricted radiological release.

Building 351 was considered radiologically impacted due to its use by NRDL personnel. The ROCs selected for Building 351 included Cs-137, Ra-226, Sr-90, and Th-232. These radionuclides covered the alpha, beta, and gamma emitters that may have been present inside Building 351, based on historical use.

7.10.3 Final Status Survey Summary

Mobilization to perform the FSS fieldwork for Building 351 began in mid-May 2008. Buildings 236, 369, and 400 were selected for use as the background or reference areas for the Building 351 survey activities. These buildings had similar construction materials and were not identified as impacted in the HRA (NAVSEA 2004). The selected reference area buildings were constructed between 1945 (Building 400) and 1956 (Building 369). Building 236 was constructed in 1949.

The investigation levels for alpha and beta surveys were established at 32.85 dpm/100 cm^2 and 900 dpm/100 cm^2, respectively. Loose surface contamination investigations to determine the fraction of removable activity present relative to the total activity were set at 20 percent of the values for total activity and were different than other investigation levels due to the lower release

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criteria. A complete discussion of the reference areas and investigation levels was provided in the Building 351 FSS (Appendix Q).

Asbestos abatement activities were initiated on the third floor of Building 351, followed by the second and first floors. Following completion of the abatement activities, the asbestos waste was removed and placed in LLRW bins for subsequent disposal by the DON's radiological waste contractor. A total of 2,788 bags of asbestos-containing materials were removed from Building 351 and disposed of as LLRW during fieldwork.

Trash and debris present in Building 351 were surveyed for proper disposal following the completion of asbestos abatement activities. In addition, a total of eight items, including drinking fountains, ovens, an electrical rack, a stove top, and a sink were radiologically surveyed to support disposition of the material. Seven of the eight items surveyed were verified to be less than the release criteria. The survey result for one drinking fountain found in Building 351 indicated the presence of beta contamination and was placed in an LLRW bin for disposal on August 11, 2008. In addition, the ventilation systems in Building 351 were disassembled and disposed of as LLRW. The material and equipment survey results were provided in Appendix D of the Building 351 FSS (Appendix Q).

The Building 351 drain lines were removed from the interior of the structure in July 2008. The materials, including sinks, were staged inside the building pending further activities. Because the drain pipe was generally too small in diameter to properly survey, approximately 1,824 linear feet of the drain pipe was disposed of as LLRW. As drain systems were removed from the top floor down to the first floor, drain pipe penetrations from one floor to the next remained. To ensure that the drain systems did not leak and leave contamination, 117 floor penetrations were swipe surveyed. Prior to collecting the swipe samples, each floor penetration was identified, numbered, and mapped. Two swipe samples were collected from each of the floor penetrations and submitted to the laboratory for analysis. The analytical results did not identify radioactivity above the release criteria for any ROC. The location of these floor penetrations and swipe survey results were presented in Appendix E of the Building 351 FSS (Appendix Q).

To facilitate access for removal of the drain systems on the first floor of Building 351, the areas were first surveyed and some interior walls were removed. Following an evaluation of the survey results, the concrete floor covering the drain lines was saw-cut to provide access. Once completed, the concrete floor pieces were removed and surveyed for potential radioactive contamination. None of the concrete pieces surveyed indicated the presence of radioactivity above the release criteria and were released for off-site disposal or recycling. The removal of the drain lines beneath Building 351 resulted in one trench survey unit designated as TU115. The removal of these pipes was completed in accordance with the storm drain and sanitary sewer systems Work Plan (TtEC 2010). The details of the TU115 FSS activities are summarized in Section 7.6 of this RACR.

Initially, Building 351 was divided into 49 Class 1 survey units and 5 Class 2 survey units. Following asbestos abatement and drain systems removal, these survey units were rearranged. Based on the revised footprint area, survey unit designations 12 through 16, 37, 38, and 41 were eliminated. For the FSS, 41 Class 1 survey units and 5 Class 2 survey units were designated.

Alpha and beta scan readings were logged in each of the Class 1 and Class 2 survey units. Two alpha readings in the Class 1 survey units exceeded the release criteria and three readings in Survey Unit 51 exceeded the beta release criteria. However, follow-up static investigation measurements did not show the presence of radioactivity above the release criteria. In addition, systematic alpha and beta static measurements were logged at discrete locations in each of the Class 1 and Class 2 survey units. None of these static measurements identified the presence of radioactivity above the release criteria.

Swipe samples were collected from each of the discrete systematic and biased locations in the designated survey units. The average swipe data were all less than the release criteria and no swipe measurement exceeded 20 percent of the release criteria. However, investigation levels on concrete wall surfaces were exceeded in four separate locations. To support the investigation process, four solid samples were collected from the building surfaces in the associated survey units and analyzed by gamma spectroscopy. No radioactivity above the release criteria was identified. The solid sample results were presented in Appendix F of the Building 351 FSS (Appendix Q).

Building 351 was subjected to reviews to ensure that radiation exposures to workers, the public, and the environment met ALARA principles. These reviews were conducted for Building 351 operations, practices, and procedures with potential for individual or collective doses. Results from radiological survey activities, and air, swipe, and soil samples were used to assess the potential radiological impacts of Building 351 activities. These activities included characterization to ensure complete removal of radioactive material exceeding the release criteria. Following the completion of survey activities, qualitative radiological impacts from operations were evaluated by performing a dose and risk assessment. Based on recent estimates of dose to the public from Building 351 survey activities, only qualitative ALARA analyses were required. Qualitative ALARA analyses for Building 351 did not result in alpha or beta measurements above the investigation levels and none of the alpha, beta, or gamma measurement results identified residual radioactivity above the release criteria for any ROC. A description of the ALARA process is presented in Section 3.2.6 of this RACR and detailed in the Building 351 FSS (Appendix Q).

Modeling for Building 351 was performed to calculate the residual dose to the critical group using RESRAD-BUILD Version 3.4 software. The maximum residual dose in Building 351 was identified in Survey Unit 3 at 0.509 mrem/y and the maximum excess lifetime cancer risk was

identified in Survey Unit 18 at 3.16×10^{-8}. The results of the modeling efforts were provided in Appendix G of the Building 351 FSS (Appendix Q).

Based on an evaluation of the survey results and a review of the modeling efforts, the DON concluded that Building 351 met the release criteria and recommended that it be radiologically released for unrestricted use.

7.10.4 Regulatory Concurrence

The final FSS results for Building 351 (Appendix Q) were submitted to the regulatory agencies on March 8, 2010. Concurrence with the radiological release for unrestricted use of Building 351 was obtained from the DTSC and CDPH on August 2, 2010. Copies of the DTSC letter and the CDPH memorandum are provided in Appendix X. According to statements by the EPA, their decision for radiological free release of Building 351 will be based on the data and analyses presented in this RACR.

7.11 BUILDING 351A

The following sections summarize the Building 351A FSS, provide an abbreviated history, summarize the FSS results, and discuss regulatory concurrence for the unrestricted radiological release of the structure. The Building 351A FSS report is provided in Appendix R and details the radiological survey activities. The location of Building 351A within Parcel G is depicted on Figures 3-3 and 7-1.

7.11.1 Description

Building 351A is a one-story, concrete building constructed over a crawlspace that abuts the south side of Building 351. Located between Cochrane and Morrell Streets, Building 351A has approximately 3,448 m^2 of floor space.

Building 351A is currently vacant and unoccupied. The SFRA Redevelopment Plan (SFRA 1997) identified the planned future reuse of the property as a "mixed use" area that may include residential development.

7.11.2 History

According to the HRA, Volume II (NAVSEA 2004), Building 351A was used as a radiation detection equipment shop and a facility where other instruments were calibrated, repaired, and reconditioned. The NRDL also used Building 351A for the following:

- Chemistry laboratory
- Applied research branch
- Administrative offices

- Nuclear and physical chemistry laboratory
- Chemical technology division

As described in Section 7.10.2, the NRDL consolidated most of its facilities into Building 815 in March 1955 and performed radiological surveys on those structures it formerly used. No contamination was identified in Building 351A during these survey activities. The building remained vacant following HPNS closure.

The DON performed additional radiological surveys inside Building 351A in August 1974 and found beta contamination in a sink and associated drain lines in Workroom 47. The sink and drain lines were removed, but no additional decontamination efforts were documented.

The DON performed cursory alpha, beta/gamma, and gamma scan surveys in 1992 as part of a surface contamination survey. No detectable activity was identified in the Building 351A. In 1997, the DON returned to survey the remaining drain lines in Workroom 47 for alpha and beta activity; however, no residual contamination was detected above acceptable activity levels for the period.

An area of elevated activity was discovered inside one of the Building 351A laboratory rooms in the first quarter of 2001. Tile and molding were removed and analyzed by gamma spectroscopy. In July and July 2001, a 100 percent gamma walkover survey was performed inside the structure, and 1-minute static gamma measurements were obtained from both the building and a section of the drain piping in Workroom 47. Swipes for alpha and beta/gamma removable contamination were obtained from the open ends of the drain line. In addition, a 10 percent gamma walkover survey was performed in accessible portions of the building attic. No radioactivity above the release criteria was noted in the attic. A small leaded box described as a 16 by 16 by 16 inches cube was discovered during these activities. The enclosure may have been used to store higher-activity radioactive materials and sources. The enclosure was found to contain loose radioactivity above the release criteria of this period.

The DON mobilized a radiological subcontractor to perform a Class 3 survey of Building 351A in March 2002. Further investigations were performed on the drain piping. Because contamination was identified, the drain piping was removed. All drain pipes from the building flowed to a central line located in the crawlspace beneath the structure. The piping was removed from the crawlspace and surveys performed. Because limited contamination was found, the piping was disposed of as LLRW.

The Class 3 survey of Building 351A was later considered inadequate for the DON to recommend unrestricted radiological release. The DON determined that some areas inside the crawlspace required remediation, the leaded box needed to be removed, and the ventilation system required a scoping survey. A search through the sample archive produced all but one of

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the original soil samples collected in 2002 from the crawlspace. The missing sample had been collected from the trench area and the associated analytical results indicated the presence of elevated Cs-137 activity. Because the initial 2002 analysis of the missing sample indicated elevated Cs-137 activity, the DON elected to remediate the affected area.

Building 351A was considered radiologically impacted because of its use by NRDL personnel and its use as an instrument calibration and repair facility. The ROCs selected for Building 351A included Cs-137, Pu-239, Ra-226, Sr-90, and Th-232. The remediation goals for these ROCs are listed in Table 2-2.

7.11.3 Final Status Survey Summary

Mobilization to perform the FSS fieldwork for Building 351A began in mid-May 2008. After reviewing the applicable plans and variety of interior surfaces in Building 351A, Buildings 236, 369, 400, and 413 were selected for use as the background or reference areas for the survey activities. These buildings had similar construction materials to Building 351A and were not listed as impacted in the HRA (NAVSEA 2004). The reference area for soils was the same as the reference area used for the sewer and storm drain removal action. Reference area soil samples were obtained in April 2006 in an area of the Building 813 parking lot in Parcel D-2. The Building 813 parking lot material was considered to be similar to that encountered in the crawlspace soils beneath Building 351A.

The investigation levels for alpha and beta radiation surveys were established at 32.85 dpm/ 100 cm^2 and 900 dpm/100 cm^2, respectively. Loose surface contamination investigations to determine the fraction of removable activity present relative to the total activity were set at 20 percent of the values for total activity and were different than other investigation levels due to the lower release criteria. The reference area soil samples collected from the Building 813 parking lot provided a basis for net activity concentration for the crawlspace soil samples.

Trash and debris were collected from Building 351A in an effort to remove all non-permanent items from the structure prior to beginning the actual survey activities. The trash/debris was composed of miscellaneous items including ceiling tiles and wood paneling. These items and the remainder of the trash/debris were disposed of as LLRW. During these activities, the leaded enclosure previously identified as LLRW was transferred to the DON's radiological contractor for disposal.

Flooring materials and wallboard in Building 351A were found to contain potentially friable asbestos. Asbestos abatement activities were performed to expose the original surfaces of the structure in preparation for the survey activities. The asbestos-containing materials removed from Building 351A were disposed of as LLRW.

A scoping survey was performed on the Building 351A ventilation system during the FSS activities. All accessible portions of the system, including registers and cold-air returns, were opened and surveyed. Swipe samples were collected at every accessible location and were analyzed by gamma spectroscopy. The results of the ventilation system scoping survey did not indicate the presence of radioactivity above the release criteria. Following an evaluation of the scoping survey results, the DON concluded that the ventilation system in Building 351A was not impacted.

The RASO directed the reanalysis of the archived crawlspace soil samples collected in 2002. Based on these results, remediation was performed in the crawlspace area and trench area using a soil-vacuum system equipped with a high-efficiency particulate air filter. Air sampling results did not indicate radioactivity above 10 percent of the derived air concentration levels. Details related to the crawlspace remediation effort were provided in the Building 351A FSS (Appendix R). During remediation, approximately 11.5 cubic yards of material in the trench area and about 17 cubic yards of soil from the crawlspace were placed in LLRW bins for disposal.

Initially, Building 351A was divided into 44 Class 1 interior survey units on the main floor, with 17 Class 1 survey units and a single Class 2 survey unit in the crawlspace, and a single Class 1 survey unit for the trench area where the main sewer trunk line had been removed. Scan surveys for alpha and beta indicated the presence of contamination in Survey Units 7, 26, and 43. Characterization surveys were performed to determine the extent of contamination in each area. Three separate remedial actions were performed in Building 351A using a mechanical abrasive method for removal of the wall materials. The remediation spoils were disposed of as LLRW. Follow-up verification remedial action support survey activities indicated that the remediation efforts were successful.

During the field activities, the presence of numerous floor penetrations from removed pipes was noted. A swipe survey of 58 floor penetration openings was performed to ensure that no contamination was presented. None of the swipe sample results indicated the presence of radioactivity above the release criteria. The results from this survey were provided in Appendix J of the Building 351A FSS (Appendix R).

Following the completion of asbestos abatement and remediation activities, the survey units were realigned. Survey Unit designations 4, 15, 17, and 28 were eliminated when they were combined into adjacent survey units. To perform the FSS, the interior of Building 351A was then divided into 40 Class 1 survey units on the main floor. Nineteen Class 1 survey units and one Class 2 survey unit were designated in the crawlspace, and one Class 1 survey unit was selected for the trench area.

During the FSS activities in Building 351A, alpha and beta scan readings logged for the Class 1 and Class 2 survey units did not indicate the presence of radioactivity above the release criteria

following the completion of the remediation activities. Systematic alpha and beta static measurements were collected at discrete locations within each survey unit. None of the systematic static measurements indicated the presence of radioactivity above the release criteria. In addition, none of the swipe measurements were greater than 20 percent of the release criteria (after all remedial actions were completed), and all swipe data were less than 20 percent of the total net residual activities identified within the survey unit.

Systematic soil samples were collected from discrete locations in each of the crawlspace survey units following the collection of scan readings and static measurements. No radioactivity above the release criteria was identified in these soil samples for any ROC.

Building 351A was subjected to reviews to ensure that radiation exposures to workers, the public, and the environment met ALARA principles. These reviews were conducted for Building 351A operations, practices, and procedures with potential for individual or collective doses. Results from radiological survey activities, and air, swipe, and soil samples were used to assess the potential radiological impacts of Building 351A activities. These activities included characterization to ensure complete removal of radioactive material exceeding the release criteria. Following the completion of survey activities, qualitative radiological impacts from operations were evaluated by performing a dose and risk assessment. Based on recent estimates of dose to the public from Building 351A survey activities, only qualitative ALARA analyses were required. Qualitative ALARA analyses for Building 351A did not result in alpha or beta measurements above the investigation levels and none of the alpha, beta, or gamma measurement results identified residual radioactivity above the release criteria for any ROC. A description of the ALARA process is presented in Section 3.2.6 of this RACR and detailed in the Building 351A FSS (Appendix R).

Modeling for Building 351A was performed separately for the building and the crawlspace using RESRAD-BUILD Version 3.5 software. The maximum residual dose of 0.732 mrem/y with a maximum excess lifetime cancer risk of 1.43×10^{-5} was identified in Survey Unit M in the crawlspace area. The maximum residual dose of 0.202 mrem/y with a maximum excess lifetime cancer risk of 1.34×10^{-7} was identified in Survey Unit 47 in Building 351A. The results of the modeling efforts were provided in Appendix L of the Building 351A FSS (Appendix R).

An evaluation of the survey results and modeling efforts concluded that Building 351A and its associated crawlspace met the release criteria. Based on these results, the DON recommended Building 351A be radiologically released for unrestricted use.

7.11.4 Regulatory Concurrence

The final FSS results for Building 351A (Appendix R) were submitted to the regulatory agencies on July 26, 2010. Concurrence with the radiological release for unrestricted use of Building 351A was obtained from the DTSC and CDPH on October 6, 2010. Copies of the DTSC letter and the

CDPH memorandum are provided in Appendix X. According to statements by the EPA, their decision for radiological free release of Building 351A will be based on the data and analyses presented in this RACR

7.12 BUILDINGS 317/364/365 SITE

The following sections summarize the Buildings 317/364/365 Site FSS, provide an abbreviated history, summarize the FSS results, and discuss regulatory concurrence for the unrestricted radiological release of the property. The Buildings 317/364/365 Site FSS is provided in Appendix S and details the radiological survey activities. The location of the Buildings 317/364/365 Site and the former locations of each demolished structure are depicted on Figures 3-3 and 7-1.

7.12.1 Description

The Buildings 317/364/365 Site was a combination of three structures used by the NRDL during its tenure at HPNS. The Buildings 317/364/365 Site was approximately 0.98 acres or 3,966 m^2 in area. This property is located between Cochrane and Morrell Streets, immediately south of Building 351A.

All three of the structures associated with the Buildings 317/364/365 Site were demolished. The SFRA Redevelopment Plan (SFRA 1997) identified the planned future use of the property as a "mixed use" area that may include residential development.

7.12.2 History

Each of the Buildings 317/364/365 Site structures had an extensive operating history involving numerous radiological surveys prior to their demolition. According to the HRA, Volume II (NAVSEA 2004), Building 317 measured approximately 100 feet by 30 feet and was used by NRDL personnel for temporary animal quarters. Investigations subsequent to the HRA identified a decontamination test pad directly south of this area. A previous remedial action described in the HRA as the "peanut spill" was located north of the Building 317 footprint and was included as part of the Building 317/364/365 Site. The HRA indicated that the peanut spill was successfully remediated in 2001; however, an FSS of the excavation boundaries was never performed.

Building 364 was a concrete structure with a concrete foundation that measured 40 feet by 50 feet. A liquid radioactive waste collection area immediately to the rear of the structure contained a sump pump with a concrete pad and two holding tanks. According to the HRA, Volume II (NAVSEA 2004), Building 364 was used by the NRDL for the following:

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- Animal irradiation facility
- Liquid radioactive waste collection facility
- Research animal facility
- Storage building
- Isotope processing and decontamination studies facility
- General research laboratory

Building 364 contained a "hot cell" that was used to perform some of these processes. Following HPNS closure, Building 364 was leased to a laboratory company that performed assay operations that appears to have concentrated radioactive materials during processing.

Remedial actions performed in and near Building 364 included the liquid radioactive waste collection system, just east of the structure. This subsurface system was located up to a maximum depth of 8 feet bgs. Although the HRA, Volume II (NAVSEA 2004) indicated that a previous FSS was performed in this area, the concrete base of the sump had been left in place and solid samples previously collected in the area were not analyzed for each of the ROCs that may have been present.

Building 365 was a one-story wooden structure with a concrete foundation measuring 30 feet by 40 feet. According to the HRA, Volume II (NAVSEA 2004), Building 365 was used as a personnel decontamination facility, change house, storage building, and NRDL's small animal facility. Samples were remotely transferred into the hot cell in Building 364 from Building 365 via steel piping. Building 365 was later used as a sample storage facility by Navy contractors during the Phase V investigations.

The ROCs for Building 317 and Building 365 were identified as Cs-137, Pu-239, Ra-226, Sr-90, and U-235. The ROCs specified for Building 364 included Co-60, Cs-137, Pu-239, Ra-226, Sr-90, and U-235. Additional ROCs were identified for the sump area of the liquid waste transfer system including americium-241, europium-152, europium-154, Th-232, and tritium. These ROCs cover the alpha, beta, and gamma emitters that could be present at the Buildings 317/364/365 Site.

7.12.3 Final Status Survey Summary

The Buildings 317/364/365 Site fieldwork was initiated in April 2008. The reference or background area for soil at the Buildings 317/364/365 Site was the same as the reference area used for the storm drain and sanitary sewer removal project. Reference area soil samples were obtained in April 2006 from an area of the Building 813 parking lot in Parcel D-2. The Building 813 parking lot was considered to be similar to the material encountered at the Buildings 317/364/365 Site.

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The investigation level for gamma radiation surveys was established at the reference area mean plus 3-sigma, where sigma is the standard deviation of the gamma readings in the reference or background area. Background activity for Ra-226 was determined to be 0.485 pCi/g, establishing the release limit at 1.485 pCi/g. The mean activity in the background reference area was established at 0.001 pCi/g for Pu-239 and 0.020 pCi/g for U-235. The other ROCs were assumed to have a mean reference area activity of zero.

Trash and debris were collected from inside Building 364 and Building 365 prior to demolition in an effort to remove all impermanent items prior to performing the survey activities. The trash and debris and other miscellaneous items were disposed of as LLRW. Thorough surveys were performed on the Building 364 and 365 surfaces to ensure than any radiological contamination present inside the structures was removed before disposal of the demolition buildings as construction debris.

Building 364 was divided into 11 Class 1 survey units and a single Class 2 survey unit. Scan surveys, static measurements, and swipe samples were collected in each survey unit at discrete locations. During the scanning activities, beta contamination was found in Survey Unit 3 at 13,900 dpm/100 cm^2. The contaminated area was fully characterized before remediation activities consisting of mechanical abrasion and vacuuming were performed. Verification surveys indicated that the remediation effort was successful. Limited contamination also was identified in Survey Unit 2 (hot cell), which was successfully remediated. However, the hot cell was disposed of as LLRW due to the high potential for internal contamination based on its operating history. The results of the Building 364 radiological surveys prior to demolition of the structure were provided in Appendix A of the Buildings 317/364/365 Site FSS (Appendix S).

The interior of Building 365 was divided into six Class 1 survey units and one Class 2 survey unit. Scan surveys, static measurements, and swipe samples were collected at discrete systematic locations in each of the survey units. No radioactivity above the release criteria was identified inside Building 365. The survey results were provided in Appendix A of the Buildings 317/364/365 Site FSS (Appendix S).

Buildings 364 and 365 were demolished using an approved demolition plan. Building 317 had previously been demolished. Asbestos-containing and otherwise hazardous materials were removed prior to demolition.

Following demolition of Buildings 364 and 365, the Buildings 317/364/365 Site was divided as follows:

- Seven Class 1 survey units for the surface area
- Three Class 1 survey units for the liquid waste transfer system, peanut spill area, and sanitary sewer and storm drain excavations
- One Class 2 survey unit around the southern portion of the property

Each of the Class 1 survey units was limited to a maximum total area of 1,000 m^2.

A 100 percent surface scan was performed over the entire Buildings 317/364/365 Site using an RSI-700 mobile radiation detection system. The scan results identified several areas that required additional investigation and the biased soil sample analytical results identified radiological contamination south and east of Survey Unit 25. In addition, systematic and biased samples collected from the Buildings 317/364/365 Site identified several areas requiring remediation due to Cs-137 and Ra-226 activity above the release criteria. Each of these areas was fully characterized and remediated. The remediated material was disposed of as LLRW. Each of these areas was then scanned using hand-held instrumentation and verification soil samples were collected and analyzed. The verification soil sample results were below the release criteria. Based on this information, two new Class 1 survey units designated as Survey Units 29 and 30 were established. One Class 1 survey unit extended eastward until it intersected with the previous storm drain and sanitary sewer excavation identified as TU117. Based on an evaluation of the TU117 FSS results, the eastward boundary of the combined site was established without adding a Class 2 survey unit. A summary of the TU117 FSS activities is provided in Section 7.7 of this RACR and a copy of the SUPR is provided in Appendix J. Class 2 Survey Unit 26 was rearranged to buffer a distance of 2 meters beyond Survey Units 23, 25, 29, and 30.

Following the remediation efforts in Survey Unit 22, TU153 was established for this excavation and included the shallow trench associated with the sample transfer tubes between Buildings 364 and 365. The TU153 FSS activities are summarized in Section 7.9 of this RACR and the SUPR is provided in Appendix J. Following the completion of this sewer line excavation, the extent of the excavation completely encompassed Survey Unit 22. The area was backfilled with a combination of radiologically released excavated soil and imported fill.

An estimated 1,127.5 cubic yards of soil was remediated from the Buildings 317/364/365 Site and placed in LLRW bins for disposal. In addition, a total of 657 soil samples were collected and analyzed during the fieldwork. This resulted in a sampling density of approximately one sample per 6.0 m^2. Once remediation was completed in Survey Units 20 and 21 and the trench backfilled in Survey Unit 22, Survey Unit 31 was established as a 2-meter Class 2 buffer zone east of Survey Unit 22, east and north of Survey Unit 20 and north of Survey Unit 21. A minimum of 18 systematic soil samples were collected from each of the survey units. A total of 28 systematic samples were collected from Survey Unit 20. The FSS soil sample analytical results were presented in Appendix E of the Buildings 317/364/365 Site FSS (Appendix S). The results for the FSS systematic samples were less than the applicable release criteria. Once the remedial actions were completed and the final sets of systematic samples were collected and analyzed, the Buildings 317/364/365 Site was graded and all excavations were backfilled.

The Buildings 317/364/365 Site was subjected to reviews to ensure that radiation exposures to workers, the public, and the environment met ALARA principles. These reviews were

conducted for Buildings 317/364/365 Site operations, practices, and procedures with potential for individual or collective doses. Results from radiological survey activities, and air, swipe, and soil samples were used to assess the potential radiological impacts of Buildings 317/364/365 Site activities. These activities included characterization to ensure complete removal of radioactive material exceeding the release criteria. Following the completion of survey activities, qualitative radiological impacts from operations were evaluated by performing a dose and risk assessment. Based on recent estimates of dose to the public from Buildings 317/364/365 Site survey activities, only qualitative ALARA analyses were required. Qualitative ALARA analyses for the Buildings 317/364/365 Site did not result in alpha or beta measurements above the investigation levels and none of the alpha, beta, or gamma measurement results identified residual radioactivity above the release criteria for any ROC. A description of the ALARA process is presented in Section 3.2.6 of this RACR and detailed in the Buildings 317/364/365 Site FSS (Appendix S).

Modeling for the Buildings 317/364/365 Site was performed to calculate the residual dose to the critical group using the residential farmer scenario in RESRAD Version 6.5. Modeling using two separate models was performed to ensure that the residual dose was sufficiently less than the EPA criterion. Because the on-site laboratory was capable of calculating actual survey data, the first model provided input parameters that were based on these data, even when the data were less than the MDL. The second set of modeling input parameters provided that if the reported activity was less than the MDL, then the MDL was used.

The maximum residual dose when using the reported activity results greater than zero was identified in Survey Unit 31 at 1.640 mrem/y with an excess lifetime cancer risk of 2.77×10^{-5}. The maximum residual dose when using the higher of the reported activity or the MDL was 7.023 mrem/y with an excess lifetime cancer risk of 1.20×10^{-4}. The results of the modeling efforts were provided in Appendix I of the Buildings 317/364/365 Site FSS (Appendix S).

An evaluation of the survey results and modeling efforts indicated that the Buildings 317/364/365 Site met the release criteria. Based on these results, the DON recommended that the Buildings 317/364/365 Site be radiologically released for unrestricted use.

7.12.4 Regulatory Concurrence

The final FSS results for the Buildings 317/364/365 Site (Appendix S) were submitted to the regulatory agencies on October 13, 2010. Concurrence with radiological release for unrestricted use of the Buildings 317/364/365 Site was provided by the DTSC and CDPH on March 8, 2011. Copies of the DTSC letter and the CDPH memorandum are provided in Appendix X. According to statements by the EPA, their decision for radiological free release of the Buildings 317/364/365 Site will be based on the data and analyses presented in this RACR.

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8.0 WORK AREA 19 NORTH

Work Area 19 North is located in the northern portion of Parcel G just east of Building 400 and west of Building 302 (Figures 3-2, 3-3, and 8-1). It is bounded on the north by Spear Avenue and Parcel UC1, on the east by Work Area 18 North, on the south by Work Area 19 South, and on the west by Work Area 27 North. The radiological activities performed in Work Area 19 North included TU74, TU75, TU81, TU83, TU122, TU123, TU124, TU129, and Building 401. The following sections summarize the work activities completed in Work Area 19 North to support the recommended radiological release for unrestricted use of the Parcel G property.

8.1 TRENCH SURVEY UNIT 74

TU74 is located in the central portion of Work Area 19 North along the west side of Hussey Street and east of radiologically surveyed and released Building 401 (Figures 3-2 and 8-1). The radiological survey activities performed for Building 401 are summarized in Section 8.9 of this RACR and detailed in the FSS report provided in Appendix T. TU74 connects to TU83 on the north, TU75 on the east, and TU81 on the south. No piping was identified to the west of TU74 during the excavation activities. TU74 is not physically situated within an IR Program Site.

TU74 consists of two sanitary sewer trench segments and no storm drain trench segments. As identified on Figure 8-1, these trench segments include:

- 70-D19-00-3Y
- 70-D19-00-8A

Trench segment 70-D19-00-3Y transitioned into TU83 on the north and TU81 on the south. This trench segment was identified in the Design Plan (TtEC 2007c). Trench segment 70-D19-00-8A was found during the excavation activities and was not identified in the Design Plan.

8.1.1 TU74 Removal Action Activities

Excavation of TU74 was initiated on October 6, 2007 in trench segment 70-D19-00-3Y. A total of 42 truckloads (approximately 504 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU74 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on November 19, 2007, TU74 exhibited an exposed surface area of 384 m^2 and was 195 linear feet in length (Table 3-1). The maximum excavated TU74 depth was 10 feet bgs (Table 3-2).

The majority of the pipes excavated from TU74 disintegrated upon removal and were transferred along with the surrounding soil to RSY2 for processing. One pipe section was excavated from TU74 and placed on plastic pending further activities during the Parcel G removal action. As

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indicated in Table 3-2, trench segment 70-D19-00-3Y contained 12-inch-diameter VCP located at depths ranging from 7 feet to 9 feet bgs. Trench segment 70-D19-00-8A contained 10-inch-diameter VCP located at a depth of 2 feet bgs.

An insufficient volume of sediment was available in the TU74 piping for sample collection and analysis. Consequently, there were no sediment sample analytical results for TU74.

A radiological survey was performed on one section of pipe excavated from trench segment 70-D19-00-3Y (Table 3-5). No elevated results were identified during the survey activities. This section of pipe was transferred to the DON's non-radiological waste contractor for off-site disposal or recycling. A copy of the radiological survey report is included in Appendix B.

8.1.2 TU74 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU74 remained in place on Parcel G following the completion of the removal action.

8.1.3 TU74 Final Status Survey Summary

During the FSS activities, a total of 18 systematic soil samples were collected from the sidewalls and bottom of TU74 on November 27, 2007 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 8-1 depicts the FSS soil sample collection locations in TU74.

TU74 was defined for the FSS as the sum of the trench unit and the backfill soil composed of both radiologically processed and released soil and a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill were 0.046 pCi/g for Cs-137, 0.041 pCi/g for Sr-90, and 0.244 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.037 pCi/g for Cs-137, 0.036 pCi/g for Sr-90, and 0.239 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 2.617 mrem/y with an increased cancer risk of 4.657×10^{-5} for the backfill material and 2.542 mrem/y with an increased cancer risk of 4.529×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU74 SUPR provided in Appendix K.

The results of the modeling efforts determined that the potential TU74 dose due to activity concentrations greater than or equal to the MDL was 2.617 mrem/y with an increased cancer risk of 4.657×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU74 SUPR (Appendix K).

8.1.4 TU74 Backfill Activities

In addition to a volume of imported fill, radiologically processed and released excavated soil survey unit ES-0045 was selected for use as backfill material in TU74. Radiological information related to the processing of ES-0045 is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU74 SUPR (Appendix K). The radiological and chemical analytical reports for the imported fill used in TU74 were provided in Attachment 1 of the SUPRA (Appendix A).

The RASO concurred with backfilling TU74 on December 14, 2007 and backfilling operations commenced the same day. Approximately 260 cubic yards of soil was placed in TU74 to grade followed by the application of road base material over the backfilled trench. Backfilling operations for TU74 were completed on March 24, 2008. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU74.

8.2 TRENCH SURVEY UNIT 75

TU75 is located in the central portion of Work Area 19 North along Hussey Street and just west of non-radiologically impacted Building 402 (Figures 3-2 and 8-1). TU75 connects to TU123 on the north, TU81 on the south, and TU74 on the west. On the east, TU75 terminates adjacent to Building 402. The southwest portion of TU75 is physically situated within IR Program Site IR-09. The chemicals of concern associated with IR-09 are listed in Table 3-10.

TU75 is composed of eight storm drain trench segments and no sanitary sewer trench segments. As identified on Figure 8-1, this trench segments include:

- 70-D19-00-1K
- 70-D19-00-2N
- 70-D19-00-2O
- 70-D19-00-2P
- 70-D19-00-2Q
- 70-D19-00-2R
- 70-D19-09-2N
- 70-D19-09-2R

Trench segments 70-D19-00-2O and 70-D19-09-2R transitioned into TU81 on the south and trench segment 70-D19-00-1K continued into TU123 on the north. Each of the trench segments associated with TU75 was identified in the Design Plan (TtEC 2007c).

8.2.1 TU75 Removal Action Activities

Excavation of TU75 was initiated on October 8, 2007 in trench segment 70-D19-00-1K. A total of 59 truckloads (approximately 708 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU75 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on October 9, 2007, TU75 had an exposed

surface area of 410 m^2 and was 344 linear feet in length (Table 3-1). The maximum excavated TU75 depth was 6 feet bgs (Table 3-2).

A total of three sections of pipe and Manholes MH405, MH406, and MH407 were excavated from TU75 and placed on plastic pending further activities during the Parcel G removal action. The majority of the TU75 piping crumbled during excavation and was transferred along with the surrounding soil to RSY2 for processing. As identified in Table 3-2, trench segment 70-D19-00-2Q contained 10-inch-diameter concrete pipe and the remaining trench segments contained 8-inch-diameter and 10-inch-diameter VCP. The TU75 pipes were located at depths between 3 feet and 5 feet bgs.

A sufficient volume of sediment for sample collection and analysis was available in Manhole MH407 (Table 3-6). No other sediment samples were collected from the TU75 piping. The analytical results for the MH407 sediment sample did not identify the presence of radioactivity above the release criteria for any ROC. The sediment sample analytical report is presented in Appendix D.

Radiological surveys were performed for three sections of pipe excavated from trench segment 70-D19-00-2Q and the materials forming Manholes MH405, MH406, and MH407 (Table 3-5). The radiological surveys did not indicate the presence of potential contamination. The TU75 surveyed and released pipes and manhole debris were transferred to the DON's non-radiological waste contractor for off-site disposal or recycling. The radiological survey reports are included in Appendix B.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU75 on November 20, 2007 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 activity above the release limit in one soil sample at 2.2373 pCi/g. Based on this result, approximately 2.5 cubic yards of soil was remediated from TU75 on November 29, 2007. The remediated soil was placed in LLRW bin BKRU026000G2 for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation efforts, three verification soil samples were collected and analyzed. The analytical results identified the presence of Ra-226 activity above the release limit in one sample at 3.5353 pCi/g and both Cs-137 and Ra-226 contamination in one soil sample at 0.20684 pCi/g and 3.6907 pCi/g, respectively. An additional 2 cubic yards of soil was remediated from TU75 on December 10, 2007 (Table 3-9). Three verification soil samples were collected and analyzed following the remediation activities. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

In total, 24 investigative soil samples (including systematic and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 4.5 cubic yards of soil was

remediated from TU75 during the FSS activities. Figure 8-2 depicts the approximate locations of the contaminated soil samples in TU75 prior to remediation.

8.2.2 TU75 Piping Remaining In Place

A total of 111 linear feet of trench segment 70-D19-00-2N was excavated prior to termination adjacent to the east side of non-radiologically impacted Building 402. Based on historical drawings, an estimated 5 linear feet of this trench segment remained in place on Parcel G following the completion of the removal action (Table 3-8). Additional piping could not be removed without adversely affecting the structural integrity of Building 402. Because no radioactivity above the release limit was identified in the sediment sample collected from Manhole MH407 downstream from Building 402 and because the contaminated soil samples were found at the north end of TU75, the DON concluded that the 5 linear feet of piping remaining in place following the completion of the removal action was unlikely to be contaminated.

8.2.3 TU75 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU75 on December 13, 2007 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 8-1 depicts the FSS soil sample collection locations in TU75.

For the FSS, TU75 was defined as the sum of the trench unit and the backfill material composed of both radiologically processed and released excavated soil and a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill were 0.046 pCi/g for Cs-137, 0.042 pCi/g for Sr-90, and 0.292 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.056 pCi/g for Cs-137, 0.051 pCi/g for Sr-90, and 0.272 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 3.201 mrem/y with an increased cancer risk of 5.661×10^{-5} for the backfill material and 3.025 mrem/y with an increased cancer risk of 5.337×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU75 SUPR provided in Appendix K.

The results of the modeling efforts determined that the potential TU75 dose due to activity concentrations greater than or equal to the MDL was 3.201 mrem/y with an increased cancer risk of 5.661×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU75 SUPR (Appendix K).

8.2.4 TU75 Backfill Activities

Radiologically processed and released excavated soil survey units were selected for use as backfill material in TU75 in addition to a volume of imported fill. The excavated soil survey units selected included:

- ES-0044
- ES-0046

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU75 SUPR (Appendix K). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

Concurrence with backfilling TU75 was obtained from the RASO on January 2, 2008 and backfilling operations were initiated on March 17, 2008. Approximately 456 cubic yards of soil was placed in TU75 and backfilling operations were completed on March 26, 2008. A summary of the activities performed to support the recommended radiological free release of TU75 is provided in Table 3-1.

8.3 TRENCH SURVEY UNIT 81

TU81 is located in the central portion of Work Area 19 North on Hussey Street, east of non-radiologically impacted Building 435, and west of the former HPNS Pickling Vault (Figures 3-2 and 8-1). TU81 connects to TU74 and TU75 on the north, TU114 on the east, TU76 and TU82 on the south, and TU129 on the west. Portions of TU81 are situated within IR Program Sites IR-09 and IR-37. The chemicals of concern associated with these IR sites are listed in Table 3-10.

TU81 is composed of 13 storm drain trench segments and 4 sanitary sewer trench segments. As indicated on Figure 8-1, these trench segments include:

<u>Storm Drain Trench Segments</u>

- 70-D19-00-2F
- 70-D19-00-2G
- 70-D19-00-2H
- 70-D19-00-2J
- 70-D19-00-2K
- 70-D19-00-2O
- 70-D19-00-2S
- 70-D19-09-2J
- 70-D19-09-2R
- 70-D19-09-3A
- 70-D19-37-2F
- 70-D19-37-2G
- 70-D19-37-5C

<u>Sanitary Sewer Trench Segments</u>

- 70-D19-00-3X
- 70-D19-00-3Y
- 70-D19-00-5D
- 70-D19-37-1F

Trench segments 70-D19-00-2O and 70-D19-09-2R extended south from TU75 and transitioned into TU81. Each of the trench segments associated with TU81 was identified in the Design Plan (TtEC 2007c).

8.3.1 TU81 Removal Action Activities

Excavation of TU81 was initiated on October 9, 2007 in trench segment 70-D19-00-2O. A total of 100 truckloads (approximately 1,200 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU81 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on October 7, 2008, TU81 exhibited an exposed surface area of 812 m^2 and was 526 linear feet in length (Table 3-1). The maximum excavated TU81 depth was 12 feet bgs (Table 3-2).

A total of 14 sections of pipe and Manholes MH408, MH409, and MH412 were excavated from TU81 and placed on plastic pending further activities during the Parcel G removal action. Piping that crumbled during excavation was transferred along with the surrounding soil to RSY2 for processing. As identified in Table 3-2, trench segments 70-D19-00-2G, -2H, and 70-D19-37-2G contained 12-inch-diameter concrete pipes located at depths between 5 feet and 9 feet bgs. Trench segment 70-D19-37-1F contained 10-inch-diameter steel pipe located at depths between 8 feet and 10 feet bgs. The remaining trench segments contained 6-inch-diameter to 12-inch-diameter VCP located at depths ranging from 3 feet to 11 feet bgs.

Sufficient sediment for sample collection and analysis was obtained from Manhole MH412 (Table 3-6). An inadequate volume of sediment was available in the remaining TU81 piping for sample collection. The sediment sample analytical results did not identify the presence of radioactivity above the release criteria for any ROC. The sediment sample analytical results are provided in Appendix D.

Radiological surveys were performed during the Parcel G removal action on 14 sections of pipe and the materials forming Manholes MH408, MH409, and MH412 (Table 3-5). Because no elevated results were identified, the TU81 pipe sections and manhole debris were transferred to the DON's non-radiological waste contractor for off-site disposal or recycling. The final disposition of pipes and materials forming the manholes excavated from TU81 is provided in Table 3-5. The radiological survey reports are presented in Appendix B.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU81 on April 17, 2008 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 activity above the release limit in five soil samples ranging from 2.0556 pCi/g to 2.4221 pCi/g. Based on these results, 81 soil samples were collected to characterize the extent of the contamination. The analytical results identified the presence of Ra-226 contamination in 19 samples with activities ranging from 1.5141 pCi/g to 2.8437 pCi/g. Approximately 99 cubic yards of soil was excavated from the areas in TU81 that indicated the

presence of contamination and transferred to RSY2 for processing. The soil was assigned to screening pad C24 and was designated as ES-0092. Table 3-4 indicates the radiological processing results for ES-0092 and the disposition of this soil. In addition, an estimated 44.25 cubic yards of soil was placed in LLRW bins for disposal by the DON's radiological waste contractor (Table 3-9).

Following the remediation activities, a second set of 18 systematic soil samples was collected on April 13, 2008 and analyzed by the laboratory. Four of these soil samples identified the continued presence of Ra-226 above the release criteria ranging from 1.6912 pCi/g to 2.6945 pCi/g. Based on these results, roughly 12.25 cubic yards of soil was remediated from TU81 on May 20, 2008. The remediated soil was placed in LLRW bins for disposal by the DON's radiological waste contractor (Table 3-9). A total of eight verification soil samples were collected following the remediation efforts. Three of these soil samples identified Ra-226 contamination at 1.8040 pCi/g, 1.9323 pCi/g, and 2.0729 pCi/g.

Because contamination continued to be identified in TU81, small areas excavated from trench segments 70-D19-00-2H and -3Y as well as the area around excavated Manhole MH408 were added to TU81 in October 2008. Following these additions to TU81, an additional 60 characterization soil samples were collected and analyzed. The results from seven of the characterization samples identified the continued presence of Ra-226 activity above the release criteria ranging from 1.5233 pCi/g to 3.5569 pCi/g. Based on these results, approximately 45.5 cubic yards of soil was placed in LLRW bins for disposal on July 20, 2009 (Table 3-9). Following the remediation activities, 15 verification soil samples were collected and analyzed. The analytical results identified the presence of Cs-137 activity above the release limit in one soil sample at 0.13339 pCi/g and Ra-226 contamination in another sample at 1.6873 pCi/g. Approximately 14 cubic yards of soil was remediated followed by the collection of four verification soil samples. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

In total, 208 investigative soil samples (including systematic, characterization, and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 215 cubic yards of soil was remediated from TU81 during the removal action activities. Figure 8-3 depicts the approximate locations of the contaminated soil samples in TU81 prior to remediation.

8.3.2 TU81 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU81 remained in place on Parcel G following the completion of the removal action.

8.3.3 TU81 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU81 on September 24, 2009 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 8-1 depicts the FSS soil sample collection locations in TU81.

For the FSS, TU81 was defined as the sum of the trench unit and the backfill soil composed of both radiologically surveyed and released excavated soil and a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU81 were 0.046 pCi/g for Cs-137, 0.068 pCi/g for Sr-90, and 0.322 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.036 pCi/g for Cs-137, 0.200 pCi/g for Sr-90, and 0.254 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.173 mrem/y with an increased cancer risk of 8.376×10^{-5} for the backfill material and 4.562 mrem/y with an increased cancer risk of 7.215×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU81 SUPR provided in Appendix K.

The results of the modeling efforts determined that the potential TU81 dose due to activity concentrations greater than or equal to the MDL was 5.173 mrem/y with an increased cancer risk of 8.376×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU81 SUPR (Appendix K).

8.3.4 TU81 Backfill Activities

Radiologically processed and released excavated soil survey units were selected for use as backfill material in TU81 in addition to a volume of imported fill. The excavated soil survey units selected included:

- ES-0043
- ES-0092

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU81 SUPR (Appendix K). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

Concurrence with backfilling TU81 was obtained from the RASO on November 2, 2009 and backfilling operations commenced on November 4, 2009. Approximately 927 cubic yards of soil

was placed in TU81 and backfilling operations were completed on November 9, 2009. A summary of the activities performed to support the recommended radiological free release of TU81 is provided in Table 3-1.

8.4 TRENCH SURVEY UNIT 83

TU83 is located in the north central portion of Work Area 19 North near the intersection of Hussey Street and Spear Avenue and parallels the north side of radiologically surveyed and released Building 401 (Figures 3-2 and 8-1). The radiological survey activities performed for Building 401 are summarized in Section 8.9 and detailed in the FSS report provided in Appendix T. The Building 401 concrete ramp extends the length of the north side of the structure and parallels TU83. TU83 connects to TU123 and TU124 on the north and TU74 on the south. No additional pipe was found to the west of TU83. TU83 is not situated within an IR Program Site.

TU83 consists of two storm drain trench segments and three sanitary sewer trench segments. As identified on Figure 8-1, these trench segments include:

Storm Drain Trench Segments	Sanitary Sewer Trench Segments
• 70-D19-00-3G	• 70-D19-00-3Y
• 70-D19-00-3J	• 70-D19-00-4A
	• 70-D19-00-5A

Trench segments 70-D19-00-3J and -4A extended northward and transitioned into TU123 and TU124. Trench segment 70-D19-00-3G extended northward and continued into TU123. Trench segment 70-D19-00-3Y extended toward the south and transitioned into TU74. Each of the trench segments associated with TU83 was identified in the Design Plan (TtEC 2007c).

8.4.1 TU83 Removal Action Activities

Excavation of TU83 was initiated on October 5, 2007 in trench segment 70-D19-00-3Y. A total of 49 truckloads (approximately 588 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU83 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on November 16, 2007, TU83 had an exposed surface area of 367 m^2 and was 252 linear feet in length (Table 3-1). The maximum excavated TU83 depth was 7 feet bgs (Table 3-2). Bedrock was encountered at the western end of TU83 at a depth of about 5 feet bgs.

A total of six sections of pipe and Manholes MH397, MH400, MH403, and MH463 were excavated from TU83 and placed on plastic pending further activities during the Parcel G removal action. Piping that disintegrated during excavation was transferred along with the surrounding soil to RSY2 for processing. As identified in Table 3-2, trench segment 70-D19-00-

4A contained 4-inch-diameter CIP located at depths ranging from 3 feet to 5 feet bgs. The remainder of the TU83 trench segments contained 8-inch-diameter to 12-inch-diameter VCP located at depths between 2 feet and 6 feet bgs.

Insufficient sediment was available in the pipes or manholes excavated from TU83 for sample collection. Consequently, there were no sediment sample analytical results available for this trench survey unit.

Radiological surveys were performed on six sections of pipe excavated from trench segment 70-D19-00-5A and the materials forming Manholes MH397, MH400, MH403, and MH463 (Table 3-5). Because none of the pipe sections or manhole debris identified elevated survey results, the TU83 piping was transferred to the DON's non-radiological waste contractor for off-site disposal or recycling. The final disposition of pipes and materials from the manholes excavated from TU83 is provided in Table 3-5. The radiological survey reports are presented in Appendix B.

Eighteen systematic soil samples were collected from TU83 on January 11, 2008 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 activity above the release limit in two soil samples at 1.5327 pCi/g and 2.5476 pCi/g. To further define the potential extent of contamination, 18 characterization soil samples were collected from TU83 on January 28, 2008. The analytical results identified the presence of Ra-226 contamination in one soil sample at 1.6784 pCi/g. Based on these results, approximately 13 cubic yards of soil was placed in LLRW bins for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation efforts, a total of 13 verification soil samples were collected and analyzed. The analytical results identified Ra-226 contamination in three soil samples at 2.0252 pCi/g, 2.3185 pCi/g, and 2.4731 pCi/g. Although the remediation of additional soil was attempted, very little could be collected due to the exposure of bedrock in the trench in the area of the contaminated samples. Consequently, no additional verification soil samples were collected.

In total, 49 investigative soil samples were collected (including systematic, characterization, and verification samples) prior to the 18 systematic FSS soil samples and roughly 13.25 cubic yards of soil was remediated from TU83 during the removal action. Figure 8-2 depicts the approximate locations of the contaminated soil samples in TU83 prior to remediation.

8.4.2 TU83 Piping Remaining In Place

A total of 25 linear feet of trench segment 70-D19-00-4A was excavated prior to its termination within the 10-foot buffer zone adjacent to the concrete ramp located on the north side of Building 401. Based on historical drawings, approximately 10 linear feet of this trench segment remained in placed on Parcel G following the completion of the removal action (Table 3-8).

Additional pipe could not be removed without adversely affecting the structural integrity of the concrete ramp.

8.4.3 TU83 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU83 on April 28, 2008 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 8-1 depicts the FSS soil sample collection locations in TU83.

TU83 was defined for the FSS as the sum of the trench unit and the backfill material composed of both radiologically processed and released excavated soil and a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU83 were 0.045 pCi/g for Cs-137, 0.049 pCi/g for Sr-90, and 0.272 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.044 pCi/g for Cs-137, 0.058 pCi/g for Sr-90, and 0.144 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 2.852 mrem/y with an increased cancer risk of 5.100×10^{-5} for the backfill material and 1.594 mrem/y with an increased cancer risk of 2.820×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU83 SUPR provided in Appendix K.

The results of the modeling efforts determined that the potential TU83 dose due to activity concentrations greater than or equal to the MDL was 2.852 mrem/y with an increased cancer risk of 5.1×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU83 SUPR (Appendix K).

8.4.4 TU83 Backfill Activities

In addition to a volume of imported fill, radiologically processed and released excavated soil survey units were selected for use as backfill material in TU83. The excavated soil survey units selected included:

- ES-0066
- ES-0067

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the

TU83 SUPR (Appendix K). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

The RASO concurred with backfilling TU83 on May 15, 2008 and backfilling operations were initiated on May 19, 2008. Approximately 369 cubic yards of soil was placed in TU83 to grade followed by the application of road base material over the backfilled trench. Backfilling operations were completed on May 20, 2008. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU83.

8.5 TRENCH SURVEY UNIT 122

TU122 is located in the northwest portion of Work Area 19 North, just south of Parcel UC1 and Spear Avenue and between H and Cochrane Streets (Figures 3-2 and 8-1). TU122 connects to trench survey units associated with Parcel UC1 on the north and east, TU89 on the south, and TU123 on the west. No part of TU122 is situated within an IR Program Site.

TU122 is composed of nine storm drain trench segments and one sanitary sewer trench segment. As identified on Figure 8-1, this trench segments include:

Storm Drain Trench Segments

- 70-D18-00-4G
- 70-D19-00-2U
- 70-D19-00-2V
- 70-D19-00-2W
- 70-D19-00-2X
- 70-D19-00-2Y
- 70-D19-00-2Z
- 70-D19-00-3M
- 70-D19-00-8H

Sanitary Sewer Trench Segment

- 70-D18-00-4V

Trench segment 70-D19-00-2Z continued toward the west and transitioned into TU123. With the exception of 70-D19-00-8H, each of the trench segments associated with TU122 was identified in the Design Plan (TtEC 2007c). Trench segment 70-D19-00-8H was found during excavation of Manhole MH390.

8.5.1 TU122 Removal Action Activities

Excavation of TU122 was initiated on August 29, 2008 in trench segment 70-D19-00-2Z. A total of 62 truckloads (approximately 744 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU122 was radiologically processed in RSY2

(Table 3-4). Following the completion of excavation on December 4, 2008, TU122 exhibited an exposed surface area of 636 m^2 and was 582 linear feet in length (Table 3-1). The maximum excavated TU122 depth was 10 feet bgs (Table 3-2).

A total of 23 sections of pipe and Manholes MH390, MH391, and MH392 were excavated from TU122 and placed on plastic pending further activities during the Parcel G removal action. Piping that disintegrated during excavation was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, trench segment 70-D18-00-4V contained 18-inch-diameter steel and VCP located at depths between 4 feet and 9 feet bgs. Trench segment 70-D19-00-2Z contained 21-inch-diameter steel pipe located at depths of 2 feet to 3 feet bgs. The remainder of the TU122 trench segments contained 6-inch-diameter to 18-inch-diameter CMP located at depths ranging from 1 foot to 5 feet bgs.

Sufficient sediment for sample collection and analysis was obtained from Manholes MH390 and MH391 (Table 3-6). An insufficient volume of sediment was available in the excavated pipe sections or Manhole MH392 for sample collection. The laboratory analytical results did not identify contamination in the Manhole MH390 sediment sample; however, Cs-137 activity above the release limit was identified in the sediment sample collected from MH391 at 0.1790 pCi/g. Manhole MH391 was placed in LLRW bin GFLU001016G6 on October 14, 2008 for disposal by the DON's radiological waste contractor. The sediment sample analytical reports are provided in Appendix D.

Radiological surveys were performed on 23 sections of pipe and the materials forming Manholes MH390 and MH392 during the Parcel G removal action (Table 3-5). No elevated results were identified for the TU122 pipe sections or manhole debris surveyed. Based on the survey results, the 23 sections of pipe and materials forming Manholes MH390 and MH392 were transferred to the DON's non-radiological waste contactor for off-site disposal or recycling. The final disposition of each pipe section and manhole excavated from TU122 is provided in Tables 3-5 and 3-6. The radiological survey reports are presented in Appendix B.

Due to the presence of Cs-137 contamination in the sediment sample collected from Manhole MH391, a total of 187 investigative soil samples were collected from TU122 and analyzed by the laboratory. The analytical results identified the presence of Cs-137 activity above the release limit in three soil samples at 0.11593 pCi/g, 0.11975 pCi/g, and 0.13034 pCi/g. Based on these results, an estimated 2.5 cubic yards of soil was remediated from TU122 on January 16, 2009. The remediated soil was placed in LLRW bin GFLU001163G8 for disposal by the DON's radiological waste contractor (Table 3-9).

In total, 187 investigative soil samples were collected prior to the 18 systematic FSS soil samples and an estimated 2.5 cubic yards of soil was remediated during the TU122 FSS activities. Figure 8-2 depicts the approximate locations of the contaminated soil samples prior to remediation.

8.5.2 TU122 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU122 remained in place on Parcel G following the completion of the removal action.

8.5.3 TU122 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU122 on March 18, 2009 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 8-1 depicts the FSS soil sample collection locations in TU122.

TU122 was defined for the FSS as the sum of the trench unit and the backfill material composed of both radiologically processed and released excavated soil and a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU122 were 0.048 pCi/g for Cs-137, 0.073 pCi/g for Sr-90, and 0.211 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.034 pCi/g for Cs-137, 0.071 pCi/g for Sr-90, and 0.314 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 3.039 mrem/y with an increased cancer risk of 5.045×10^{-5} for the backfill material and 4.354 mrem/y with an increased cancer risk of 7.269×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU122 SUPR provided in Appendix K.

The results of the modeling efforts determined that the potential TU122 dose due to activity concentrations greater than or equal to the MDL was 4.354 mrem/y with an increased cancer risk of 7.269×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU122 SUPR (Appendix K).

8.5.4 TU122 Backfill Activities

In addition to a volume of imported fill, radiologically processed and released excavated soil survey unit ES-0152 was selected for use as backfill material in TU122. Radiological information related to the processing of ES-0152 is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU122 SUPR (Appendix K).

Concurrence with backfilling TU122 was obtained from the RASO on April 23, 2009 and backfilling operations commenced on April 24, 2009. Approximately 475 cubic yards of soil was placed in TU122 to grade followed by the application of road base material over the backfilled trench. Backfilling operations for TU122 were completed on April 28, 2009. Table 3-1

summarizes the activities performed to support the recommended radiological free release of TU122.

8.6 TRENCH SURVEY UNIT 123

TU123 is located in the north central portion of Work Area 19 North near the intersection of Hussey Street and Spear Avenue and just south of Parcel UC1 (Figures 3-2, 3-3, and 8-1). TU123 connects to Parcel UC1 Trench Survey Units 146 and 147 on the north, TU122 on the east, TU75 and TU83 on the south, and TU124 on the west. No IR Program Sites are associated with TU123.

TU123 consists of 12 storm drain trench segments and a single sanitary sewer trench segment. As identified on Figure 8-1, these trench segments include:

Storm Drain Trench Segments		Sanitary Sewer Trench Segment
• 70-D19-00-1K	• 70-D19-00-3G	• 70-D19-00-3Z
• 70-D19-00-2Z	• 70-D19-00-3H	
• 70-D19-00-3A	• 70-D19-00-3I	
• 70-D19-00-3B	• 70-D19-00-3K	
• 70-D19-00-3C	• 70-D19-00-3L	
• 70-D19-00-3E	• 70-D19-00-3O	

Trench segment 70-D19-00-1K continued northward from TU75 and transitioned into TU123. Trench segment 70-D19-00-2Z continued from TU122 toward the west and terminated at Manhole MH393 in TU123. Trench segment 70-D19-00-3G continued northward from TU83 and terminated at Manhole MH399 in TU123. Each of the TU123 trench segments was identified in the Design Plan (TtEC 2007c).

8.6.1 TU123 Removal Action Activities

Excavation of TU123 was initiated on August 26, 2008 in trench segment 70-D19-00-3L. A total of 71 truckloads (approximately 852 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU123 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on December 4, 2008, TU123 had an exposed surface area of 777 m^2 and was 591 linear feet in length (Table 3-1). The maximum excavated TU123 depth was 14 feet bgs (Table 3-2).

A total of 14 sections of pipe and Manholes MH393, MH396, MH399, MH401, and MH404 were excavated from TU123 and placed on plastic pending further activities during the Parcel G removal action. Piping that crumbled during excavation was transferred along with the

surrounding soil to RSY2 for processing. As indicated in Table 3-2, trench segments 70-D19-00-1K, -3B, -3G, -3H, and -3Z contained 10-inch-diameter VCP located at depths ranging from 3 feet to 13 feet bgs. Storm drain trench segment 70-D19-00-2Z contained 21-inch-diameter steel pipe located at depths between 2 feet and 3 feet bgs. The remainder of the TU123 trench segments contained 10-inch-diameter to 18-inch-diameter concrete pipe located at depths ranging from 3 feet to 5 feet bgs.

Sufficient sediment for sample collect and analysis was obtained from Manhole MH404 during the during excavation of TU123 (Table 3-6). None of the pipe sections or Manholes MH393, MH396, MH399, or MH401 contained sufficient sediment for sample collection. The sediment sample analytical results for Manhole MH404 did not identify the presence of radioactivity above the release criteria for any ROC. The laboratory analytical reports are provided in Appendix D.

Radiological surveys were performed on 14 sections of pipe and the materials forming Manholes MH393, MH396, MH399, MH401, and MH404 during the Parcel G removal action (Table 3-5). Because none of the pipe sections or manhole debris identified elevated survey results, the TU123 piping was transferred to the DON's non-radiological waste contractor for off-site disposal or recycling. The final disposition of pipes and manholes excavated from TU123 is provided in Tables 3-5 and 3-6. The radiological survey reports are presented in Appendix B.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU123 on January 19, 2009 and submitted to the laboratory for analysis. The analytical results identified Ra-226 activity above the release limit in seven of the soil samples ranging from 1.5473 pCi/g to 2.5699 pCi/g. Based on these results, an estimated 10.75 cubic yards of soil was remediated from TU123. The remediated soil was placed in LLRW bins for disposal by the DON's radiological waste contractor (Table 3-9). Six verification soil samples were collected on February 9, 2009 following the remediation activities. One soil sample identified the presence of Ra-226 contamination at 2.6022 pCi/g. Roughly 1.25 cubic yards of soil was remediated from TU123 on April 28, 2009 based on the contaminated verification soil sample. Following remediation, a total of three verification soil samples were collected and analyzed. The analytical results identified the continued presence of Ra-226 activity above the release limit in two soil samples at 1.6379 pCi/g and 2.426 pCi/g. Based on these results, an additional 8 cubic yards of soil was placed in LLRW bin GFLU001182G9 for disposal (Table 3-9). Three verification soil samples were collected following the remediation activities on May 7, 2009. The analytical results identified the presence of Ra-226 activity above the release limit in one soil sample at 1.8500 pCi/g. An estimated 4.5 cubic yards of soil was remediated on May 15, 2009. The remediated soil was placed in LLRW bin GFLU001164G9 for disposal by the DON's radiological waste contractor (Table 3-9). The three verification soil samples collected and analyzed following the remediation activities did not identify the presence of contamination above the release criteria for any ROC.

A second set of 18 systematic soil samples was collected from TU123 on June 5, 2009 and submitted to the laboratory for analysis. One soil sample identified the presence of Ra-226 activity above the release limit at 2.4069 pCi/g. Based on this result, approximately 4 cubic yards of soil was remediated from TU123. The remediated soil was placed in LLRW bin BKRU026017G10 for disposal (Table 3-9). Three verification soil samples were collected on June 22, 2009 and analyzed. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

In total, 54 investigative soil samples (including systematic and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 28.5 cubic yards of soil was remediated during the TU123 during the removal action activities. Figure 8-2 depicts the approximate locations of the contaminated soil samples prior to remediation.

8.6.2 TU123 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU123 remained in place on Parcel G following the completion of the removal action.

8.6.3 TU123 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU123 on June 29, 2009 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 8-1 depicts the FSS soil sample collection locations in TU123.

For the FSS, TU123 was defined as the sum of the trench unit and the backfill material composed of both radiologically processed and released excavated soil and a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU123 were 0.049 pCi/g for Cs-137, 0.082 pCi/g for Sr-90, and 0.336 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.050 pCi/g for Cs-137, 0.220 pCi/g for Sr-90, and 0.213 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.290 mrem/y with an increased cancer risk of 8.600×10^{-5} for the backfill material and 3.919 mrem/y with an increased cancer risk of 6.181×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU123 SUPR provided in Appendix K.

The results of the modeling efforts determined that the potential TU123 dose due to activity concentrations greater than or equal to the MDL was 5.290 mrem/y with an increased cancer risk of 8.600×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which

supports radiological free release. No further radiological action was recommended in the TU123 SUPR (Appendix K).

8.6.4 TU123 Backfill Activities

In addition to a volume of imported fill, radiologically processed and released excavated soil survey unit ES-0162 was selected for use as backfill material in TU123. Radiological information related to the processing of ES-0162 is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU123 SUPR (Appendix K). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

Concurrence with backfilling TU123 was obtained from the RASO on August 25, 2009 and backfilling operations were initiated on August 26, 2009. Approximately 654 cubic yards of soil was placed in TU123 to grade followed by the application of road base material over the backfilled trench. Backfilling operations for TU123 were completed on August 27, 2009. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU123.

8.7 TRENCH SURVEY UNIT 124

TU124 is located in the northwest corner of Work Area 19 North, just south of Spear Avenue and Parcel UC1 and north of radiologically surveyed and released Building 401 (Figures 3-2 and 8-1). The radiological activities performed for Building 401 are summarized in Section 8.9 and are detailed in the FSS report provided in Appendix T. TU124 connects to Parcel UC1 Trench Survey Units 133 and 164 on the north and west, TU123 on the east, and TU83 and TU84 on the south. TU124 is not situated within an IR Program Site.

TU124 is composed of five storm drain trench segments and two sanitary sewer trench segments. As identified on Figure 8-1, these trench segments include:

Storm Drain Trench Segments	Sanitary Sewer Trench Segments
• 70-D19-00-3E	• 70-D19-00-4A
• 70-D19-00-3F	• 70-D27-00-8D
• 70-D19-00-3J	
• 70-D27-00-2X	
• 70-D27-00-8C	

Trench segment 70-D19-00-3E extended westward from TU123 and transitioned into TU124. With the exception of trench segments 70-D27-00-8C and -8D, each of the TU124 trench

segments was identified in the Design Plan (TtEC 2007c). Trench segments 70-D27-00-8C and -8D were found during the excavation of Manhole 436.

8.7.1 TU124 Removal Action Activities

Excavation of TU124 commenced on August 25, 2008 in trench segment 70-D19-00-3F. A total of 26 truckloads (approximately 312 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU124 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on December 3, 2008, TU124 exhibited an exposed surface area of 477 m^2 and was 369 linear feet in length (Table 3-1). The maximum excavated TU124 depth was 11 feet bgs (Table 3-2).

The majority of the piping excavated from TU124 disintegrated during removal and was transferred along with the surrounding soil to RSY2 for processing. A total of two sections of pipe and Manholes MH436 and MH402 were excavated from TU124 and placed on plastic pending further activities during the Parcel G removal action. As identified in Table 3-2, trench segments 70-D19-00-3E and -3F contained 18-inch-diameter concrete pipe located at depths between 3 feet and 4 feet bgs. Trench segments 70-D19-00-3J and 70-D27-00-8C and -8D contained 6-inch-diameter to 12-inch-diameter VCP located at depths ranging from 3 feet to 11 feet bgs. In addition, trench segment 70-D19-00-4A contained 4-inch-diameter CIP and -2X generally contained 15-inch-diameter PVC pipe (Table 3-2). The pipes in these trench segments were located at depths between 3 feet and 4 feet bgs.

Sufficient sediment for sample collection and analysis was found in Manhole MH402 during the TU124 excavation activities (Table 3-6). No sediment samples were collected from TU124 piping or Manhole MH436 due to an insufficient volume of available material. The sediment sample analytical results for Manhole MH402 identified the presence of Cs-137 activity above the release limit at 0.20919. Due to the presence of Cs-137 contamination, the materials forming Manhole MH402 were placed in LLRW bin GFLU001234G6 on September 23, 2008 for disposal by the DON's radiological waste contractor. The sediment sample analytical report is provided in Appendix D.

Radiological surveys were performed on two sections of pipe excavated from trench segment 70-D27-00-2X and the materials forming Manhole MH436 (Table 3-5). Because none of the pipe sections or Manhole MH436 materials indicated elevated survey results, the TU124 piping was transferred to the DON's non-radiological waste contractor for off-site disposal or recycling. The final disposition of pipes and manhole debris excavated from TU124 is provided in Tables 3-5 and 3-6. The radiological survey reports are presented in Appendix B.

Due to the presence of Cs-137 contamination in the sediment sample collected from Manhole MH402, a total of 98 investigative soil samples were collected along the bottom of TU124 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226

activity above the release limit in 27 soil samples ranging from 1.5745 pCi/g to 3.0701 pCi/g. Based on these results, an estimated 66 cubic yards of soil was placed in LLRW bins for disposal by the DON's radiological waste contractor (Table 3-9).

Following the remediation efforts, a total of 38 verification soil samples were collected on June 4, 2009 and analyzed by the laboratory. Thirteen of these samples identified the continued presence of Ra-226 contamination ranging from 1.4924 pCi/g to 3.0122 pCi/g. Roughly 84.75 cubic yards of soil was remediated from those areas in TU124 identified as having contamination present above the release criteria for Ra-226. A total of 21 verification soil samples were collected from TU124 on June 11, 2009 following the remediation activities. Three of the verification soil samples identified the presence of Ra-226 activity above the release limit at 1.6195 pCi/g, 2.8312 pCi/g, and 3.0617 pCi/g. Based on these results, an estimated 37.5 cubic yards of soil was placed in LLRW bins for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation efforts, nine verification soil samples were collected on June 22, 2009 and analyzed. No radioactivity above the release criteria was identified in these verification soil samples for any ROC.

In total, 166 investigative soil samples (including investigative and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 188.25 cubic yards of soil was remediated from TU124 during the removal action activities. Figure 8-4 depicts the approximate locations of the contaminated soil samples in TU124 prior to remediation.

8.7.2 TU124 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU124 remained in place on Parcel G following the completion of the removal action.

8.7.3 TU124 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU124 on July 6, 2009 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 8-1 depicts the FSS soil sample collection locations in TU124.

TU124 was defined as the sum of the trench unit and the backfill material composed of both radiologically processed and released excavated soil and a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill were 0.047 pCi/g for Cs-137, 0.160 pCi/g for Sr-90, and 0.274 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.040 pCi/g for Cs-137, 0.305 pCi/g for Sr-90, and 0.146 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 3.477 mrem/y with an increased cancer risk of 5.929×10^{-5} for the backfill material and 2.306 mrem/y with an increased cancer risk of 3.743×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU124 SUPR provided in Appendix K.

The results of the modeling efforts determined that the potential TU124 dose due to activity concentrations greater than or equal to the MDL was 3.477 mrem/y with an increased cancer risk of 5.929×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU124 SUPR (Appendix K).

8.7.4 TU124 Backfill Activities

Radiologically processed and released excavated soil survey unit ES-0199 was selected for use as backfill material in TU124 in addition to a volume of imported fill. Radiological information related to the processing of ES-0199 and the associated laboratory analytical results were discussed in the TU124 SUPR (Appendix K). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

Concurrence with backfilling TU124 was obtained from the RASO on August 31, 2009 and backfilling operations commenced on September 1, 2009. Approximately 493 cubic yards of soil was placed in TU124 to grade followed by the application of road base material over the backfilled trench. Backfilling operations for TU124 were completed on September 2, 2009. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU124.

8.8 TRENCH SURVEY UNIT 129

TU129 is located in the southwest portion of Work Area 19 North on the west side of Hussey Street, just east of non-radiologically impacted Building 435 and south of radiologically surveyed and released Building 401 (Figures 3-2, 3-3, and 8-1). The radiological activities performed for Building 401 are summarized in Section 8.9 of this RACR and detailed in the FSS report provided in Appendix T. TU129 connects to TU81 on the east. On the north, TU129 was terminated at a subsurface concrete runway containing salt and fresh water lines, an air supply line, and a natural gas line. TU129 was terminated on the west at Building 435. No additional pipe was found to the south of TU129 during the excavation activities. The majority of TU129 is situated within IR Program Site IR-37. The chemicals of concern associated with IR-37 are listed in Table 3-10.

TU129 is composed of six storm drain trench segments and two sanitary sewer trench segments. As identified on Figure 8-1, these trench segments include:

Storm Drain Trench Segments

- 70-D19-00-5B
- 70-D19-37-2I
- 70-D19-37-2J
- 70-D19-37-2M
- 70-D19-37-5C
- 70-D19-37-8A

Sanitary Sewer Trench Segments

- 70-D19-00-3X
- 70-D19-37-3X

Trench segments 70-D19-00-3X and 70-D19-37-5C extended westward from TU81 and transitioned into TU129. With the exception of trench segment 70-D19-37-8A, each of the trench segments associated with TU129 was identified in the Design Plan (TtEC 2007c). Trench segment 70-D19-37-8A was found during the excavation of Manhole MH410. Although identified in the Design Plan, trench segments 70-D19-37-2K and -2L and Manhole MH411were not removed due to their proximity to Buildings 401 and 435.

8.8.1 TU129 Removal Action Activities

Excavation of TU129 was initiated on January 6, 2009 in trench segment 70-D19-37-2J. A total of 26 truckloads (approximately 312 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU129 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on January 7, 2009, TU129 exhibited an exposed surface area of 326 m^2 and was 229 linear feet in length (Table 3-1). The maximum excavated TU129 depth was 7 feet bgs (Table 3-2).

The majority of the piping excavated from TU129 crumbled upon removal and was transferred along with the surrounding soil to RSY2 for processing. One pipe section and Manholes MH410 and MH478 were excavated from TU129 and placed on plastic pending further activities during the Parcel G removal action. As indicated in Table 3-2, trench segments 70-D19-37-2J and -8A contained 3-inch-diameter and 8-inch-diameter CIP located at depths between 3 feet and 6 feet bgs. The remaining TU129 trench segments contained 4-inch-diameter to 10-inch-diameter VCP located at depths ranging from 3 feet to 7 feet bgs.

No sediment samples were collected from piping during the excavation of TU129 due to an insufficient volume of available material. Consequentially, there were no sediment sample analytical results for TU129.

Radiological surveys were performed on one section of pipe excavated from trench segment 70-D19-37-8A and the materials forming Manholes MH410 and MH478 (Table 3-5). No elevated survey results were identified for the TU129 piping. As indicated in Table 3-5, the surveyed and released section of pipe and the materials forming both manholes were transferred

to the DON's non-radiological waste contractor for off-site disposal or recycling. The radiological survey reports are presented in Appendix B.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU129 on March 14, 2009 and submitted to the laboratory for analysis. The laboratory analytical results identified the presence of Cs-137 activity above the release limit in one soil sample at 0.16 pCi/g and Ra-226 activity above the release limit in six samples ranging from 1.5765 pCi/g to 2.3644 pCi/g. Based on these results, an estimated 10 cubic yards of soil was remediated. The remediated soil was placed in LLRW bin GFLU001178G8 for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation efforts, a total of 12 verification soil samples were collected on April 3, 2009 and submitted to the laboratory for analysis. The analytical results identified Ra-226 contamination in six of these samples ranging from 1.8069 pCi/g to 3.3147 pCi/g.

As indicated in Table 3-9, roughly 21.5 cubic yards of soil was remediated from TU129 on July 16, 2009 based on the presence of Ra-226 activity above the release limit. Following the remediation efforts, a total of 11 verification soil samples were collected and analyzed. Three of these soil samples identified the continued presence of Ra-226 contamination at 1.5915 pCi/g, 2.1350 pCi/g, and 3.2169 pCi/g. Based on these results, approximately 17.5 cubic yards of soil was remediated followed by the collection of four verification soil samples on July 22, 2009 (Table 3-9). Two of the verification soil samples identified the continued presence of Ra-226 contamination at 1.5837 pCi/g and 2.0555 pCi/g. An additional 13 cubic yards of soil was remediated and four verification soil samples were collected and analyzed. One soil sample identified the presence of Ra-226 activity above the release limit at 1.5335 pCi/g.

An estimated 4.5 cubic yards of soil was remediated from TU129 on August 5, 2009. The remediated soil was placed in LLRW bin GFLU001221G3 for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation efforts, two verification soil samples were collected and analyzed. Both samples identified the presence of Ra-226 contamination at 1.6359 pCi/g and 1.6878 pCi/g. As indicated in Table 3-9, roughly 6 cubic yards of soil was remediated on August 10, 2009. A total of three verification soil samples were collected following the completion of the remediation activities. The analytical results did not identify the presence of radioactivity above the release criteria for any ROC.

In total, 54 investigative soil samples (including systematic and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 72.5 cubic yards of soil was remediated during the TU129 removal action activities. Figure 8-2 depicts the approximate locations of the TU129 contaminated soil samples prior to remediation.

8.8.2 TU129 Piping Remaining In Place

A total of 80 linear feet of trench segment 70-D19-37-2J was removed during the excavation of TU129 prior to termination at the concrete raceway containing salt and fresh water lines, an air supply line, and a natural gas line. This trench segment extended northward from the concrete runway on the east side of radiologically surveyed and released Building 401 within the 10-foot buffer zone surrounding the structure. In addition, trench segment 70-D19-37-2K continued westward from trench segment 70-D19-37-2J beneath Building 401 and extended along the south side of the structure within the 10-foot buffer zone. No additional piping could be removed from these trench segments without adversely affecting the structural integrity of Building 401. Based on historical drawings, an estimated 140 linear feet of trench segment 70-D19-37-2J and 175 linear feet of trench segment -2K remained in place on Parcel G following the completion of the removal action (Table 3-8).

During the TU129 excavation activities, a total of 24 linear feet of trench segment 70-D19-37-3X was removed prior to its termination within the 10-foot buffer zone on the east side of non-radiologically impacted Building 435. This trench segment continued beneath Building 435 and was intersected by trench segment 70-D19-37-2L at the west end of the structure. Trench segment 70-D19-37-2L continued beneath Building 435 until it connected to Manhole MH411 on the south side of the structure. Manhole MH411 and trench segment 70-D19-37-2L were not removed during the excavation of TU129 due to their location beneath Building 435 and proximity to the foundation of the structure within the 10-foot buffer zone to the south. Based on historical drawings, an estimated 116 linear feet of trench segment 70-D19-37-3X and 21 linear feet of trench segment -2L remained in place on Parcel G following the completion of the removal action (Table 3-8).

A total of 8 linear feet of trench segment 70-D19-37-8A was removed to the northwest of Manhole MH410 during the excavation of TU129. The excavation of this trench segment was terminated within the 10-foot buffer zone on the west side of non-radiologically impacted Building 435. Based on historical drawings, approximately 10 linear feet of trench segment 70-D19-37-8A remained in place on Parcel G following the completion of the removal action (Table 3-8). Additional piping could not be removed without adversely affecting the structural integrity of Building 435.

8.8.3 TU129 Final Status Survey Summary

A total of 18 systematic soil samples were collected from the sidewalls and bottom of TU129 on August 18, 2009 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 8-1 depicts the FSS soil sample collection locations in TU129.

TU129 was defined for the FSS as the sum of the trench unit and the backfill material composed of imported fill. The average net residual radioactivity concentrations for material used as backfill were 0.053 pCi/g for Cs-137, 0.070 pCi/g for Sr-90, and 0.373 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.035 pCi/g for Cs-137, 0.175 pCi/g for Sr-90, and 0.084 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 3.701 mrem/y with an increased cancer risk of 6.708×10^{-5} for the backfill material and 1.086 mrem/y with an increased cancer risk of 1.846×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 4 and 5 of the TU129 SUPR provided in Appendix K.

The results of the modeling efforts determined that the potential TU129 dose due to activity concentrations greater than or equal to the MDL was 3.701 mrem/y with an increased cancer risk of 6.708×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU129 SUPR (Appendix K).

8.8.4 TU129 Backfill Activities

Imported fill was selected as the appropriate backfill material for TU129. The radiological and chemical analytical reports for the imported fill used in TU129 were provided in Attachment 1 of the SUPRA (Appendix A).

The RASO concurred with backfilling TU129 on September 18, 2009 and backfilling operations commenced on September 22, 2009. Approximately 335 cubic yards of soil was placed in TU129 to grade followed by the application of road base material over the backfilled trench. Backfilling operations were completed on September 23, 2009. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU129.

8.9 BUILDING 401

The following sections summarize the Building 401 FSS, provide an abbreviated history, summarize the FSS results, and discuss regulatory concurrence for the unrestricted radiological release of the structure. The Building 401 FSS is provided in Appendix T and details the radiological survey results. The location of Building 401 within Parcel G is depicted on Figures 3-3 and 8-1.

8.9.1 Description

Building 401 is a vacant two-story structure measuring about 100 feet by 250 feet. Located in the northern portion of Parcel G, Building 401 is bounded by Spear Avenue and Hussey and H Streets.

The SFRA Redevelopment Plan (SFRA 1997) identified the future use of the property as a "mixed use" area that could include residential development.

8.9.2 History

Building 401 was used by the Navy as a supply storehouse, trades shop, and general stores. Navy Public Works utilized the structure as a maintenance shop and offices. According to the HRA, Volume II (NAVSEA 2004), no use or storage of general radioactive materials was identified in Building 401. Following HPNS closure, Building 401 was leased to civilian tenants. In 2005, one of the civilian tenants presented several gauges and dials containing Ra-226 to the Navy's on-site radiological subcontractor for proper disposal. According to the tenant, these items had been obtained through the Defense Reutilization and Marketing Office and were not previously located in Building 401. The tenant lease was terminated in 2007.

Building 401 was considered radiologically impacted due to the tenant's collection and storage of radioactive gauges and dials obtain through the Defense Reutilization and Marketing Office. The DON and RASO determined that a scoping survey of the tenant's lease area inside Building 401 was necessary to determine whether contamination was present due to the tenant's activities. The ROCs selected for Building 401 included Cs-137, Ra-226, and Sr-90.

8.9.3 Final Status Survey Summary

Numerous non-licensed radioactive materials, such as check sources, electron tubes, and other radioluminescent devices were identified in Building 401 during the pre-survey surveillance activities. A photographic log of these items was provided in Appendix I of the Building 401 FSS report (Appendix T).

Building 400 was selected for use as the background or reference area for surface activity and exposure rate measurements due to its similar construction to Building 401. Additional reference areas included the non-tenant lease area in Building 401 and Buildings 413, 236, 369, and 217. These buildings had similar construction materials to Building 401 and were not listed as impacted in the HRA, Volume II (NAVSEA 2004).

The investigation levels for alpha and beta surveys were established at 100 dpm/100 cm^2 and 1,000 dpm/100 cm^2, respectively. The alpha and beta loose surface investigation levels were established at 20 percent of the values for total activity and were different than other investigation levels due to the lower release criteria. A complete discussion of the reference areas and investigation levels was provided in the Building 401 FSS (Appendix T).

Fieldwork for the scoping survey was initiated in the spring of 2008. Equipment and materials such as cabinets, shelves, chairs, and trash that were present inside the lease area of Building 401

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were surveyed. None of the items surveyed indicated the presence of radioactivity above the release criteria and were transferred to a separate building on HPNS for storage.

Limited surveys of the Building 401 drainage system were performed during the fieldwork. No activity above the release criteria was identified. The laboratory results for the swipe samples that were collected from sinks and drains were presented in Appendix J of the Building 401 FSS report (Appendix T).

A thorough reconnaissance effort was undertaken to identify potentially contaminated items that the tenant may have left in Building 401 following lease termination. Items with a National Stock Number beginning with 5960 were assumed to be contaminated and were collected and staged for disposal as LLRW. A total of 30 items with radioactivity above background were recovered. An additional 56 electron tubes also were collected and disposed of as LLRW. No contamination exceeding Regulatory Guide 1.86 (AEC 1974) limits was discovered in the vicinity of the contaminated items collected. A photographic library of the recovered items was provided in Appendix I of the Building 401 FSS (Appendix T).

Initially, the tenant lease area in Building 401 was divided into 29 Class 1 survey units and 2 Class 2 survey units. Once field mobilization occurred, the survey units were reconfigured into 33 Class 1 survey units and 2 Class 2 survey units. Alpha, beta, and gamma scan readings were logged for 100 percent of the accessible surfaces in the Class 1 survey units, and 50 percent of those in the Class 2 survey units. Following a review of the associated scan data, biased alpha static measurements were collected in Survey Units 13, 21, 22, 30, and 31 and biased beta measurements were collected in Survey Units 13 and 21. Each of the biased measurements logged were below the investigation levels. Systematic alpha and beta static measurements and swipe samples collected at discrete locations within each survey unit did not identify the presence of radioactivity above the release criteria.

Building 401 was subjected to reviews to ensure that radiation exposures to workers, the public, and the environment met ALARA principles. These reviews were conducted for Building 401 operations, practices, and procedures with potential for individual or collective doses. Results from radiological survey activities, and air and swipe samples were used to assess the potential radiological impacts of Building 401 activities. These activities included characterization to ensure complete removal of radioactive material exceeding the release criteria. Following the completion of survey activities, qualitative radiological impacts from operations were evaluated by performing a dose and risk assessment. Based on recent estimates of dose to the public from Building 401 survey activities, only qualitative ALARA analyses were required. Qualitative ALARA analyses for Building 401 did not result in alpha or beta measurements above the investigation levels and none of the alpha, beta, or gamma measurement results identified residual radioactivity above the release criteria for any ROC. A description of the ALARA

process is presented in Section 3.2.6 of this RACR and detailed in the Building 401 FSS (Appendix T).

Dose levels for the critical group were derived by analyzing residual levels of radioactive materials using default building occupancy scenarios in RESRAD-BUILD 3.4 software. The maximum residual dose from the Building 401 survey units was identified in Survey Unit 7 at 0.930 mrem/y, and the maximum excess lifetime cancer risk of 5.84×10^{-5} was identified in Survey Unit 1. Based on these results, the DON recommended Building 401 for unrestricted radiological release. The results of the modeling efforts were provided in Appendix K of the Building 401 FSS (Appendix T).

8.9.4 Regulatory Concurrence

The final FSS results for Building 401 (Appendix T) were submitted to the regulatory agencies on September 21, 2009. Concurrence with the radiological release for unrestricted use of Building 401 was obtained from the DTSC and CDPH on October 28, 2009. Copies of the DTSC letter and the CDPH memorandum are provided in Appendix X. According to statements by the EPA, their decision for radiological free release of Building 401 will be based on the data and analyses presented in this RACR.

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9.0 WORK AREA 19 SOUTH

Work Area 19 South is located in the southwest portion of Parcel G between Cochrane and H Streets (Figures 3-2, 3-3, and 9-1). It is bounded on the north by Work Area 19 North, on the east by Work Area 18 South, on the south by Parcel D-1, and on the west by Work Area 27 South. The radiological work activities performed in Work Area 19 South included TU76 through TU80, TU82, TU92 through TU94, TU106 through TU108, TU116, and Buildings 408 and 411. The following sections summarize the work activities completed in Work Area 19 South to support the recommended radiological release for unrestricted use of the Parcel G property.

9.1 TRENCH SURVEY UNIT 76

TU76 is located in the central portion of Work Area 19 South on the east side of Hussey Street and west of radiologically surveyed and released Building 411 (Figures 3-2 and 9-1). The radiological activities performed for Building 411 are summarized in Section 9.15 of this RACR and detailed in the FSS report provided in Appendix V. TU76 connects to TU81 on the north, TU80 on the east, TU78 on the south, and TU77, TU79, and TU82 on the west.

TU76 is composed of nine storm drain trench segments and one sanitary sewer trench segment. As identified on Figure 9-1, these trench segments include:

Storm Drain Trench Segments

- 70-D19-00-1X
- 70-D19-00-1Y
- 70-D19-00-2A
- 70-D19-00-2B
- 70-D19-00-2D
- 70-D19-00-2E
- 70-D19-00-2G
- 70-D19-00-3T
- 70-D19-00-4B

Sanitary Sewer Trench Segment

- 70-D19-00-1U

Trench segments 70-D19-00-1U and -2D transitioned into TU82 and trench segment -2A continued into TU77. In addition, trench segment 70-D19-00-2B transitioned into TU107, -2G continued into TU81, and -4B extended into TU78. Each of the trench segments associated with TU76 was identified in the Design Plan (TtEC 2007c).

9.1.1 TU76 Removal Action Activities

Excavation of TU76 was initiated on October 17, 2007 in trench segment 70-D19-00-2G. A total of 111 truckloads (approximately 1,332 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU76 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on October 26, 2007, TU76 exhibited an exposed surface area of 908 m^2 and was 531 linear feet in length (Table 3-1). The maximum excavated TU76 depth was 8 feet bgs (Table 3-2).

A total of five sections of pipe and Manholes MH413, MH414, MH416, and MH417 were excavated from TU76 and placed on plastic pending further activities during the Parcel G removal action. Piping that crumbled during excavation was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, trench segment 70-D19-00-2A contained 8-inch-diameter fiberglass pipe located at depths between 6 feet and 7 feet bgs. Trench segments 70-D19-00-2B, -2G, and -4B contained 12-inch-diameter and 18-inch-diameter concrete pipe located at depths ranging from 6 feet to 7 feet bgs. The remaining trench segments contained 6-inch-diameter and 8-inch-diameter VCP located at depths between 5 feet and 8 feet bgs.

An insufficient volume of sediment was available in pipes and manholes excavated from TU76 for sample collection and analysis. Consequently, there were no sediment sample analytical results associated with TU76.

Radiological surveys were performed on five sections of pipe and the materials forming Manholes MH413, MH414, MH416, and MH417 during the Parcel G removal action (Table 3-5). None of the results identified the presence of contamination. The surveyed and released pipe sections and Manholes MH413, MH414, MH416, and MH417 materials were transferred to the DON's non-radiological waste contractor for off-site disposal or recycling. The radiological survey reports are presented in Appendix B.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU76 on March 31, 2008 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 activity above the release limit in one soil sample at 1.8773 pCi/g. To identify the extent of potential contamination, a total of 23 characterization soil samples were collected on April 11, 2008 and submitted to the laboratory for analysis. Because no additional contamination was identified in the characterization samples, approximately 3.5 cubic yards of soil was remediated from TU76 on April 18, 2008. The remediated soil was placed in LLRW bin GFLU001209G4 for disposal by the DON's radiological waste contractor (Table 3-9). Following remediation, a total of three verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

A second set of 18 systematic soil samples was collected from TU76 on April 24, 2008 and submitted to the laboratory for analysis. Two soil samples identified the presence of Ra-226 activity above the release limit at 1.7969 pCi/g and 2.4086 pCi/g. Based on these results, roughly 11.5 cubic yards of soil was placed in LLRW bin BFLU00054G2 for disposal by the DON's radiological waste contractor (Table 3-9). A total of six verification soil samples were collected and analyzed following the remediation activities. One soil sample identified the continued presence of Ra-226 contamination at 2.4745 pCi/g. An estimated 5 cubic yards of soil was placed in LLRW bin MHFU001646G2 on May 3, 2008 for disposal. Three verification soil samples were collected and analyzed following the remediation efforts. Two of these soil samples identified Ra-226 contamination at 2.2166 pCi/g and 3.5144 pCi/g. Based on these results, an additional 5 cubic yards of soil was remediated and three verification soil samples were collected. The analytical results identified the continued presence of Ra-226 contamination in one soil sample at 2.0789 pCi/g. Approximately 6 cubic yards of soil was remediated on May 30, 2008 and placed in LLRW bin GFLU001172G5 for disposal (Table 3-9). Because the sidewall of TU76 where the Ra-226 contamination had been identified opened up into the adjacent trench survey unit, no available soil was available for verification sampling and analysis.

A third set of 18 systematic samples was collected from the sidewalls and bottom of TU76 on September 13, 2008 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 activity above the release limit in two soil samples at 1.9991 pCi/g and 3.2175 pCi/g. Based on these results, an additional 3.5 cubic yards of soil was remediated on January 10, 2009. The remediated soil was placed in LLRW bin MHFU001330G5 for disposal (Table 3-9). Following the remediation efforts, four verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the verification samples for any ROC.

In total, 96 investigative soil samples (including systematic, characterization, and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 34.5 cubic yards of soil was remediated from TU76 during the removal action activities. Figure 9-2 depicts the approximate locations of the contaminated soil samples in TU76 prior to remediation.

9.1.2 TU76 Piping Remaining In Place

Storm drain trench segments 70-D19-33-1Y and -1X are located immediately adjacent to the west side of Building 411. These storm lines continue from the roof of Building 411 and extend down the interior walls of the structure. Trench segments 70-D19-33-1Y and -1X were not excavated during the Parcel G removal action due to their proximity to Building 411. According to historical drawings, an estimated 10 linear feet of pipe remained in place for each trench segment following the completion of excavation (Table 3-8). Based on the radiological history of Building 411, there is no potential for radiological contamination to have been transferred

from the building to the roof storm drains, and from there to the storm drain sewers. Therefore, the DON determined that the roof drain pipes were not radiologically impacted and could be left in place within the 10-foot safety buffer around Building 411.

9.1.3 TU76 Final Status Survey Summary

A total of 18 systematic soil samples were collected from the sidewalls and bottom of TU76 on January 14, 2009 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 9-1 depicts the FSS soil sample collection locations in TU76.

TU76 was defined for the FSS as the sum of the trench unit and the backfill soil composed of both radiologically processed and released excavated soil and a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill were 0.050 pCi/g for Cs-137, 0.072 pCi/g for Sr-90, and 0.312 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.047 pCi/g for Cs-137, 0.088 pCi/g for Sr-90, and 0.306 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.415 mrem/y with an increased cancer risk of 8.638×10^{-5} for the backfill material and 5.371 mrem/y with an increased cancer risk of 8.546×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU76 SUPR provided in Appendix L.

The results of the modeling efforts determined that the potential TU76 dose due to activity concentrations greater than or equal to the MDL was 5.415 mrem/y with an increased cancer risk of 8.638×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU76 SUPR (Appendix L).

9.1.4 TU76 Backfill Activities

Radiologically processed and released excavated soil survey units were selected for use as backfill material in TU76 in addition to a volume of imported fill. The excavated soil survey units selected included:

- ES-0047
- ES-0055
- ES-0058

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU76 SUPR (Appendix L). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

Concurrence with backfilling TU76 was obtained from the RASO on March 24, 2009 and backfilling operations commenced on March 25, 2009. Approximately 1,732 cubic yards of soil was placed in TU76 and the backfilling operations were completed on March 27, 2009. A summary of the activities performed to support the recommended radiological free release of TU76 is provided in Table 3-1.

9.2 TRENCH SURVEY UNIT 77

TU77 is located in the central portion of Work Area 19 South on the west side of Hussey Street and northeast of non-radiologically impacted Building 407 (Figures 3-2 and 9-1). TU77 connects to TU82 on the north, TU76 on the east, TU79 on the south, and terminates at Manhole MH418 on the west. No piping was found to the west of Manhole MH418 during the excavation activities. The eastern portion of TU77 is physically situated within IR Program Site IR-66. The chemicals of concern associated with IR-66 are listed in Table 3-10.

TU77 is composed of two storm drain trench segments and one sanitary sewer trench segment. As identified on Figure 9-1, these trench segments include:

Storm Drain Trench Segments	Sanitary Sewer Trench Segment
• 70-D19-00-2A	• 70-D19-00-3S
• 70-D19-66-2A	

Trench segment 70-D19-00-2A transitioned from TU76 into TU77. Trench segment 70-D19-00-3S continued north into TU82 and extended south into TU79. Each of the trench segments associated with TU77 was identified in the Design Plan (TtEC 2007c).

9.2.1 TU77 Removal Action Activities

Excavation of TU77 was initiated on September 5, 2007 in trench segment 70-D19-66-2A. A total of 85 truckloads (approximately 1,020 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU77 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on October 26, 2007, TU77 had an exposed surface area of 951 m^2 and was 317 linear feet in length (Table 3-1). The maximum excavated TU77 depth was 22 feet bgs (Table 3-2).

The majority of the piping excavated from TU77 disintegrated upon removal and was transferred along with the surrounding soil to RSY2 for processing. One section of pipe and Manhole

MH418 were excavated from TU77 and placed on plastic pending further activities during the Parcel G removal action. As indicated in Table 3-2, trench segments 70-D19-00-2A and 70-D19-66-2A contained 8-inch-diameter fiberglass pipe located at depths ranging from 7 feet to 9 feet bgs. Trench segment 70-D19-00-3S contained 10-inch-diameter VCP located at depths between 9 feet and 21 feet bgs.

A sufficient volume of sediment for sample collection and analysis was obtained from Manhole 418 and submitted to the laboratory for analysis (Table 3-6). No radioactivity above the release criteria was identified in this sediment sample for any ROC. The sediment sample analytical report is provided in Appendix D.

Radiological surveys were performed on one section of pipe excavated from trench segment 70-D19-00-3S and the materials forming Manhole MH418 during the Parcel G removal action (Table 3-5). No elevated survey results were identified for the TU77 piping. The surveyed and released section of pipe and Manhole MH418 materials were transferred to the DON's non-radiological waste contractor for off-site disposal or recycling. The radiological survey reports are included in Appendix B.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU77 on November 30, 2007 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 activity above the release limit in one soil sample at 1.8725 pCi/g. Based on this result, 15 characterization soil samples were collected on December 12, 2007 and submitted to the laboratory for analysis. Seven of the characterization soil samples identified the presence of Ra-226 contamination ranging from 1.6401 pCi/g to 3.0543 pCi/g. Based on the systematic and characterization sample results, approximately 38 cubic yards of soil was remediated. The remediated soil was placed in LLRW bins for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation efforts, 13 verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

A second set of 18 systematic soil samples was collected from TU77 on January 10, 2008 and submitted to the laboratory. The analytical results identified the presence of Ra-226 activity above the release limit in four of these samples ranging from 1.8759 pCi/g to 2.7274 pCi/g. To identify the extent of possible contamination in TU77, 20 characterization soil samples were collected and analyzed on January 24, 2008. None of the analytical results for the characterization samples identified the presence of radioactivity above the release criteria for any ROC. Roughly 21.5 cubic yards of soil was remediated in February 2008. Following the remediation activities, a total of 14 verification soil samples were collected and analyzed. The analytical results identified the continued presence of Ra-226 activity above the release limit in two soil samples at 1.5229 pCi/g and 1.9761 pCi/g. Approximately 5 cubic yards of soil was remediated from TU77 on February 26, 2008. The remediated soil was placed in LLRW bin

GFLU001039G4 for disposal (Table 3-9). Six verification soil samples were collected and analyzed following the remediation activities. The analytical results identified the presence of Ra-226 contamination in two soil samples at 1.7519 pCi/g and 2.2987 pCi/g.

In March 2008, an estimated 10 cubic yards of soil was remediated from TU77 (Table 3-9). Following the remediation efforts, six verification soil samples were collected and analyzed. Two of the verification soil samples identified Ra-226 contamination at 1.9746 pCi/g and 2.0254 pCi/g. Approximately 7.75 cubic yards of soil was remediated from TU77 on March 14, 2008. The remediated soil was placed in LLRW bin GFLU001210G4 for disposal (Table 3-9). Four verification soil samples were collected and analyzed following the remediation efforts. Because one of these soil samples identified the presence of Ra-226 contamination at 1.9661 pCi/g, an additional 5.25 cubic yards of soil was remediated and three verification soil samples were collected. The laboratory analytical results did not identify the presence of radiological contamination in the verification soil samples.

A third set of 18 systematic soil samples was collected from the sidewalls and bottom of TU77 on April 4, 2008 and submitted to the laboratory for analysis. The analytical results for four of these samples identified the presence of Ra-226 activity above the release criteria ranging from 1.4961 pCi/g to 2.4138 pCi/g. Based on these results, roughly 14 cubic yards of soil was placed in LLRW bins for disposal (Table 3-9). Following remediation, 12 verification soil samples were collected and analyzed on April 15, 2008. The analytical results identified the continued presence of Ra-226 contamination in one soil sample at 1.9796 pCi/g. Based on this result, an additional 3.5 cubic yards of soil was remediated on April 18, 2008. The remediated soil was placed in LLRW bin GFLU001209G4 for disposal and three verification soil samples were collected and analyzed. Two of these samples showed Ra-226 activity above the release limit at 1.9899 pCi/g and 2.2214 pCi/g. Roughly 3.75 cubic yards of soil was remediated followed by the collection of three verification soil samples on April 24, 2008. The analytical results identified the presence of Ra-226 activity above the release limit at 3.5366 pCi/g and 3.7540 pCi/g. Based on these results, an additional 6.75 cubic yards of soil was placed in LLRW bin BKRU026454G3 for disposal (Table 3-9). Three verification soil samples were collected and analyzed following the remediation activities. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

A fourth set of 18 systematic soil samples was collected from TU77 on May 2, 2008 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 activity above the release limit in three soil samples at 1.7036 pCi/g, 2.0386 pCi/g, and 2.4392 pCi/g. Based on these results, roughly 10 cubic yards of soil was remediated from TU77 on May 16, 2008. The remediated soil was placed in LLRW bin BFLU00359G3 for disposal by the DON's radiological waste contractor and nine verification soil samples were collected and analyzed (Table 3-9). No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

On May 21, 2008, a fifth set of 18 systematic soil samples was collected from the sidewalls and bottom of TU77 and submitted to the laboratory for analysis. Three of the soil samples identified the continued presence of Ra-226 activity above the release limit ranging from 1.8889 pCi/g to 1.9972 pCi/g. Based on these results, approximately 14.25 cubic yards of soil was remediated followed by the collection of nine verification soil samples for analysis. The laboratory analytical results did not identify the presence of contamination in the verification soil samples.

A sixth set of 18 systematic soil samples was collected from TU77 on June 5, 2008 and submitted to the laboratory for analysis. Ra-226 contamination was identified in five soil samples ranging from 1.8802 pCi/g to 3.6020 pCi/g. Based on these results, an estimated 30 cubic yards of soil was placed in LLRW bins for disposal (Table 3-9).

On July 16, 2008, a seventh set of 18 systematic soil samples was collected from the sidewalls and bottom of TU77 and submitted to the laboratory for analysis. The analytical results identified the continued presence of Ra-226 activity above the release limit in four soil samples ranging from 1.7049 pCi/g to 3.7058 pCi/g. Based on these results and because of the previous remediation and sampling efforts, an estimated 185 cubic yards of soil was remediated followed by the collection of 17 verification soil samples (Table 3-9). Because the laboratory analytical results for five of these soil samples showed the continued presence of Ra-226 contamination ranging from 1.8469 pCi/g to 3.2405 pCi/g, an additional 23.25 cubic yards of soil was remediated from TU77.

An eighth set of 18 systematic soil samples was collected from TU77 on October 29, 2008 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 activity above the release limit in five soil samples ranging from 2.0562 pCi/g to 3.6647 pCi/g. Based on these results, approximately 27 cubic yards of soil was remediated followed by the collection of 14 verification soil samples. Three of these soil samples identified Ra-226 contamination at 1.7181 pCi/g, 1.8086 pCi/g, and 2.0329 pCi/g. An estimated 26 cubic yards of soil was remediated from TU77 on June 16, 2009 (Table 3-9). Six verification soil samples were collected and analyzed following the remediation efforts. The analytical results identified the continued presence of Ra-226 contamination in one soil sample at 2.3748 pCi/g. Based on this result, approximately 9 cubic yards of soil was remediated on June 24, 2009 (Table 3-9). The remediated soil was placed in LLRW bin BFLU000396G10 for disposal followed by the collection of three verification soil samples. Because one soil sample identified the presence of Ra-226 contamination at 1.8954 pCi/g, an additional 4 cubic yards of soil was remediated on July 1, 2009 and three verification soil samples were collected. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

On July 14, 2009, a ninth set of 18 systematic soil samples was collected from the sidewalls and bottom of TU77 and submitted to the laboratory for analysis. The analytical results identified the

presence of Ra-226 activity above the release limit in one soil sample at 2.0072 pCi/g. Based on this result, approximately 10 cubic yards of soil was placed in LLRW bin BKRU026470G11 for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation activities, two verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

In total, 327 investigative soil samples (including systematic, characterization, and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 454 cubic yards of soil was remediated from TU77 during the Parcel G removal action. Figure 9-3 depicts the approximate locations of the contaminated soil samples in TU77 prior to remediation.

9.2.2 TU77 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU77 remained in place on Parcel G following the completion of the removal action.

9.2.3 TU77 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU77 on August 6, 2009 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 9-1 depicts the FSS soil sample collection locations in TU77.

For the FSS, TU77 was defined as the sum of the trench unit and the backfill material composed of imported fill. The average net residual radioactivity concentrations for material used as backfill were 0.053 pCi/g for Cs-137, 0.070 pCi/g for Sr-90, and 0.373 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.042 pCi/g for Cs-137, 0.135 pCi/g for Sr-90, and 0.236 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 6.598 mrem/y with an increased cancer risk of 1.048×10^{-4} for the backfill material and 4.541 mrem/y with an increased cancer risk of 7.102×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 4 and 5 of the TU77 SUPR provided in Appendix L.

The results of the modeling efforts determined that the potential TU77 dose due to activity concentrations greater than or equal to the MDL was 6.598 mrem/y with an increased cancer risk of 1.048×10^{-4}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU77 SUPR (Appendix L).

9.2.4 TU77 Backfill Activities

Imported fill was selected as the appropriate backfill soil for TU77. The radiological and chemical analytical reports for the imported fill used in TU77 were provided in Attachment 1 of the SUPRA (Appendix A).

The RASO concurred with backfilling TU77 on October 6, 2009 and backfilling operations commenced on October 8, 2009. Approximately 2,109 cubic yards of soil was placed in TU77 followed by the application of road base material over the backfilled trench. Backfilling operations for TU77 were completed on October 12, 2009. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU77.

9.3 TRENCH SURVEY UNIT 78

TU78 is located in the central portion of Work Area 19 South along the east side of Hussey Street and immediately west of radiologically surveyed and released Building 411 (Figures 3-2 and 9-1). The radiological activities performed for Building 411 are summarized in Section 9.15 of this RACR and detailed in the FSS report provided in Appendix V. TU78 connects to TU76 on the north, TU107 on the south, and TU79 on the west. On the east, TU78 was terminated at the 10-foot buffer zone on the west side of Building 411. Although TU78 is not located within the boundaries of an IR Program Site, it is physically situated immediately adjacent to IR Program Site IR-33. The chemicals of concern associated with IR-33 are listed in Table 3-10.

TU78 consists of 13 storm drain trench segments and no sanitary sewer trench segments. As identified on Figure 9-1, these trench segments include:

- 70-D19-00-1O
- 70-D19-00-1P
- 70-D19-00-1Q
- 70-D19-00-1R
- 70-D19-00-1S
- 70-D19-00-1T
- 70-D19-00-1W
- 70-D19-00-4B
- 70-D19-00-4C
- 70-D19-00-4D
- 70-D19-00-8D
- 70-D19-00-8E
- 70-D19-00-8F

Trench segment 70-D19-00-4B transitioned into TU76 and -8E continued into TU79. With the exception of 70-D19-00-8D, -8E, and -8F, each of the trench segments associated with TU78 was identified in the Design Plan (TtEC 2007c). Trench segments 70-D19-00-8D, -8E, and -8F were found during the excavation of TU78. Although identified in the Design Plan, storm drain trench segments 70-D19-33-1Q, -1R, -4D, -8D, and -8E were not excavated during the removal action due to their proximity to the west side of Building 411.

9.3.1 TU78 Removal Action Activities

Excavation of TU78 was initiated on October 20, 2007 in trench segment 70-D19-00-1W. A total of 118 truckloads (approximately 1,416 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU78 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on October 26, 2007, TU78 exhibited an exposed surface area of 909 m^2 and was 560 linear feet in length (Table 3-1). The maximum excavated TU78 depth was 9 feet bgs (Table 3-2).

A total of 59 sections of pipe and Manholes MH420, MH422, and MH423 were excavated from TU78 and placed on plastic pending further activities during the Parcel G removal action. Piping that crumbled during excavation was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, trench segment 70-D19-00-1O contained 10-inch-diameter CMP located at depths ranging from 7 feet to 8 feet bgs. Trench segments 70-D19-00-1P and -4B contained 18-inch-diameter and 24-inch-diameter concrete pipe and -8D contained 6-inch-diameter concrete-encased VCP. The pipes in these trench segments were located at depths between 6 feet and 8 feet bgs. The remaining trench segments contained 6-inch-diameter to 10-inch-diameter VCP located at depths ranging from 5 feet to 8 feet bgs.

A sufficient volume of sediment for sample collection and analysis was obtained from one pipe section and Manhole MH422 (Table 3-6). The laboratory analytical results did not identify the presence of radioactivity above the release criteria in the sediment samples for any ROC. The sediment sample analytical reports are provided in Appendix D.

Radiological surveys were performed on 59 sections of pipe and the materials forming Manholes MH420, MH422, and MH423 (Table 3-5). No elevated results were identified for the pipes or manhole debris surveyed. The 59 sections of pipe and the materials forming Manholes MH420, MH422, and MH423 were transferred to the DON's non-radiological waste contractor for off-site disposal or recycling. The radiological survey reports are provided in Appendix B.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU78 on February 11, 2008 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 activity above the release limit in one soil sample at 1.7879 pCi/g. To further define the potential extent of contamination, an additional seven characterization soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the characterization soil samples for any ROC. Approximately 1 cubic yard of soil was remediated from TU78 on February 25, 2008. The remediated soil was placed in LLRW bin BKRU025677G2 for disposal by the DON's radiological waste contractor (Table 3-9). Following remediation, three verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

On March 7, 2008, a second set of 18 systematic soil samples was collected from TU78 and analyzed by the laboratory. The analytical results identified Ra-226 contamination in one soil sample at 1.6896 pCi/g. Approximately 2.75 cubic yards of soil was placed in LLRW bin GFLU001210G4 for disposal (Table 3-9). Three verification soil samples were collected and analyzed following the remediation activities. No contamination was identified in the verification soil samples for any ROC.

A third set of 18 systematic soil samples was collected from the sidewalls and bottom of TU78 on March 17, 2008 and submitted to the laboratory for analysis. The analytical results identified the continued presence of Ra-226 activity above the release limit in two soil samples at 1.8187 pCi/g and 2.1259 pCi/g. Based on these results, roughly 6.75 cubic yards of soil was remediated and six verification soil samples were collected and analyzed. Ra-226 contamination was identified in one soil sample at 1.9203 pCi/g. An additional 3 cubic yards of soil was remediated followed by the collection of three verification soil samples. One soil sample identified the continued presence of Ra-226 contamination at 1.6342 pCi/g. Based on this result, an additional 3 cubic yards of soil was remediated on April 11, 2008. The remediated soil was placed in LLRW bin CVGU001156G2 for disposal (Table 3-9). Following the remediation activities, three verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

In total, 79 investigative soil samples (including systematic, characterization, and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 16.5 cubic yards of soil was remediated from TU78 during the removal action activities. Figure 9-2 depicts the approximate locations of the contaminated soil samples in TU78 prior to remediation.

9.3.2 TU78 Piping Remaining In Place

The TU78 trench segments that remained in place on Parcel G following the completion of the removal action were each associated with the Building 411 roof drains that extended down the interior of the structure and exited the building into the ground. These trench segments included 70-D19-00-1W and 70-D19-33-4D, -8D, -1R, -8E, and -1Q. The IR Program Site IR-33 boundary parallels the west side of Building 411 within the 10-foot buffer zone on the east side of the structure.

A total of 13 linear feet of trench segment 70-D19-00-1W was excavated prior to its termination within the 10-foot buffer zone on the west side of Building 411. Based on historical drawings, approximately 7 linear feet of this trench segment remained in place following the completion of the Parcel G removal action (Table 3-8). In addition, about 10 linear feet of trench segments 70-D19-33-4D, -8D, -1R, -8E, and -1Q remained in place following excavation of TU78 (Table 3-8). No additional pipe could be removed without adversely affecting the structural integrity of Building 411. Based on the radiological history of Building 411, there was no potential for

radiological contamination to have been transferred from the building to the roof storm drains and from there to the storm drain sewers. Therefore, the DON determined that roof drain pipes were not radiologically impacted and could be left in place within the 10-foot safety buffer.

9.3.3 TU78 Final Status Survey Summary

The final 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU78 on April 23, 2008 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 9-1 depicts the FSS soil sample collection locations in TU78.

TU78 was defined for the FSS as the sum of the trench unit and the backfill material composed of both radiologically processed and released excavated soil and a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill were 0.044 pCi/g for Cs-137, 0.070 pCi/g for Sr-90, and 0.284 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.040 pCi/g for Cs-137, 0.102 pCi/g for Sr-90, and 0.167 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 4.946 mrem/y with an increased cancer risk of 7.883×10^{-5} for the backfill material and 3.160 mrem/y with an increased cancer risk of 4.964×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU78 SUPR provided in Appendix L.

The results of the modeling efforts determined that the potential TU78 dose due to activity concentrations greater than or equal to the MDL was 4.946 mrem/y with an increased cancer risk of 7.883×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU78 SUPR (Appendix L).

9.3.4 TU78 Backfill Activities

Radiologically processed and released excavated soil survey units were selected for use as backfill material in TU78 in addition to a volume of imported fill. The excavated soil survey units selected included:

- ES-0054
- ES-0059
- ES-0062

ED_004747_00027470-00253

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU78 SUPR (Appendix L). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

The RASO concurred with backfilling TU78 on May 7, 2008 and backfilling operations were initiated the same day. Approximately 875 cubic yards of soil was placed in TU78 and backfilling operations were completed on May 10, 2008. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU78.

9.4 TRENCH SURVEY UNIT 79

TU79 is located on the west side of Hussey Street in Work Area 19 South, just east of non-radiologically impacted Building 407 and radiologically surveyed and released Building 439 (Figures 3-2, 3-3, and 9-1). The radiological work performed for Building 439 is summarized in Section 11.6 of this RACR and the details are discussed in the FSS report provided in Appendix W. TU79 connects to TU77 on the north, TU76 and TU78 on the east, and TU108 on the south. TU79 is not situated within an IR Program Site; however, portions of trench segments that were not excavated due to their proximity to Building 439 are located within IR Program Site IR-67. The chemicals of concern associated with IR-67 are listed in Table 3-10.

TU79 is composed of two storm drain trench segments and four sanitary sewer trench segments. As identified on Figure 9-1, these trench segments include:

Storm Drain Trench Segments	Sanitary Sewer Trench Segments
• 70-D19-00-1S	• 70-D19-00-3Q
• 70-D19-00-8E	• 70-D19-00-3R
	• 70-D19-00-3S
	• 70-D19-00-8G

Trench segment 70-D19-00-3S extended toward the north and transitioned into TU82 and trench segment -8E extended toward the east and continued into TU78. In addition, trench segment 70-D19-00-8G extended toward the south and transitioned into TU108. With the exception of trench segments 70-D19-00-8E and -8G, each of the trench segments associated with TU84 was identified in the Design Plan (TtEC 2007c). Trench segments 70-D19-00-8E and -8G were found during the TU84 excavation activities. Although identified in the Design Plan, trench segments 70-D19-67-1S and -1I and Manhole MH428 were not excavated due to their proximity to Building 439 and an active fresh water supply line on the east side of the structure.

9.4.1 TU79 Removal Action Activities

Excavation of TU79 commenced on October 22, 2007 in trench segment 70-D19-00-3R. A total of 136 truckloads (approximately 1,632 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU79 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on October 26, 2007, TU79 exhibited an exposed surface area of 963 m^2 and was 423 linear feet in length (Table 3-1). The maximum excavated TU79 depth was 10 feet bgs (Table 3-2).

The majority of the pipes excavated from TU79 crumbled upon removal and was transferred along with the surrounding soil to RSY2 for processing. One pipe section and Manholes MH419 and MH421 were excavated from TU79 and placed on plastic pending further activities during the Parcel G removal action. As indicated in Table 3-2, trench segment 70-D19-00-8G contained 6-inch-diameter CIP located at depths between 6 feet and 7 feet bgs. The remainder of the trench segments contained 6-inch-diameter to 10-inch-diameter VCP located at depths ranging from 5 feet to 9 feet bgs.

An insufficient volume of sediment was available in the TU79 pipes and manholes for sample collection and analysis. Consequently, there were no sediment sample analytical results for TU79.

Radiological surveys were performed on one section of pipe excavated from trench segment 70-D19-00-3Q and the materials forming Manholes MH419 and MH421 during the Parcel G removal action (Table 3-5). None of the piping surveyed identified elevated results. The TU79 pipe section and materials forming both manholes were transferred to the DON's non-radiological waste contractor for disposal or recycling. The final disposition of the TU79 piping is identified in Table 3-5. The radiological survey reports are presented in Appendix B.

9.4.2 TU79 Piping Remaining In Place

A total of 10 linear feet of trench segment 70-D19-00-1S was excavated prior to its termination near an active fresh water line that runs parallel to Hussey Street. Based on historical drawings, an estimated 9 linear feet of this trench segment remained in place on Parcel G following the completion of the removal action (Table 3-8). Additional pipe could not be removed without adversely affecting the integrity of the fresh water line.

Trench segment 70-D19-67-1S extends toward the west and Building 439 from the active fresh water line that parallels Building 439 and connects to the structure's roof drains. Based on historical drawings, approximately 19 linear feet remained in place on Parcel G following the completion of the removal action (Table 3-8). The roof drains that extended down the exterior of Building 439 from the roof were cut to prevent water accumulation and to preserve the fresh water pipeline.

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Trench segment 70-D19-67-1I runs parallel to the east side of Building 439 within the 10-foot buffer zone. This trench segment manifolds the Building 439 roof drains together. Based on historical drawings, an estimated 324 linear feet of trench segment 70-D19-67-1I remained in place on Parcel G within the 10-foot buffer zone on the east side of Building 439 (Table 3-8). Located immediately adjacent to the trench segment 70-D19-67-1I manifold, Manhole 428 also was left in place within the 10-foot buffer zone. This manhole and the pipe manifold could not be removed without adversely affecting the structural integrity of Building 439 and the fresh water pipeline.

Based on the radiological history of Building 439, there was no potential for radiological contamination to have been transferred from the structure to the roof storm drains and from there to the storm drain sewers. Therefore, the DON determined that the roof drain pipes were not radiologically impacted and could be left in place within the 10-foot safety buffer. This is supported by the radiological work performed during the FSS activities for TU79. None of the trench survey unit soil samples or the pipe and manhole radiological survey results identified the presence of radioactivity above the release criteria. Based on this information, the DON concluded that the TU79 piping remaining in place on Parcel G was unlikely to be contaminated.

9.4.3 TU79 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU79 on November 30, 2007 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 9-1 depicts the FSS soil sample collection locations in TU79.

TU79 was defined for the FSS as the sum of the trench unit and backfill material composed of radiologically processed and released excavated soil. The average net residual radioactivity concentrations for material used as backfill in TU79 were 0.043 pCi/g for Cs-137, 0.040 pCi/g for Sr-90, and 0.237 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.041 pCi/g for Cs-137, 0.046 pCi/g for Sr-90, and 0.245 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 4.228 mrem/y with an increased cancer risk of 6.713×10^{-5} for the backfill material and 4.382 mrem/y with an increased cancer risk of 6.952×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU79 SUPR provided in Appendix L.

The results of the modeling efforts determined that the potential TU79 dose due to activity concentrations greater than or equal to the MDL was 4.382 mrem/y with an increased cancer risk of 6.952×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which

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supports radiological free release. No further radiological action was recommended in the TU79 SUPR (Appendix L).

9.4.4 TU79 Backfill Activities

Radiologically processed and released excavated soil survey units were selected for use as backfill material in TU79. The excavated soil survey units selected included:

- ES-0057
- ES-0060
- ES-0061
- ES-0063
- ES-0064
- ES-0065

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU79 SUPR (Appendix L).

The RASO concurred with backfilling TU79 on December 19, 2007 and backfilling operations commenced on December 20, 2007. Approximately 1,297 cubic yards of soil was placed in TU79 to grade followed by the application of road base material over the backfilled trench. Backfilling operations were completed on January 16, 2008. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU79.

9.5 TRENCH SURVEY UNIT 80

TU80 is located in the northeast portion of Work Area 19 South and north of radiologically surveyed and released Building 411 (Figures 3-2 and 9-1). The radiological activities performed for Building 411 are summarized in Section 9.15 of this RACR and detailed in the FSS report provided in Appendix V. TU80 connects TU87 on the east, TU76 on the west, and terminates on the north at Manhole MH462 and on the south at Building 411. The eastern portion of TU80 is situated within IR Program Site IR-09. The chemicals of concern for IR-09 are listed in Table 3-10.

TU80 is composed of two storm drain trench segments and three sanitary sewer trench segments. As identified on Figure 9-1, these trench segments include:

Storm Drain Trench Segments	Sanitary Sewer Trench Segments
• 70-D19-00-1Z	• 70-D19-00-1U
• 70-D19-09-1Z	• 70-D19-09-1U
	• 70-D19-09-5E

Each of the trench segments associated with TU80 was identified in the Design Plan (TtEC 2007c).

9.5.1 TU80 Removal Action Activities

Excavation of TU80 was initiated on August 30, 2007 in trench segment 70-D19-09-5E. A total of 50 truckloads (approximately 600 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU80 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on October 19, 2007, TU80 had an exposed surface area of 502 m^2 and was 270 linear feet in length (Table 3-1). The maximum excavated TU80 depth was 9 feet bgs (Table 3-2).

A total of 53 sections of pipe and Manhole MH462 were excavated from TU80 and placed on plastic pending further activities during the Parcel G removal action. Piping that crumbled during excavation was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, trench segments 70-D19-00-1U and 70-D19-09-1U contained 8-inch-diameter VCP located at depths between 2 feet and 7 feet bgs. The remaining trench segments contained 15-inch-diameter and 16-inch-diameter concrete pipe located at depths ranging from 6 feet to 8 feet bgs.

An insufficient volume of sediment was available in the TU80 piping for sample collection and analysis. Consequently, there were no sediment sample analytical results for TU80.

Radiological surveys were performed on the 53 sections of pipe and the materials forming Manhole MH462 during the Parcel G removal action (Table 3-5). Two pipe sections excavated from trench segment 70-D19-09-5E indicated elevated survey results and were placed in LLRW bin GFLU001115G2 for disposal by the DON's radiological waste contractor. The remaining pipe sections and Manhole MH462 debris were transferred to the DON's non-radiological waste contractor for off-site disposal or recycling. The final disposition of the piping excavated from TU80 is provided in Table 3-5. The radiological survey reports are presented in Appendix B.

9.5.2 TU80 Piping Remaining In Place

A total of 160 linear feet of trench segment 70-D19-09-5E was excavated prior to being terminated at the 10-foot buffer zone on the north side of Building 411. Based on historical drawings, approximately 10 linear feet of this trench segment remained in place on Parcel G following the completion of the removal action (Table 3-8). No additional pipe could be

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removed without adversely affecting the structural integrity of Building 411. The DON concluded that the pipe remaining in place was unlikely to be contaminated based on the FSS activities performed for TU80.

9.5.3 TU80 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU80 on December 10, 2007 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 9-1 depicts the FSS soil sample collection locations in TU80.

TU80 was defined for the FSS as the sum of the trench unit and the backfill material composed of both radiologically processed and released excavated soil and a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU80 were 0.048 pCi/g for Cs-137, 0.062 pCi/g for Sr-90, and 0.336 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.041 pCi/g for Cs-137, 0.033 pCi/g for Sr-90, and 0.200 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 4.093 mrem/y with an increased cancer risk of 7.054×10^{-5} for the backfill material and 2.451 mrem/y with an increased cancer risk of 4.226×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU80 SUPR provided in Appendix L.

The results of the modeling efforts determined that the potential TU80 dose due to activity concentrations greater than or equal to the MDL was 4.093 mrem/y with an increased cancer risk of 7.054×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU80 SUPR (Appendix L).

9.5.4 TU80 Backfill Activities

Radiologically processed and released excavated soil survey unit ES-0053 was selected for use as backfill material in TU80 in addition to a volume of imported fill. Radiological information related to the processing of ES-0053 is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU80 SUPR (Appendix L). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

The RASO concurred with backfilling TU80 on January 3, 2008 and backfilling operations commenced on March 24, 2008. Approximately 500 cubic yards of soil was placed in TU80 and

backfilling operations were completed on March 26, 2008. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU80.

9.6 TRENCH SURVEY UNIT 82

TU82 is located in the north central portion of Work Area 19 South on the west side of Hussey Street and east of non-radiologically impacted Building 404 (Figures 3-2 and 9-1). TU82 connects to TU81 on the north, TU76 on the east, TU77 on the south, and terminates on the west adjacent to Building 404. The north end of TU82 is situated within IR Program Site IR-37. The chemicals of concern associated with IR-37 are listed in Table 3-10.

TU82 consists of two storm drain trench segments and six sanitary sewer trench segments. As identified on Figure 9-1, these trench segments include:

Storm Drain Trench Segments	Sanitary Sewer Trench Segments
• 70-D19-00-2D	• 70-D19-00-1J
• 70-D19-00-2F	• 70-D19-00-1U
	• 70-D19-00-1V
	• 70-D19-00-3S
	• 70-D19-00-8C
	• 70-D19-37-1F

Trench segments 70-D19-00-1U and -2D extended westward from TU76 and transitioned into TU82. Trench segment 70-D19-002F extended southwest from TU81 into TU82. Trench segment 70-D19-00-3S was a continuation from TU77. With the exception of 70-D19-00-8C, each of the trench segments associated with TU82 was identified in the Design Plan (TtEC 2007c). Trench segment 70-D19-00-8C was discovered during the excavation of Manhole MH415. Although identified in the Design Plan, storm drain trench segment 70-D19-00-2C was not excavated due to its proximity to the east side of Building 404.

9.6.1 TU82 Removal Action Activities

Excavation of TU82 commenced on October 16, 2007 in trench segment 70-D19-00-1J. A total of 107 truckloads (approximately 1,284 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU82 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on October 19, 2007, TU82 exhibited a total surface area of 913 m^2 and was 521 linear feet in length (Table 3-1). The maximum excavated TU82 depth was 10 feet bgs (Table 3-2).

A total of three sections of pipe and Manhole MH415 were excavated from TU82 and placed on plastic pending further activities during the Parcel G removal action. Piping that disintegrated

during excavation was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, trench segments 70-D19-00-1J and 70-D19-37-1F contained 10-inch-diameter steel pipe located at depths between 7 feet and 9 feet bgs. Trench segments 70-D19-00-1V and -8C contained 4-inch-diameter PVC pipe located at depths ranging from 2 feet to 3 feet bgs. The remaining trench segments contained 6-inch-diameter to 8-inch-diameter VCP located and depths between 4 feet and 9 feet bgs.

An insufficient volume of sediment was available from the TU82 pipe sections or Manhole MH415 for sample collection and analysis. Consequently, no sediment sample analytical results exist for TU82.

Radiological surveys were performed on two sections of pipe excavated from trench segment 70-D19-00-1V, one section excavated from trench segment -3S, and the materials forming Manhole MH415 (Table 3-5). No elevated results were identified for the pipes or manhole surveyed. The three sections of pipe and the materials forming Manhole MH415 were transferred to the DON's non-radiological waste contactor for off-site disposal or recycling. The final disposition of the TU82 piping is provided in Table 3-5. The radiological survey reports are presented in Appendix B.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU82 on April 14, 2008 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 activity above the release limit in two samples at 1.5796 pCi/g and 2.5394 pCi/g. To further identify the extent of contamination, 37 characterization samples were collected from TU82 on April 22, 2008. The laboratory analytical results identified the presence of Ra-226 contamination in three of the characterization samples at 2.2541 pCi/g, 2.5339 pCi/g, and 2.6810 pCi/g. Based on these results, approximately 16 cubic yards of TU82 soil was placed in LLRW bins for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation efforts, 10 verification soil samples were collected and analyzed. The analytical results identified Ra-226 activity above the release limit in one soil sample at 2.5339 pCi/g. An estimated 5 cubic yards of soil was remediated from TU82 on August 22, 2008. The remediated soil was placed in LLRW bin GFLU001195G5 for disposal (Table 3-9). Following the remediation efforts, three verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the verification samples for any ROC.

In total, 68 investigative soil samples (including systematic, characterization, and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 21 cubic yards of soil was remediated from TU82 during the removal action activities. Figure 9-2 depicts the approximate locations of the contaminated soil samples prior to remediation.

9.6.2 TU82 Piping Remaining In Place

A total of 32 linear feet each of trench segments 70-D19-00-1V and -8C were excavated from TU82 prior to termination at the 10-foot buffer zone on the west side of Building 404. Based on historical drawings, approximately 10 linear of each of these two sanitary sewer trench segments was left in place following the completion of the removal action (Table 3-8). Additional pipes could not be removed without adversely affecting the structural integrity of Building 404.

Based on historical drawings, an estimated 10 linear feet of storm drain trench segment 70-D19-00-2C remained in place on Parcel G following the completion of the removal action (Table 3-8). This trench segment was located within the 10-foot buffer zone on the west side of Building 404. This trench segment connected to excavated trench segments 70-D19-00-2D and -2F. None of this trench segment could be removed without adversely affecting the structural integrity of Building 404.

9.6.3 TU82 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU82 on September 8, 2008 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 9-1 depicts the FSS soil sample collection locations in TU82.

For the FSS, TU82 was defined as the sum of the trench unit and the backfill material composed of radiologically processed and released excavated soil. The average net residual radioactivity concentrations for material used as backfill in TU82 were 0.043 pCi/g for Cs-137, 0.063 pCi/g for Sr-90, and 0.241 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.045 pCi/g for Cs-137, 0.099 pCi/g for Sr-90, and 0.312 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 4.234 mrem/y with an increased cancer risk of 6.740×10^{-5} for the backfill material and 5.525 mrem/y with an increased cancer risk of 8.773×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU82 SUPR provided in Appendix L.

The results of the modeling efforts determined that the potential TU82 dose due to activity concentrations greater than or equal to the MDL was 5.525 mrem/y with an increased cancer risk of 8.773×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU82 SUPR (Appendix L).

9.6.4 TU82 Backfill Activities

Radiologically processed and released excavated soil survey units were selected for use as backfill material in TU82. The excavated soil survey units selected included:

- ES-0050
- ES-0051
- ES-0052
- ES-0056

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU82 SUPR (Appendix L).

Concurrence with backfilling TU82 was obtained from the RASO on December 11, 2008 and backfilling operations commenced on January 5, 2009. Approximately 1,180 cubic yards of soil was placed in TU82 to grade followed by the application of road base material over the backfilled trench. Backfilling operations for TU82 were completed on January 7, 2009. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU82.

9.7 TRENCH SURVEY UNIT 92

TU92 is located in the southern portion of Work Area 19 South, just east of Hussey Street and immediately south of radiologically surveyed and released Building 411 (Figures 3-2 and 9-1). The radiological activities performed for Building 411 are summarized in Section 9.15 of this RACR and detailed in the FSS report provided in Appendix V. TU92 connects to TU78 on the west and was terminated at the drainage cleanout on the east. No additional piping was found to the north or south of TU92 during the removal action activities. TU92 is physically situated in IR Program Site IR-44. The chemicals of concern associated with IR-44 are listed in Table 3-10.

TU92 consists of five storm drain trench segments and no sanitary sewer trench segments. As identified on Figure 9-1, these trench segments include:

- 70-D18-44-2G
- 70-D18-44-2H
- 70-D18-44-8A
- 70-D18-44-8B
- 70-D19-44-1O

Trench segments 70-D18-44-2G, -2H, and 70-D19-44-1O were identified in the Design Plan (TtEC 2007c). The remaining trench segments were found during excavation of TU92.

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9.7.1 TU92 Removal Action Activities

Excavation of TU92 commenced on February 11, 2008 in trench segment 70-D18-44-2G. A total of 24 truckloads (approximately 288 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU92 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on February 12, 2008, TU92 had an exposed surface area of 275 m^2 and was 125 linear feet in length (Table 3-1). The maximum excavated TU92 depth was 11 feet bgs (Table 3-2).

A total of 11 sections of pipe and Manhole MH385 were excavated from TU92 and placed on plastic pending further activities during the Parcel G removal action. Piping that disintegrated during excavation was transferred along with the surrounding soil to RSY2 for processing. As identified in Table 3-2, trench segments 70-D18-44-2G and 70-D19-44-1O contained 10-inch-diameter CMP located at depths ranging from 7 feet to 10 feet bgs. The remaining trench segments contained 4-inch-diameter and 8-inch-diameter CIP located at depths between 6 feet and 9 feet bgs.

Sufficient sediment for sample collection and analysis was available in three sections of pipe excavated from trench segment 70-D18-44-2G (Table 3-6). The analytical results identified the presence of Cs-137 activity above the release limit in each of the three sediment samples at 0.19014 pCi/g, 0.45033 pCi/g, and 0.60541 pCi/g. Each of these sections of pipe was placed in LLRW bin GFLU001279G4 on February 29, 2008 for disposal by the DON's radiological waste contractor. The sediment sample analytical reports are included in Appendix D.

Radiological surveys were performed on eight sections of pipe and the materials forming Manhole MH385 during the Parcel G removal action (Table 3-5). The survey results did not identify the presence of contamination. The eight sections of pipe and Manhole MH385 debris were transferred to the DON's non-radiological waste contractor for off-site disposal or recycling. The radiological survey reports are provided in Appendix B.

Due to the presence of Cs-137 contamination in sediment samples collected from pipe sections excavated from TU92, a total of 37 characterization soil samples were collected along the bottom of TU92. The analytical results did not identify the presence of radioactivity above the release criteria for any ROC.

9.7.2 TU92 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU92 remained in place on Parcel G following the completion of the removal action.

9.7.3 TU92 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU92 on April 17, 2008 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 9-1 depicts the FSS soil sample collection locations in TU92.

For the FSS, TU92 was defined as the sum of the trench unit and the backfill material composed of a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU92 were 0.053 pCi/g for Cs-137, 0.070 pCi/g for Sr-90, and 0.373 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.042 pCi/g for Cs-137, 0.077 pCi/g for Sr-90, and 0.259 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 3.454 mrem/y with an increased cancer risk of 6.376×10^{-5} for the backfill material and 2.439 mrem/y with an increased cancer risk of 4.483×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 4 and 5 of the TU92 SUPR provided in Appendix L.

The results of the modeling efforts determined that the potential TU92 dose due to activity concentrations greater than or equal to the MDL was 3.454 mrem/y with an increased cancer risk of 6.376×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU92 SUPR (Appendix L).

9.7.4 TU92 Backfill Activities

Imported fill was selected as the appropriate backfill soil for TU92. The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

The RASO concurred with backfilling TU92 on May 7, 2008 and backfilling activities were initiated the same day. Approximately 306 cubic yards of soil was placed in TU92 to grade followed by the application of road base material over the backfilled trench. Backfilling activities were completed for TU92 on June 9, 2008. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU92.

9.8 TRENCH SURVEY UNIT 93

TU93 is located in the southeast portion of Work Area 19 South, just west of Cochrane Street and immediately south of radiologically surveyed and released Building 411 (Figures 3-2 and 9-1). The radiological activities performed for Building 411 are summarized in Section 9.15 of

this RACR and detailed in the FSS report provided in Appendix V. TU93 connects to TU95 on the east and terminates at MH386 on the west. No piping was found to the north or south of TU93 during the excavation activities. TU93 is physically situated within IR Program Site IR-44. The chemicals of concern associated with IR-44 are listed in Table 3-10.

TU93 consists of five storm drain trench segments and no sanitary sewer trench segments. As identified on Figure 9-1, these trench segments include:

- 70-D18-44-2I
- 70-D18-44-2J
- 70-D18-44-2K
- 70-D18-44-8C
- 70-D18-44-8D

With the exception of 70-D18-44-8C and -8D, each of the trench segments associated with TU93 was identified in the Design Plan (TtEC 2007c). Trench segments 70-D18-44-8C and -8D were discovered during the excavation of TU93.

9.8.1 TU93 Removal Action Activities

Excavation of TU93 was initiated on February 12, 2008 in trench segment 70-D18-44-2I. A total of 52 truckloads (approximately 624 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU93 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on February 18, 2008, TU93 exhibited an exposed surface area of 722 m^2 and was 249 linear feet in length (Table 3-1). The maximum excavated TU93 depth was 20 feet bgs (Table 3-2).

A total of 63 sections of pipe and Manholes MH386, MH388, and MH470 were excavated from TU93 and placed on plastic pending further activities during the Parcel G removal action. Piping that disintegrated during excavation, including Manhole MH387, was transferred with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, trench segments 70-D18-44-2I, -2J, and -2K contained 10-inch-diameter CMP located at depths ranging from 6 feet to 19 feet bgs. Trench segment 70-D18-44-8C and -8D contained 4-inch-diameter CIP located at depths between 8 feet and 9 feet bgs.

Sufficient sediment for sample collection and analysis was obtained from one pipe section excavated from trench segment 70-D18-44-8C (Table 3-6). The analytical results identified the presence of Cs-137 contamination at 0.48015 pCi/g. This pipe section was placed in LLRW bin GFLU001279G4 for disposal by the DON's radiological waste contractor. The sediment sample analytical report is provided in Appendix D.

Radiological surveys were performed on 62 sections of pipe and the materials forming Manholes MH386, MH388, and MH470 during the Parcel G removal action (Table 3-5). None of the results indicated elevated activity in any of the pipe sections or manhole debris surveyed. The

TU93 piping was transferred to the DON's non-radiological waste contractor for off-site disposal or recycling. The final disposition of the pipes and materials forming the manholes removed from TU93 is identified in Tables 3-5 and 3-6. The radiological survey reports are included in Appendix B.

Due to the presence of Cs-137 contamination in one pipe sediment sample, a total of 23 characterization soil samples were collected on April 10, 2008 and submitted to the laboratory for analysis. The analytical results did not identify the presence of radioactivity above the release criteria in the characterization soil samples for any ROC.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU93 on April 18, 2008 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 activity above the release limit in one soil sample at 2.2837 pCi/g. Based on this result, an estimated 3 cubic yards of soil was placed in LLRW bin BFLU000054G2 for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation efforts, three verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

A second set of 18 systematic soil samples was collected from TU93 on May 6, 2008 and submitted to the laboratory for analysis. The analytical results identified the continued presence of Ra-226 contamination in one soil sample at 2.1459 pCi/g. Approximately 8.5 cubic yards of soil was remediated followed by the collection of three verification soil samples (Table 3-9). The laboratory analytical results did not identify the presence of radioactivity above the release criteria in the verification soil samples.

In total, 65 investigative soil samples (including characterization, systematic, and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 11.5 cubic yards of soil was remediated during the TU93 removal action activities. Figure 9-2 depicts the approximate locations of the contaminated soil samples in TU93 prior to remediation.

9.8.2 TU93 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU93 remained in place on Parcel G following the completion of the removal action.

9.8.3 TU93 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU93 on June 5, 2008 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 9-1 depicts the FSS soil sample collection locations in TU93.

TU93 was defined for the FSS as the sum of the trench unit and the backfill material composed of a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU93 were 0.053 pCi/g for Cs-137, 0.070 pCi/g for Sr-90, and 0.373 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.039 pCi/g for Cs-137, 0.119 pCi/g for Sr-90, and 0.210 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.552 mrem/y with an increased cancer risk of 9.135×10^{-5} for the backfill material and 3.377 mrem/y with an increased cancer risk of 5.466×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 4 and 5 of the TU93 SUPR provided in Appendix L.

The results of the modeling efforts determined that the potential TU93 dose due to activity concentrations greater than or equal to the MDL was 5.552 mrem/y with an increased cancer risk of 9.135×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU93 SUPR (Appendix L).

9.8.4 TU93 Backfill Activities

Imported fill was selected as the appropriate backfill soil for TU93. The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

Concurrence with backfilling TU93 was obtained from the RASO on June 17, 2008 and backfilling operations commenced on July 9, 2008. Approximately 840 cubic yards of soil was placed in TU93 to grade followed by the application of road base material over the backfilled trench. Backfilling operations for TU93 were completed on July 11, 2008. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU93.

9.9 TRENCH SURVEY UNIT 94

TU94 is located in the southeast corner of Work Area 19 South near the intersection of Cochrane Street and 3rd Avenue and traverses the interior of non-radiologically impacted Building D-A (Figures 3-2 and 9-1). TU94 connects to TU99 on the east, TU106 on the west, and terminates at Manholes MH369 and MH370 on the north and Manholes MH367 and MH372 on the south. TU94 is physically situated in IR Program Site IR-44. The chemicals of concern associated with IR-44 are listed in Table 3-10.

TU94 consists of nine storm drain trench segments and no sanitary sewer trench segments. As identified on Figure 9-1, these trench segments include:

- 70-D18-44-1L
- 70-D18-44-1M
- 70-D18-44-1N
- 70-D18-44-1O
- 70-D18-44-1P
- 70-D18-44-1Q
- 70-D18-44-1R
- 70-D18-44-1S
- 70-D18-44-1T

Trench segment 70-D18-44-1L extended toward the west from TU106, continued through TU94, and terminated in TU99. Each of the trench segments associated with TU94 was identified in the Design Plan (TtEC 2007c).

9.9.1 TU94 Removal Action Activities

Excavation of TU94 was initiated on July 22, 2008 in trench segment 70-D18-44-1S. A total of 75 truckloads (approximately 900 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU94 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on August 8, 2008, TU94 had an exposed surface area of 716 m^2 and was 394 linear feet in length (Table 3-1). The maximum excavated TU94 depth was 9 feet bgs (Table 3-2).

A total of 76 sections of pipe and Manholes MH367, MH368, MH369, MH370, MH371, MH372, MH475, and MH476 were excavated from TU94 and placed on plastic pending further activities during the Parcel G removal action. Piping that disintegrated during excavation was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, each of the trench segments associated with TU94 contained 10-inch-diameter CMP located at depths ranging from 4 feet to 8 feet bgs.

An insufficient volume of sediment was available in the TU94 piping for sample collection and analysis. Consequently, no sediment sample analytical results exist for TU94.

Radiological surveys were performed on 76 sections of pipe and the materials forming Manholes MH367, MH368, MH369, MH370, MH371 MH372, MH475, and MH476 during the Parcel G removal action (Table 3-5). The surveys identified elevated results in two pipe sections excavated from trench segment 70-D18-44-1L, two pipe sections excavated from trench segment -1O, two pipe sections excavated from trench segment -1Q, and two pipe sections excavated from trench segment -1S. The potentially contaminated pipe sections were placed in LLRW bins for disposal by the DON's radiological waste contractor. Table 3-5 identifies the disposition of each pipe section and manhole debris excavated from TU94. The radiological survey reports are provided in Appendix B.

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9.9.2 TU94 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU94 remained in place on Parcel G following the completion of the removal action.

9.9.3 TU94 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU94 on October 7, 2008 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 9-1 depicts the FSS soil sample collection locations in TU94.

TU94 was defined for the FSS as the sum of the trench unit and the backfill material composed of a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU94 were 0.053 pCi/g for Cs-137, 0.070 pCi/g for Sr-90, and 0.373 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.049 pCi/g for Cs-137, 0.090 pCi/g for Sr-90, and 0.184 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.525 mrem/y with an increased cancer risk of 9.099×10^{-5} for the backfill material and 2.93 mrem/y with an increased cancer risk of 4.764×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 4 and 5 of the TU94 SUPR provided in Appendix L.

The results of the modeling efforts determined that the potential TU94 dose due to activity concentrations greater than or equal to the MDL was 5.525 mrem/y with an increased cancer risk of 9.099×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU94 SUPR (Appendix L).

9.9.4 TU94 Backfill Activities

Imported fill was selected as the appropriate backfill soil for TU94. The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

Concurrence with backfilling TU94 was obtained from the RASO on November 19, 2008 and backfilling operations commenced on December 4, 2008. Approximately 741 cubic yards of soil was placed in TU94 to grade followed by the application of road base material over the backfilled trench. Backfilling operations for TU94 were completed on December 9, 2008. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU94.

9.10 TRENCH SURVEY UNIT 106

TU106 is located on the southern end of Work Area 19 South, north of 3rd Avenue and south of radiologically surveyed and released Building 411 (Figures 3-2 and 9-1). The radiological activities performed for Building 411 are summarized in Section 9.15 and detailed in the FSS report provided in Appendix V. TU106 extends south from Manholes MH376 and MH377 through Manholes MH375 and MH378, then continues through Manholes MH374 and MH379 and finally terminates on the south at Manholes MH373 and MH380. TU106 connects to TU94 on the east and TU116 on the west. No piping was found north of Manholes MH376 or MH377 or south of Manholes MH373 or MH380. Physically, TU106 is situated within IR Program Site IR-44. The chemicals of concern associated with IR-44 are listed in Table 3-10.

TU106 is composed of nine storm drain trench segments and no sanitary sewer trench segments. As identified on Figure 9-1, these trench segments include:

- 70-D18-44-1L
- 70-D18-44-1U
- 70-D18-44-1V
- 70-D18-44-1W
- 70-D18-44-1X
- 70-D18-44-1Y
- 70-D18-44-1Z
- 70-D18-44-2A
- 70-D18-44-2B

Trench segment 70-D18-44-1L extended westward from TU99, through TU94 and into TU106, and terminated in TU116. Each of the trench segments associated with TU106 was identified in the Design Plan (TtEC 2007c).

9.10.1 TU106 Removal Action Activities

Excavation of TU106 was initiated on February 12, 2008 in trench segment 70-D18-44-1W. A total of 68 truckloads (approximately 816 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU106 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on August 6, 2008, TU106 exhibited an exposed surface area of 687 m^2 and was 353 linear feet in length (Table 3-1). The maximum excavated TU106 depth was 8 feet bgs (Table 3-2).

A total of 94 sections of pipe and 8 manholes (MH373 through MH380) were excavated from TU106 and placed on plastic pending further activities during the Parcel G removal action. Piping that disintegrated during excavation was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, eight of the storm drain trench segments associated with TU106 contained 10-inch-diameter CMP located at depths ranging from 6 feet to 7 feet bgs. Trench segment 70-D18-44-1Y contained 12-inch-diameter CMP located at depths between 6 feet and 7 feet bgs.

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A sufficient volume of sediment was found in five sections of pipe excavated from trench segments 70-D18-44-1U, -1V, and -1W for sample collection and analysis (Table 3-6). None of the manholes contained a sufficient volume of sediment for sample collection. The laboratory analytical results did not identify the presence of radioactivity above the release criteria in the sediment samples for any ROC. The sediment sample analytical results are provided in Appendix D.

Radiological surveys were performed on 94 sections of pipe and the materials forming Manholes MH373 through MH380 during the Parcel G removal action activities (Table 3-5). With the concurrence of the RASO, six pipe sections excavated from trench segment 70-D18-44-1L, two pipe sections excavated from trench segment -1Y, three pipe sections excavated from trench segment -2A, and one pipe section excavated from trench segment -2B were disposed of as LLRW due to elevated survey results. The remainder of the excavated pipe sections and each of the eight manholes were surveyed and released to the DON's non-radiological waste contractor for off-site disposal or recycling. The final disposition of piping excavated from TU106 is provided in Table 3-5. The radiological survey reports are provided in Appendix B.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU106 on September 4, 2008 and submitted to the laboratory for analysis. One soil sample identified the presence of Ra-226 above the release limit at 2.3955 pCi/g. To delineate the extent of contamination, a total of 16 characterization soil samples were collected and analyzed. The analytical results identified the presence of Ra-226 activity above the release limit in one sample at 2.5391 pCi/g. Based on these results, an estimated 2 cubic yards of soil was remediated on October 9, 2008. The remediated soil was placed in LLRW bin GFLU001109G6 for disposal by the DON's radiological waste contractor (Table 3-9). Following remediation, a total of three verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

A second set of 18 systematic soil samples was collected from TU106 on October 24, 2008 and analyzed by the laboratory. Three of the systematic soil samples identified the presence of Ra-226 activity above the release limit at 1.5083 pCi/g, 1.7477 pCi/g, and 2.8207 pCi/g. Roughly 9 cubic yards of soil was remediated from TU106 on November 4, 2008. The remediated soil was placed in LLRW bin GFLU001126G1 pending off-site disposal (Table 3-9). A total of nine verification soil samples were collected following the remediation activities. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

A third set of 18 systematic soil samples was collected from the sidewalls and bottom of TU106 on January 20, 2009 and submitted to the laboratory for analysis. One soil sample identified Ra-226 contamination at 2.8456 pCi/g. As indicated in Table 3-9, approximately 2.25 cubic yards of soil was remediated from TU106 on January 30, 2009 followed by the collection of

three verification soil samples. No radioactivity above the release criteria was identified in the verification soil samples.

A fourth set of 18 systematic soil samples was collected from TU106 on March 19, 2009 and analyzed by the laboratory. Three soil samples identified the presence of Ra-226 contamination at 1.515 pCi/g, 1.7027 pCi/g, and 2.6642 pCi/g. Based on these results, an estimated 4.5 cubic yards of soil was remediated from TU106 on April 2, 2009 (Table 3-9). Following the remediation efforts, six verification soil samples were collected and analyzed. One soil sample identified the continued presence of Ra-226 activity above the release limit at 2.0554 pCi/g. Based on this result, approximately 7.5 cubic yards of soil was placed in LLRW bin GFLU001163G9 for disposal (Table 3-9). Three verification soil samples were collected following the remediation efforts and analyzed by the laboratory. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

In total, 112 investigative soil samples (including systematic, characterization, and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 25.25 cubic yards of soil was remediated from TU106 during the Parcel G removal action. Figure 9-2 depicts the approximate locations of the contaminated soil samples in TU106 prior to remediation.

9.10.2 TU106 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU106 remained in place on Parcel G following the completion of the removal action.

9.10.3 TU106 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU106 on April 22, 2009 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 9-1 depicts the FSS soil sample collection locations in TU106.

For the FSS, TU106 was defined as the sum of the trench unit and the backfill soil composed of a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU106 were 0.053 pCi/g for Cs-137, 0.070 pCi/g for Sr-90, and 0.373 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.032 pCi/g for Cs-137, 0.094 pCi/g for Sr-90, and 0.174 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.392 mrem/y with an increased cancer risk of 8.928×10^{-5} for the backfill material and 2.700 mrem/y with an increased cancer risk of 4.404×10^{-5} for the trench unit. The modeling

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parameters and results were presented in Attachments 4 and 5 of the TU106 SUPR provided in Appendix L.

The results of the modeling efforts determined that the potential TU106 dose due to activity concentrations greater than or equal to the MDL was 5.392 mrem/y with an increased cancer risk of 8.928×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU106 SUPR (Appendix L).

9.10.4 TU106 Backfill Activities

Imported fill was selected as the appropriate backfill material for TU106. The radiological and chemical analytical reports for the imported fill used in TU106 were provided in Attachment 1 of the SUPRA (Appendix A).

The RASO concurred with backfilling TU106 on May 11, 2009 and backfilling activities commenced on May 13, 2009. Approximately 815 cubic yards of soil was placed in TU106 followed by the application of road base material over the backfilled trench. Backfilling activities were completed for TU106 on May 21, 2009. A summary of the activities performed to support the recommended radiological free release of TU106 is provided in Table 3-1.

9.11 TRENCH SURVEY UNIT 107

TU107 is located in the southern portion of Work Area 19 South, at the southeast end of Hussey Street and just north of 3rd Avenue (Figures 3-2 and 9-1). TU107 connects to TU78 on the north, TU108 on the west, and TU204 on the south. No piping was found to the east of Manholes MH426, MH427, or MH430. One small section located on the southern end of TU107 is situated within IR Program Site IR-44. The chemicals of concern associated with IR-44 are listed in Table 3-10.

TU107 consists of four storm drain trench segments and one sanitary sewer trench segment. As identified on Figure 9-1, these trench segments include:

<u>Storm Drain Trench Segments</u>

- 70-D19-00-1M
- 70-D19-00-6A
- 70-D19-00-6C
- 70-D19-44-1L

<u>Sanitary Sewer Trench Segment</u>

- 70-D19-00-6B

Trench segment 70-D19-00-6A extended toward the west and transitioned into TU108. Each of the trench segments associated with TU107 was identified in the Design Plan (TtEC 2007c).

9.11.1 TU107 Removal Action Activities

Excavation of TU107 commenced on August 9, 2007 in trench segment 70-D19-00-1M. A total of 35 truckloads (approximately 420 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU107 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on September 4, 2008, TU107 exhibited an exposed surface area of 272 m^2 and was 152 linear feet in length (Table 3-1). The maximum excavated TU107 depth was 8 feet bgs (Table 3-2).

A total of 37 sections of pipe and Manholes MH426, MH427, and MH430 were excavated from TU107 and placed on plastic pending further activities during the Parcel G removal action. Piping that crumbled during excavation was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, storm drain trench segments 70-D19-00-1M and 70-D19-44-1L contained 24-inch-diameter concrete pipe located at depths ranging between 4 feet and 6 feet bgs. Storm drain trench segments 70-D19-00-6A and -6C contained 8-inch-diameter and 10-inch-diameter VCP located at depths between 2 feet and 5 feet bgs. In addition, sanitary sewer trench segment 70-D19-00-6B contained 6-inch-diameter CIP located at depths between 3 feet and 6 feet bgs.

Sufficient sediment for sample collection and analysis was found in 13 pipe sections and Manhole MH430 during the removal action activities (Table 3-6). Eleven sediment samples were collected from pipe sections excavated from trench segment 70-D19-00-1M and two sediment samples were collected from pipe sections excavated from trench segment 70-D19-44-1L. Four sediment samples collected from trench segment 70-D19-00-1M identified the presence of Cs-137 contamination ranging from 0.15603 pCi/g to 0.58532 pCi/g, and two sediment samples showed Ra-226 contamination at 1.9408 pCi/g and 2.1086 pCi/g. In addition, one sediment sample collected from a pipe section excavated from trench segment 70-D19-00-1M indicated the presence of both Cs-137 and Ra-226 at 0.21319 pCi/g and 1.4937 pCi/g, respectively. One of the sediment samples collected from trench segment 70-D19-44-1L identified the presence of Cs-137 contamination at 0.12059 pCi/g. The sediment sample collected from Manhole MH430 identified both Cs-137 and Ra-226 contamination at 0.42211 pCi/g and 2.5562 pCi/g, respectively. The pipe sections that contained contaminated sediment and Manhole MH430 were placed in LLRW bins for disposal by the DON's radiological waste contractor (Table 3-6). The sediment sample analytical reports are provided in Appendix D.

Radiological surveys were performed on 34 sections of pipe and the materials forming Manholes MH426 and MH427 during the Parcel G removal action (Table 3-5). None of the pipe sections or manhole debris identified elevated survey results. The radiologically surveyed and released pipe sections and materials forming the manholes were transferred to the DON's non-radiological waste contractor for off-site disposal or recycling. The final disposition of piping excavated from TU107 is provided in Tables 3-5 and 3-6. The radiological survey reports are presented in Appendix B.

Due to the presence of Cs-137 and Ra-226 contamination in sediment samples collected from TU107 piping, a total of 46 investigative soil samples were collected along the bottom of TU107 on September 6, 2008 and submitted to the laboratory for analysis. Five of the investigative soil samples identified the presence of Ra-226 activity above the release limit ranging from 1.5773 pCi/g to 2.4902 pCi/g. Based on these results, an estimated 13 cubic yards of soil was remediated. The remediated soil was placed in LLRW bin GFLU001059G6 for disposal by the DON's radiological waste contractor (Table 3-9). Following remediation activities, nine verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

In total, 55 investigative soil samples (including investigative and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 13 cubic yards of soil was remediated from TU107 during the Parcel G removal action. Figure 9-2 depicts the approximate locations of the contaminated soil samples in TU107 prior to remediation.

9.11.2 TU107 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU107 remained in place on Parcel G following the completion of the removal action.

9.11.3 TU107 Final Status Survey Summary

During the FSS activities, a total of 18 systematic soil samples were collected from the sidewalls and bottom of TU107 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 9-1 depicts the FSS soil sample collection locations in TU107.

TU107 was defined for the FSS as the sum of the trench unit and the backfill material composed of both radiologically processed and released excavated soil and a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU107 were 0.044 pCi/g for Cs-137, 0.071 pCi/g for Sr-90, and 0.236 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.045 pCi/g for Cs-137, 0.091 pCi/g for Sr-90, and 0.290 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 2.224 mrem/y with an increased cancer risk of 4.090×10^{-5} for the backfill material and 2.721 mrem/y with an increased cancer risk of 5.005×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU107 SUPR provided in Appendix L.

The results of the modeling efforts determined that the potential TU107 dose due to activity concentrations greater than or equal to the MDL was 2.721 mrem/y with an increased cancer risk of 5.005×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU107 SUPR (Appendix L).

9.11.4 TU107 Backfill Activities

Radiologically processed and released excavated soil survey unit ES-0143 was selected for use as backfill material in TU107 in addition to a volume of imported fill. Radiological information related to the processing of ES-0143 is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU107 SUPR (Appendix L). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

Concurrence with backfilling TU107 was obtained from the RASO on November 19, 2008 and backfilling activities commenced on December 2, 2008. Approximately 287 cubic yards of soil was placed in TU107 and backfilling activities were completed on December 4, 2008. A summary of the activities performed to support the recommended radiological free release of TU107 is provided in Table 3-1.

9.12 TRENCH SURVEY UNIT 108

TU108 is located in the southern portion of Work Area 19 South at the south end of Hussey Street, just north of 3rd Avenue and east of radiologically surveyed and released Building 439 (Figures 3-2 and 9-1). The radiological work and FSS activities performed for Building 439 are summarized in Section 11.6 of this RACR and detailed in the FSS report provided in Appendix W. TU108 connects to TU79 on the north, TU107 on the east, and TU204 on the south. Small sections on the west side of TU108 are situated within IR Program Site IR-67. The chemicals of concern associated with IR-67 are listed in Table 3-10.

TU108 consists of one storm drain trench segment and four sanitary sewer trench segments. As identified on Figure 9-1, these trench segments include:

Storm Drain Trench Segment	Sanitary Sewer Trench Segments
• 70-D19-00-6A	• 70-D19-00-3P
	• 70-D19-00-6B
	• 70-D19-00-8G
	• 70-D19-67-8G

Trench segment 70-D19-00-8G extended toward the east and transitioned into TU79. A small connector trench was excavated between trench segment 70-D19-00-8G and the main body of TU108 to incorporate this small section into the survey unit. Although identified in the Design Plan (TtEC 2007c), trench segments 70-D19-67-6A, -6B, -1J, and Manhole MH429 were not excavated during the Parcel G removal action. In addition, trench segments 70-D19-00-8G and 70-D19-67-8G were not identified in the Design Plan, but were discovered during the Building 439 FSS activities.

9.12.1 TU108 Removal Action Activities

Excavation of TU108 commenced on August 8, 2008 in trench segment 70-D19-00-3P. A total of 44 truckloads (approximately 528 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU108 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on September 22, 2008, TU108 exhibited an exposed surface area of 396 m^2 and was 254 linear feet in length (Table 3-1). The maximum excavated TU108 depth was 9 feet bgs (Table 3-2).

A total of three pipe sections and Manhole MH425 were excavated from TU108 and placed on plastic pending further activities during the Parcel G removal action. The majority of the piping crumbled during excavation and was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, trench segments 70-D19-00-3P and -6A contained 10-inch-diameter VCP located at depths between 2 feet and 8 feet bgs. The remaining trench segments contained 6-inch-diameter CIP located at depths down to 6 feet bgs.

None of the pipes excavated from TU108 or Manhole MH425 contained sufficient sediment for sample collection and analysis. Consequently, no sediment sample analytical results exist for TU108.

Radiological surveys were performed on the three pipe sections removed from trench segments 70-D19-00-8G and 70-D19-67-8G, and the materials forming Manhole MH425 during the Parcel G removal action activities (Table 3-5). None of the pipe sections or Manhole MH425 debris identified elevated survey results. The TU108 piping was transferred to the DON's non-radiological waste contractor for off-site disposal or recycling. The final disposition of the TU108 pipes and manhole debris is identified in Table 3-5. The radiological survey reports are presented in Appendix B.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU108 on September 22, 2008 and submitted to the laboratory for analysis. Four of these soil samples identified the presence of Ra-226 activity above the release limit ranging from 1.8011 pCi/g to 2.5177 pCi/g. To further identify the extent of the contamination, a total of 23 characterization soil samples were collected and analyzed. The analytical results identified the presence of Ra-226 activity above the release limit in six of these samples ranging from 1.896 pCi/g to

2.5958 pCi/g. Based on these results, approximately 87 cubic yards of soil was remediated from TU108 followed by the collection of 15 verification soil samples (Table 3-9). The laboratory analytical results identified one Ra-226 contaminated soil sample at 1.8073 pCi/g. Based on this result, an additional 5.5 cubic yards of soil was remediated on April 30, 2009. The remediated soil was placed in LLRW bin DB1202D2 for disposal (Table 3-9). Two verification soil samples were collected and analyzed at the completion of the remediation activities. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

In total, 58 investigative soil samples (including systematic, characterization, and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 92.5 cubic yards of soil was remediated from TU108 during the Parcel G removal action. Figure 9-2 depicts the approximate locations of the contaminated soil samples in TU108 prior to remediation.

9.12.2 TU108 Piping Remaining In Place

Trench segments 70-D19-67-6A and -6B are located within the 10-foot buffer zone on the east side of Building 439 and were not excavated during the Parcel G removal action (Table 3-8). These trench segments could not be excavated without adversely affecting the structural integrity of Building 439.

A total of 9 linear feet of trench segment 70-D19-67-8G was excavated prior to its termination within the 10-foot buffer zone on the east side of Building 439. Based on historical drawings, an estimated 10 linear feet of trench segment 70-D19-67-8G remained in place following the completion of the removal action (Table 3-8).

Trench segment 70-D19-67-1J and Manhole 429 located at the southeast corner of Building 439 were not excavated during the Parcel G removal action. Because trench segment 70-D19-67-1J and Manhole MH429 are located within 10 feet of Building 439, neither the pipe nor the manhole could be safely removed without damaging the foundation of the structure. Based on historical drawings, an estimated 40 linear feet of trench segment 70-D19-67-1J remained in place on Parcel G following the completion of the excavation activities (Table 3-8).

Radiological surveys performed during the Parcel G removal action on three sections of pipe excavated from TU108 and the materials forming Manhole MH425 did not indicate the presence of contamination. In addition, a total of 76 soil samples were collected and analyzed and approximately 92.5 cubic yards of soil was remediated during the FSS activities for TU108. Based on these results, the DON concluded that the piping left in place on Parcel G was unlikely to be contaminated.

9.12.3 TU108 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU108 in September 2008 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 9-1 depicts the FSS soil sample collection locations in TU108.

TU108 was defined for the FSS as the sum of the trench unit and the backfill material consisting of both radiologically processed and released excavated soil and a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU108 were 0.049 pCi/g for Cs-137, 0.053 pCi/g for Sr-90, and 0.320 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.041 pCi/g for Cs-137, 0.265 pCi/g for Sr-90, and 0.207 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 3.460 mrem/y with an increased cancer risk of 6.138×10^{-5} for the backfill material and 2.627 mrem/y with an increased cancer risk of 4.469×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU108 SUPR provided in Appendix L.

The results of the modeling efforts determined that the potential TU108 dose due to activity concentrations greater than or equal to the MDL was 3.460 mrem/y with an increased cancer risk of 6.138×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU108 SUPR (Appendix L).

9.12.4 TU108 Backfill Activities

In addition to a volume of imported fill, radiologically processed and released excavated soil survey unit ES-0142 was selected for use as backfill material in TU108. Radiological information related to the processing of ES-0142 is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU108 SUPR (Appendix L). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

The RASO concurred with backfilling TU108 on July 15, 2009 and backfilling activities were initiated and completed on July 17, 2009. Approximately 438 cubic yards of soil was placed in TU108 to grade followed by the application of road base material over the backfilled trench. A summary of the activities performed to support the recommended radiological free release of TU108 is provided in Table 3-1.

9.13 TRENCH SURVEY UNIT 116

TU116 is located in the southern portion of Work Area 19 South near the corner of 3rd Avenue and Hussey Street and immediately east of radiologically surveyed and released former Building 408 (Figures 3-2 and 9-1). The radiological activities performed for former Building 408 prior to demolition and its footprint are summarized in Section 9.14 of this RACR and detailed in the FSS provided in Appendix U. TU116 connects to TU106 on the east and terminates on the north, south and west at Manholes MH384, MH381, and MH383, respectively. Physically, TU116 is situated within IR Program Site IR-44. The chemicals of concern associated with IR-44 are listed in Table 3-10.

TU116 is composed of five storm drain trench segments and no sanitary sewer trench segments. As identified on Figure 9-1, these trench segments include:

- 70-D18-44-1L
- 70-D18-44-2C
- 70-D18-44-2D
- 70-D18-44-2E
- 70-D18-44-2F

Trench segment 70-D18-44-1L extended toward the west from TU99, through TU94 and TU106, and transitioned into TU116 where it terminated near the footprint of former Building 408. Each of the trench segments associated with TU116 was identified in the Design Plan (TtEC 2007c). Although identified in the Design Plan, Manholes MH389, MH460, and MH461 could not be found during the excavation activities after several attempts.

9.13.1 TU116 Removal Action Activities

Excavation of TU116 began on September 30, 2008 in trench segment 70-D18-44-1L. A total of 28 truckloads (approximately 336 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU116 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on October 10, 2008, TU116 exhibited an exposed surface area of 342 m^2 and was 229 linear feet in length (Table 3-1). The maximum excavated TU116 depth was 8 feet bgs (Table 3-2).

A total of 38 sections of pipe and Manholes MH381, MH382, MH383, and MH384 were excavated from TU116 and placed on plastic pending further activities during the Parcel G removal action. Piping that disintegrated during excavation was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, each of the TU116 trench segments contained 10-inch-diameter CMP located at depths between 4 feet and 7 feet bgs.

An insufficient volume of sediment was available in the TU116 piping for sample collection and analysis. Consequently, there were no existing sediment sample analytical results for TU116.

Radiological surveys were performed on 38 sections of pipe and the materials forming Manholes MH381, MH382, MH383, and MH384 during the Parcel G removal action (Table 3-5). Only one pipe section excavated from trench segment 70-D18-44-1L showed elevated survey results and was transferred to LLRW bin BKRU026006G2 for disposal by the DON's radiological waste contractor. None of the remaining sections of pipe or manhole debris indicated the presence of potential contamination. The final disposition of the pipes and manholes excavated from TU116 is provided in Table 3-5. The radiological survey reports are presented in Appendix B.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU116 on October 28, 2008 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 activity above the release limit in three soil samples at 1.5615 pCi/g, 2.1970 pCi/g, and 2.8485 pCi/g. To further delineate the extent of the contamination, a total of 29 characterization soil samples were collected from TU116 on November 17, 2008 and analyzed. Six of these soil samples identified Ra-226 contamination ranging from 2.0033 pCi/g to 4.0260 pCi/g. Based on these analytical results, an estimated 55 cubic yards of soil was placed in LLRW bins for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation efforts, a total of 12 verification soil samples were collected from TU116 on December 6, 2008 and analyzed. Two of these samples identified the continued presence of Ra-226 activity above the release limit at 3.1054 pCi/g and 4.1986 pCi/g. Based on these results, an additional 6.75 cubic yards of soil was remediated. The remediated soil was placed in LLRW bin GFLU001163G9 pending off-site disposal. Three verification soil samples were collected following the remediation activities. No radioactivity above the release criteria was identified in these soil samples for any ROC.

In total, 62 investigative soil samples (including systematic, characterization, and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 61.75 cubic yards of soil was remediated from TU116 during the Parcel G removal action. Figure 9-2 depicts the approximate locations of the contaminated soil samples prior to remediation.

9.13.2 TU116 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU116 remained in place on Parcel G following the completion of the removal action.

9.13.3 TU116 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU116 on April 27, 2009 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 9-1 depicts the FSS soil sample collection locations in TU116.

TU116 was defined for the FSS as the sum of the trench unit and the backfill material composed of a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU116 were 0.053 pCi/g for Cs-137, 0.070 pCi/g for Sr-90, and 0.373 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.050 pCi/g for Cs-137, 0.073 pCi/g for Sr-90, and 0.271 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 3.778 mrem/y with an increased cancer risk of 6.812×10^{-5} for the backfill material and 2.797 mrem/y with an increased cancer risk of 5.022×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 4 and 5 of the TU116 SUPR provided in Appendix L.

The results of the modeling efforts determined that the potential TU116 dose due to activity concentrations greater than or equal to the MDL was 3.778 mrem/y with an increased cancer risk of 6.812×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU116 SUPR (Appendix L).

9.13.4 TU116 Backfill Activities

Imported fill was selected for use as the appropriate backfill material in TU116. The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

The RASO concurred with backfilling TU116 on June 5, 2009 and backfilling operations began on June 8, 2009. Approximately 350 cubic yards of soil was placed in TU116 to grade followed by the application of road base material over the backfilled trench. Backfilling operations were completed for TU116 on June 15, 2009. A summary of the activities performed to support the recommended radiological free release of TU116 is provided in Table 3-1.

9.14 BUILDING 408

The following sections summarize the Building 408 FSS, provide an abbreviated history, describe the FSS results, and discuss regulatory concurrence for the unrestricted radiological release of the structure. The Building 408 FSS is provided in Appendix U and details the radiological survey activities. The location of Building 408 within Parcel G is depicted on Figures 3-3 and 9-1.

9.14.1 Description

Building 408 was located on the corner of Hussey Street and 3rd Avenue on the south side of Parcel G. Prior to dismantlement, Building 408 was a steel-framed structure housing two

freestanding furnaces constructed in 1947. The structure was approximately three stories in height at its open, northern end and dropped to one story in height at its southern end. The majority of the east and west sides of the structure were covered in corrugated asbestos-concrete transite panels. A firebrick-lined hearth occupied most of the open area at the north end of the structure. Natural gas burners were located on the east and west sides of the hearth and a pair of smokestacks extended from the lower rear segment of the building.

Building 408 was demolished in the spring of 2008, leaving only the concrete building pad. The SFRA Redevelopment Plan (SFRA 1997) identified the future planned use of the property as a "mixed use" area that may include residential development.

9.14.2 History

According to the HRA, Volume II (NAVSEA 2004), Building 408 was used as a smelter/furnace. Potential radioactive contamination may have been introduced through the smelting of Ra-226 and Sr-90 containing devices. Based on this potential, the ROCs selected for Building 408 included Ra-226 and Sr-90, as well as natural thorium in the firebrick.

9.14.3 Final Status Survey Summary

Mobilization to perform the scoping survey work activities for Building 408 began in May 2008. A total of 460 transite panels were removed from the building exterior during the demolition activities. Each panel was identified by a unique number and tracked to ensure proper disposition. With the approval of the RSO, the majority of these transite panels were radiologically surveyed and released and disposed of as non-LLRW asbestos waste. Six transite panels that exceeded the release criteria were disposed of as LLRW. Following removal of the transite panels, the two furnaces were dismantled. Over 100 cubic yards of firebrick was disposed of as LLRW due to the presence of natural thorium. In addition, several hundred bags of asbestos-containing trash and debris from the furnaces were placed in LLRW bins for disposal. In total, seven LLRW bins were used for the disposal of the asbestos-containing wastes and firebrick removed from Building 408.

The Building 408 steel structure was demolished in May and July of 2008. The steel was cut, sized, and radiologically surveyed prior to being staged for recycling. In addition, a total of 200 beams were disposed of as non-LLRW metal scrap. None of these beams were found to be contaminated during the survey activities. Over 1,300 metal pieces from Building 408 were surveyed and released as non-LLRW during the FSS activities; however, 17 metal pieces were disposed of as LLRW because they exceeded the release criteria. The released metal pieces from Building 408 filled 17 scrap metal bins and were transferred off-site for recycling. The survey results for the transite panels and steel structural pieces were provided in Attachment B of the Building 408 FSS (Appendix U).

Building 270 was selected as the appropriate reference or background area for conducting gamma static, gamma scan, and alpha/beta scan surveys at the former Building 408 site. Although the Building 270 structure had been demolished, its concrete foundation remained and was of similar construction material to that of Building 408. A concrete surface inside Building 400 was selected as the appropriate reference area for conducting alpha and beta static surveys at the former Building 408 site.

The investigation levels for alpha and beta surveys were established at 100 dpm/100 cm^2 and 1,000 dpm/100 cm^2, respectively. Loose surface contamination investigations to determine the fraction of removable activity present relative to the total activity were set at 20 percent of the values for total activity and were different than other investigation levels due to the lower release criteria. A complete discussion of the reference areas and investigation levels was provided in the Building 408 FSS report (Appendix U).

Following dismantlement of Building 408, the resulting footprint of the site was divided into two survey units. Survey Unit 1 was designated as a Class 1 that encompassed the footprint of the former structure. Survey Unit 2 was designated as a Class 2 that extended 2 meters outward from Survey Unit 1. Survey Unit 1 measured approximately 20 meters by 16 meters with a total area of approximately 322.38 m^2. Survey Unit 2 measured about 2 meters by 75 meters with a total area of 149.41 m^2. The Class 1 and Class 2 survey units and respective sample measurement locations were depicted on Figure 4-1 in the Building 408 FSS report (Appendix U).

Alpha and beta scan readings were logged for Survey Units 1 and 2 during the FSS activities. The majority of the alpha and all of the beta scan readings did not indicate the presence of contamination. However, three alpha scan readings in Survey Unit 2 exceeded the investigation levels. Biased static measurements were collected in the vicinity of the elevated readings and these results were found to be below the release criteria. The elevated alpha scan readings were likely the result of other factors such as static electricity caused by dust loading or radon from naturally occurring radioactivity in the concrete material. Systematic alpha and beta static measurements were collected at discrete locations within each survey unit. None of these measurements exceeded the release criteria. In addition, none of the swipe measurements indicated the presence of loose surface activity greater than the release criteria, and all of the swipe data were less than 20 percent of the total net residual activity identified within each survey unit.

Building 408 was subjected to reviews to ensure that radiation exposures to workers, the public, and the environment met ALARA principles. These reviews were conducted for Building 408 operations (including demolition), practices, and procedures with potential for individual or collective doses. Results from radiological survey activities, and air and swipe samples were used to assess the potential radiological impacts of Building 408 activities. These activities

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included characterization and demolition of Building 408 to ensure complete removal of radioactive material exceeding the release criteria. Following the completion of survey and demolition activities, qualitative radiological impacts from operations were evaluated by performing a dose and risk assessment. Based on recent estimates of dose to the public from Building 408 survey and demolition activities, only qualitative ALARA analyses were required. Qualitative ALARA analyses for Building 408 did not result in alpha or beta measurements above the investigation levels and none of the alpha, beta, or gamma measurement results identified residual radioactivity above the release criteria for any ROC. A description of the ALARA process is presented in Section 3.2.6 of this RACR and detailed in the Building 408 FSS (Appendix U).

Modeling for Building 408 was performed to calculate the residual dose to the critical group using the residential scenario in RESRAD-BUILD. The maximum residual dose in the Class 1 survey unit was 0.131 mrem/y with an increased health risk of 2.91×10^{-7} and 0.198 mrem/y with an increased health risk of 7.95×10^{-8} for the Class 2 survey unit. The modeling parameters and results were provided in Appendix G of the Building 408 FSS report (Appendix U).

Following an evaluation of the survey results and modeling efforts, the DON concluded that the Building 408 Site met the release criteria and recommended that it be radiologically released for unrestricted use.

9.14.4 Regulatory Concurrence

The final FSS results for Building 408 (Appendix U) were submitted to the regulatory agencies on July 8, 2009. Concurrence with the radiological release for unrestricted use of the former Building 408 site was obtained from the DTSC and CDPH on August 27, 2009. Copies of the DTSC letter and the CDPH memorandum are provided in Appendix X. According to statements by the EPA, their decision for radiological free release of the former building site will be based on the data and analyses presented in this RACR.

9.15 BUILDING 411

The following sections summarize the Building 411 FSS, provide an abbreviated history, describe the FSS results, and discuss regulatory concurrence for the unrestricted radiological release of the structure. The Building 411 FSS is provided in Appendix V and details the radiological survey results. The location of Building 411 within Parcel G is depicted on Figures 3-3 and 9-1.

9.15.1 Description

Building 411 is a three-story, curtain-walled, steel-framed structure with a relatively flat roof located in the southern waterfront area of Parcel G and is bounded by Manseau, Hussey,

Cochrane, and H Streets. It measures approximately 185,000 square feet and includes a saw-toothed series of rooftop monitors as well as bands of steel industrial sash and glazed industrial doors. The structure has three levels, with a taller segment to the north. A leaded enclosure measuring approximately 25 feet by 15 feet was situated in this building and housed an X-ray machine the DON used for radiography.

Currently, Building 411 is unoccupied. According to the SFRA Redevelopment Plan (SFRA 1997), the future planned reuse of the property is industrial.

9.15.2 History

The HRA, Volume II (NAVSEA 2004) indicates that Building 411 was used by the DON for the following purposes:

- Radiography shop
- Source storage
- Civilian cafeteria
- Shipfitter's shop
- Boilermaker's shop
- Ship repair shop

In addition, Building 411 was leased to civilian tenants Eric Lansdown (The Doll House) and Sierra Western Equipment.

In the spring of 2002, a radiological services contractor to the DON performed a scoping survey to determine whether residual contamination was present in Building 411. The designated surveillance area was organized into three specific Class 3 survey units encompassing the interior three floors of the structure. The surveys consisted of alpha and beta-gamma scans and swipe sampling for alpha and beta-gamma activity. The radioactivity levels were determined to be less than the release criteria in Building 411.

Building 411 was considered impacted due to the historical use of general radioactive materials by the DON. The ROCs selected for Building 411 were Cs-137, Co-60, and Ra-226. Based on the RASO's review of the Phase V data and because no records of swipe sample results could be found for the sealed sources used inside the building for radiography, the DON directed TtEC to perform a number of tasks in Building 411 including:

- A Class 3 survey of the third floor
- Verification of the existing Class 3 survey data on the first and second floors
- Class 1 surveys in the vicinity of the area where radiography was performed

- Class 2 surveys around the Class 1 areas
- Collect additional scan measurements
- Prepare a new FSS report using the combined data sets

9.15.3 Final Status Survey Summary

Buildings 369 and 400 were selected as the appropriate background or reference areas following a review of the applicable plans for Building 411. Buildings 369 and 400 were not listed as impacted structures in the HRA, Volume II (NAVSEA 2004), were made of similar building materials, and were constructed in the same era as Building 411. The reference area buildings were constructed between 1945 (Building 400) and 1956 (Building 369).

The investigation levels for alpha and beta surveys were established at 90 dpm/100 cm^2 and 4,500 dpm/100 cm^2, respectively. Loose surface investigations to determine the fraction of removable activity present relative to the total activity were established at 20 percent of the values for total activity and were different from other investigation levels due to the lower release criteria. A complete discussion of the reference areas and investigation levels was provided in the Building 411 FSS (Appendix V).

Mobilization to perform the survey work for Building 411 began in July 2008 with the performance of topographic engineering surveys of the interior building surfaces. No ventilation or drainage systems were surveyed as part of the FSS activities in Building 411.

To perform the surveys, Building 411 was divided into four Class 3 survey units. Survey Unit 1 encompassed the third floor of the building, including the mezzanine level. Survey Unit 2 covered the second floor of the building. Due to the size of the first floor, the area was divided into two separate Class 3 survey units designated as Survey Units 3 and 4. Survey Units 5, 6, 7, 9, and 10 were designated as Class 1 areas, while Survey Units 8 and 11 were designated as Class 2 areas. Some of the data collection points that were used during the Phase V investigations were identified for resurvey during the Class 3 survey activities. These data collection locations were used for part of the first and second floor surveys.

Alpha and beta scans were performed on 100 percent of the accessible surfaces in the Class 1 survey units, 50 percent of those in the Class 2 survey units, and 25 percent in the Class 3 survey units. None of the scan readings exceeded the investigation levels and no areas were identified for follow-up biased static measurements. Systematic alpha and beta static measurements were logged at discrete locations in each of the survey units. None of the static measurements logged exceeded the release criteria. In addition, swipe samples were collected from each of the discrete locations. The average swipe data results were less than 0.88 dpm/100 cm^2 alpha and 4.79 dpm/ 100 cm^2 beta in each of the survey units. No swipe measurement was greater than 20 percent of the release criteria and all of the swipe data were less than 20 percent of the total net residual

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activity identified within the survey unit. The maximum swipe measurements were 8.40 dpm/ 100 cm^2 alpha and 18.28 dpm/100 cm^2 beta.

Building 411 was subjected to reviews to ensure that radiation exposures to workers, the public, and the environment met ALARA principles. These reviews were conducted for Building 411 operations, practices, and procedures with potential for individual or collective doses. Results from radiological survey activities, and air and swipe samples were used to assess the potential radiological impacts of Building 411 activities. These activities included characterization to ensure complete removal of radioactive material exceeding the release criteria. Following the completion of survey activities, qualitative radiological impacts from operations were evaluated by performing a dose and risk assessment. Based on recent estimates of dose to the public from Building 411 survey activities, only qualitative ALARA analyses were required. Qualitative ALARA analyses for Building 411 did not result in alpha or beta measurements above the investigation levels and none of the alpha, beta, or gamma measurement results identified residual radioactivity above the release criteria for any ROC. A description of the ALARA process is presented in Section 3.2.6 of this RACR and detailed in the Building 411 FSS (Appendix V).

Dose modeling for Building 411 was performed to calculate the residual dose to the critical group using the residential scenario in RESRAD-BUILD. The maximum Building 411 residual dose was identified in Survey Unit 6 at 0.611 mrem/y with a maximum excess lifetime cancer risk of 2.40×10^{-7}. The results of the modeling efforts were provided in Appendix J of the Building 411 FSS (Appendix V).

Based on an evaluation of the survey results and modeling efforts, the DON concluded that Building 411 met the release criteria and the structure could be radiologically released for unrestricted use.

9.15.4 Regulatory Concurrence

The final FSS results for Building 411 (Appendix V) were submitted to the regulatory agencies on July 6, 2010. Concurrence with the radiological release for unrestricted use for Building 411 was obtained from the DTSC and CDPH on October 6, 2010. A copy of the DTSC letter and the CDPH memorandum is provided in Appendix X. According to statements by the EPA, their decision for radiological free release of Building 411 will be based on the data and analyses presented in this RACR.

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10.0 WORK AREA 27 NORTH

Work Area 27 North is located in the northwest corner of Parcel G (Figures 3-2 and 10-1). It is bounded on the north by Parcel UC1, on the east by Work Area 19 North, on the south by Work Area 27 South, and on the west by Parcel E. The radiological work activities performed in Work Area 27 North included TU103, TU104, and TU105. The following sections summarize the work activities completed in Work Area 27 North to support the recommended radiological release for unrestricted use of the Parcel G property.

10.1 TRENCH SURVEY UNIT 103

Situated at the northeast corner of H Street, TU103 is located in the northeast corner of Work Area 27 North and immediately west of radiologically surveyed and released Building 401 (Figures 3-2 and 10-1). The radiological work and FSS activities performed for Building 401 are summarized in Section 8.9 of this RACR and detailed in the FSS report provided in Appendix T. TU103 connects to TU124 on the north and TU104 on the west. No additional piping was found to the south of TU103 beyond Manhole MH440 or to the east. The majority of TU103 is situated within IR Program Site IR-37. The chemicals of concern associated with IR-37 are listed in Table 3-10.

TU103 consists of six storm drain trench segments and no sanitary sewer trench segments. As identified on Figure 10-1, these trench segments include:

- 70-D27-00-2T
- 70-D27-00-2W
- 70-D27-37-2T
- 70-D27-37-2V
- 70-D27-37-2W
- 70-E27-00-2V

Trench segment 70-E27-00-2V extended toward the west and transitioned into TU104. Each of the trench segments associated with TU103 was identified in the Design Plan (TtEC 2007c). Although trench segment 70-D27-37-2U was identified in the Design Plan, no piping could be found in this trench segment after several excavation attempts.

10.1.1 TU103 FSS Removal Action Activities

Excavation of TU103 was initiated on June 20, 2008 in trench segment 70-D27-00-2W. A total of 27 truckloads (approximately 324 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU103 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on June 21, 2008, TU103 exhibited an exposed surface area of 380 m^2 and was 310 linear feet in length (Table 3-1). The maximum excavated TU103 depth was 6 feet bgs (Table 3-2).

A total of one pipe section and Manholes MH438 and MH440 were excavated from TU103 and placed on plastic pending further activities during the Parcel G removal action. Piping that crumbled during excavation was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, storm drain trench segments 70-D27-00-2T, -2W, and 70-D27-37-2W contained 10-inch-diameter VCP located at depths ranging from 2 feet to 7 feet bgs. Trench segments 70-D27-37-2V and 70-E27-00-2V contained 6-inch-diameter VCP located at depths between 4 feet and 6 feet bgs. In addition, trench segment 70-D27-37-2T contained 8-inch-diameter metal pipe located at depths between 2 feet and 3 feet bgs.

None of the pipes or manholes excavated from TU103 contained sufficient sediment for sample collection and analysis. Consequently, no sediment sample analytical results exist for TU103.

Radiological surveys were performed on one section of pipe excavated from trench segment 70-D27-37-2T and the materials forming Manholes MH438 and MH440 during the Parcel G removal action (Table 3-5). No elevated survey results were identified for either the pipe section or the two manholes. The surveyed and released TU103 pipe section and manhole debris were transferred to the DON's non-radiological waste contractor for off-site disposal or recycling in September 2008. The final disposition of the piping excavated from TU103 is listed in Table 3-5 and the radiological survey reports are provided in Appendix B.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU103 on July 22, 2008 and submitted to the laboratory for analysis. The analytical results identified the presence of Ra-226 activity above the release limit in one soil sample at 1.8394 pCi/g. Based on this result, approximately 32 cubic yards of soil was placed in LLRW bins for disposal by the DON's radiological waste contractor (Table 3-9). Following remediation, a total of three verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

A second set of 18 systematic soil samples was collected from TU103 on November 6, 2008 and submitted to the laboratory for analysis. The analytical results identified the continued presence of Ra-226 activity above the release limit in two soil samples at 2.2949 pCi/g and 3.9525 pCi/g. Based on these results, roughly 46.5 cubic yards of soil was remediated followed by the collection of six verification soil samples (Table 3-9). The laboratory analytical results identified Ra-26 activity above the release limit in one soil sample at 1.6693 pCi/g. On April 17, 2009, roughly 9.75 cubic yards of soil was placed in LLRW bin BFLU000349G9 for disposal (Table 3-9). Following the remediation activities, a total of three verification soil samples were collected and analyzed. No radioactivity was identified in the verification soil samples for any ROC.

A third set of 18 systematic soil samples was collected from the sidewalls and bottom of TU103 on April 29, 2009 and submitted to the laboratory for analysis. The analytical results identified

the presence of Ra-226 activity above the release limit at 1.7496 pCi/g. Based on this result, an estimated 4.5 cubic yards of soil was remediated from TU103 on May 14, 2009 followed by the collection of three verification soil samples. No radioactivity above the release criteria was identified in these soil samples for any ROC.

In total, 69 investigative soil samples (including systematic and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 92.75 cubic yards of soil was remediated from TU103 during the removal action activities. Figure 10-2 depicts the approximate locations of the contaminated soil samples prior to remediation.

10.1.2 TU103 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU103 remaining in place on Parcel G following the completion of the removal action.

10.1.3 TU103 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU103 on May 28, 2009 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 10-1 depicts the FSS soil sample collection locations in TU103.

For the FSS, TU103 was defined as the sum of the trench unit and the backfill material composed of a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill were 0.053 pCi/g for Cs-137, 0.070 pCi/g for Sr-90, and 0.373 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.033 pCi/g for Cs-137, 0.215 pCi/g for Sr-90, and 0.085 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 3.961 mrem/y with an increased cancer risk of 7.056×10^{-5} for the backfill material and 1.249 mrem/y with an increased cancer risk of 2.060×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 4 and 5 of the TU103 SUPR provided in Appendix M.

The results of the modeling efforts determined that the potential TU103 dose due to activity concentrations greater than or equal to the MDL was 3.961 mrem/y with an increased cancer risk of 7.056×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU103 SUPR (Appendix M).

10.1.4 TU103 Backfill Activities

A volume of imported fill was selected as the appropriate backfill material for TU103. The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

The RASO concurred with backfilling TU103 on August 12, 2009 and backfilling activities were completed on August 13, 2009. Approximately 314 cubic yards of soil was placed in TU103 during the backfilling activities. A summary of the activities performed to support the recommended radiological free release of TU103 is provided in Table 3-1.

10.2 TRENCH SURVEY UNIT 104

TU104 is located in the northwest corner of Work Area 27 North, at the northwest end of H Street and directly east of non-radiologically impacted Building 400 (Figures 3-2 and 10-1). TU104 connects to TU124 on the north, TU103 on the east, TU105 on the south, and was terminated on the east near the Parcel E property boundary. On the west, a small portion of TU104 is situated within IR Program Site IR-36. The chemicals of concern associated with IR-36 are listed in Table 3-10.

TU104 is composed of two storm drain trench segments and four sanitary sewer trench segments. As identified on Figure 10-1, these trench segments include:

<u>Storm Drain Trench Segments</u>

- 70-E27-00-2V
- 70-E27-36-2V

<u>Sanitary Sewer Trench Segments</u>

- 70-D27-00-2Y
- 70-D27-00-8A
- 70-E27-00-3K
- 70-E27-00-3L

Trench segment 70-E27-00-2V extended westward from TU103 and transitioned into TU104. Trench segment 70-E27-00-3K extended toward the south and continued into TU105. With the exception of trench segment 70-D27-00-8A, each of the trench segments associated with TU104 was identified in the Design Plan (TtEC 2007c). Trench segment 70-D27-00-8A was found during excavation of Manhole MH437.

10.2.1 TU104 Removal Action Activities

Excavation of TU104 commenced on June 18, 2008 in trench segment 70-D27-00-2Y. A total of 83 truckloads (approximately 996 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU104 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on June 24, 2008, TU104 had an

exposed surface area of 897 m^2 and was 297 linear feet in length (Table 3-1). The maximum excavated TU104 depth was 17 feet bgs (Table 3-2).

The majority of pipes excavated from TU104 disintegrated during the removal activities and were transferred along with the surrounding soil to RSY2 for processing. One pipe section excavated from trench segment 70-E27-00-3L and Manholes MH437 and MH439 were removed and placed on plastic pending further activities. As indicated in Table 3-2, storm drain trench segments 70-E27-00-2V and 70-E27-36-2V contained 6-inch-diameter VCP located at depths between 3 feet and 6 feet bgs. Sanitary sewer trench segments 70-D27-00-2Y and -8A contained 8-inch-diameter VCP located at depths ranging from 2 feet to 16 feet bgs. In addition, sanitary sewer trench segments 70-E27-00-3K and -3L contained 16-inch-diameter steel and VCP located at depths between 12 feet and 16 feet bgs.

Sufficient sediment for sample collection and analysis was not available in the pipes or manholes removed from TU104. Consequently, no sediment sample analytical results exist for TU104.

Radiological surveys were performed on one section of pipe excavated from trench segment 70-E27-00-3L and the materials forming Manholes MH437 and MH439 during the Parcel G removal action (Table 3-5). No elevated survey results were identified for the TU104 pipe section or manhole debris. As indicated in Table 3-5, the surveyed and released pipe section and the materials forming Manholes MH437 and MH439 were transferred to the DON's non-radiological waste contractor for disposal or recycling in September 2008. The radiological survey reports are provided in Appendix B.

10.2.2 TU104 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU104 remained in place on Parcel G following the completion of the removal action.

10.2.3 TU104 Final Status Survey Summary

A total of 18 systematic soil samples were collected From the sidewalls and bottom of TU104 on September 30, 2008 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 10-1 depicts the FSS soil sample collection locations in TU104.

TU104 was defined for the FSS as the sum of the trench unit and the backfill material composed of radiologically processed and released excavated soil. The average net residual radioactivity concentrations for material used as backfill in TU104 were 0.041 pCi/g for Cs-137, 0.084 pCi/g for Sr-90, and 0.171 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.042 pCi/g for Cs-137, 0.106 pCi/g for Sr-90, and 0.172 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 3.133 mrem/y with an increased cancer risk of 4.952×10^{-5} for the backfill material and 3.231 mrem/y with an increased cancer risk of 5.083×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU104 SUPR provided in Appendix M.

The results of the modeling efforts determined that the potential TU104 dose due to activity concentrations greater than or equal to the MDL was 3.231 mrem/y with an increased cancer risk of 5.083×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU104 SUPR (Appendix M).

10.2.4 TU104 Backfill Activities

Radiologically processed and released excavated soil survey units were selected for use as backfill material in TU104. The excavated soil survey units selected included:

- ES-0109
- ES-0110
- ES-0113
- ES-0114

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU104 SUPR (Appendix M).

Concurrence with backfilling TU104 was obtained from the RASO on November 19, 2008 and backfilling activities were initiated on November 22, 2008. Approximately 745 cubic yards of soil was placed in TU104 to grade followed by the application of road base material over the backfilled trench. Backfilling activities for TU104 were completed on November 25, 2008. A summary of the activities performed to support the recommended radiological free release of TU104 is provided in Table 3-1.

10.3 TRENCH SURVEY UNIT 105

TU105 is located in the southern portion of Work Area 27 North and west of non-radiologically impacted Building 404 (Figures 3-2 and 10-1). TU105 connects to TU104 on the north, TU112 and TU113 on the south, and terminates on the west near the Parcel E property boundary. No piping was found to the east of TU105. A small portion of TU105 is situated within IR Program Site IR-36. The chemicals of concern associated with IR-36 are listed in Table 3-10.

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TU105 is comprised of two storm drain trench segments and five sanitary sewer trench segments. As identified on Figure 10-1, these trench segments include:

Storm Drain Trench Segments	Sanitary Sewer Trench Segments
• 70-D27-00-2R	• 70-D27-00-8B
• 70-D27-00-2S	• 70-E27-00-3I
	• 70-E27-00-3J
	• 70-E27-00-3K
	• 70-E27-36-3J

Trench segment 70-D27-00-2S transitioned into TU112 and trench segment 70-D27-00-3I continued into TU113 on the south. Trench segment 70-E27-00-3K continued from TU104 toward the south into TU105. With the exception of trench segment 70-D27-00-8B, each of the trench segments associated with TU105 was identified in the Design Plan (TtEC 2007c). Trench segment 70-D27-00-8B was found during excavation of Manhole MH441.

10.3.1 TU105 Removal Action Activities

Excavation of TU105 began on June 24, 2008 in trench segment 70-E27-00-3K. A total of 82 truckloads (approximately 984 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU105 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on July 11, 2008, TU105 exhibited an exposed surface area of 650 m^2 and was 260 linear feet in length (Table 3-1). The maximum excavated TU105 depth was 15 feet bgs (Table 3-2).

The majority of pipes excavated from TU105 crumbled during removal and were transferred along with the surrounding soil to RSY2 for processing. One pipe section excavated from trench segment 70-E27-00-3K and Manholes MH441, MH442, and MH443 were placed on plastic pending further activities during the Parcel G removal action. As identified in Table 3-2, trench segments 70-D27-00-2R, -8B, 70-E27-00-3J, and 70-E27-36-3J contained 6-inch-diameter VCP located at depths ranging from 5 feet to 8 feet bgs. Storm drain trench segment 70-D27-00-2S contained 15-inch-diameter VCP located at depths of 6 feet to 7 feet bgs (Table 3-2). In addition, sanitary sewer trench segments 70-E27-00-3I and -3K contained 8-inch-diameter and 16-inch-diameter steel and VCP located at depths ranging from 11 feet to 14 feet bgs.

An insufficient volume of sediment was found in the pipes and manholes associated with TU105 for sample collection and analysis during the removal action activities. Consequently, no sediment sample analytical results exist for TU105.

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Radiological surveys were performed on one section of pipe excavated from trench segment 70-E27-00-3K and the materials forming Manholes MH441, MH442, and MH443 during the Parcel G removal action (Table 3-5). The survey results did not indicate the presence of radioactivity above the release limits. The final disposition of the piping excavated from TU105 is provided in Table 3-5. The radiological survey reports are provided in Appendix B.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU105 on September 26, 2008 and submitted to the laboratory for analysis. One soil sample identified the presence of Ra-226 activity above the release limit at 2.4936 pCi/g. Due to the presence of Ra-226 contamination, a total of 14 characterization soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the characterization soil samples for any ROC. An estimated 9 cubic yards of soil was remediated from TU105 followed by the collection of three verification soil samples (Table 3-9). The laboratory analytical results did not identify the presence of radioactivity above the release criteria in the verification soil samples for any ROC.

A second set of 18 systematic soil samples was collected from TU105 on October 24, 2008 and submitted to the laboratory for analysis. The analytical results identified the continued presence of Ra-226 activity above the release limit in two soil samples at 1.7479 pCi/g and 2.4251 pCi/g. Based on these results, roughly 15 cubic yards of soil was remediated from TU105 on November 5, 2008. The remediated soil was placed in LLRW bins for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation activities, six verification soil samples were collected and analyzed. The analytical results identified Ra-226 contamination in one sample at 2.2017 pCi/g. Based on this result, an additional 11 cubic yards of soil was placed in LLRW bin GFLU001037G6 and three verification soil samples were collected and analyzed. The analytical results did not identify the presence of radioactivity above the release criteria in these verification soil samples for any ROC.

In total, 62 investigative soil samples (including systematic, characterization, and verification samples) were collected prior to the 18 systematic FSS soil samples and roughly 35 cubic yards of soil was remediated from TU105 during the Parcel G removal action. Figure 10-2 depicts the approximate locations of the contaminated soil samples prior to remediation.

10.3.2 TU105 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU105 remained in place on Parcel G following the completion of the removal action.

10.3.3 TU105 Final Status Survey Summary

During the FSS activities for TU105, a total of 18 systematic soil samples were collected on February 9, 2009 and analyzed by the laboratory. The analytical results did not indicate the

presence of radioactivity above the release criteria for any ROC. Figure 10-1 depicts the FSS soil sample collection locations in TU105.

For the FSS, TU105 was defined as the sum of the trench unit and the backfill material composed of both radiologically processed and released excavated soil and a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU105 were 0.050 pCi/g for Cs-137, 0.076 pCi/g for Sr-90, and 0.325 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.038 pCi/g for Cs-137, 0.050 pCi/g for Sr-90, and 0.256 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 4.598 mrem/y with an increased cancer risk of 7.651×10^{-5} for the backfill material and 3.593 mrem/y with an increased cancer risk of 5.989×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU105 SUPR provided in Appendix M.

The results of the modeling efforts determined that the potential TU105 dose due to activity concentrations greater than or equal to the MDL was 4.598 mrem/y with an increased cancer risk of 7.651×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU105 SUPR (Appendix M).

10.3.4 TU105 Backfill Activities

In addition to a volume of imported fill, radiologically processed and released excavated soil survey units were selected for use as backfill material in TU105. The excavated soil survey units selected included:

- ES-0113
- ES-0131

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU105 SUPR (Appendix M). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

The RASO concurred with backfilling TU105 on April 6, 2009, and backfilling activities commenced the same day. Approximately 692 cubic yards of soil was placed in TU105 to grade followed by the application of road base material over the backfilled trench. Backfilling activities were completed for TU105 on April 8, 2009. A summary of the activities performed to support the recommended radiological free release of TU105 is provided in Table 3-1.

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11.0 WORK AREA 27 SOUTH

Work Area 27 South is located in the southwest corner of Parcel G and just north of 3rd Avenue (Figures 3-2, 3-3, and 11-1). It is bounded on the north by Work Area 27 North, on the east by Work Area 19 South, on the south by 3rd Avenue, and on the west by Parcel E. The radiological work activities performed in Work Area 27 South included TU109 through TU113, and Building 439. The following sections summarize the work activities completed in Work Area 27 South to support the recommended radiological release for unrestricted use of the Parcel G property.

11.1 TRENCH SURVEY UNIT 109

TU109 is located in the southwest corner of Work Area 27 South, just west of radiologically surveyed and released Building 439, north of 3rd Avenue, and is situated along the southern portion of H Street (Figures 3-2 and 11-1). The radiological activities performed for Building 439 are summarized in Section 11.6 of this RACR and detailed in the FSS report provided in Appendix W. TU109 connects to TU110 on the north and TU204 on the south. TU109 terminates adjacent to the subsurface storm drain manifold within the 10-foot buffer zone on the west side of Building 439. On the west, TU109 terminates near the Parcel E property boundary. TU109 is not situated within an IR Program Site.

TU109 is composed of six storm drain trench segments and no sanitary sewer trench segments. As identified on Figure 11-1, these trench segments include:

- 70-E27-00-2B
- 70-E27-00-2F
- 70-E27-00-2H
- 70-E27-00-2I
- 70-E27-00-2J
- 70-E27-00-2K

Trench segment 70-E27-00-2K extended northward and transitioned into TU110. Each of the trench segments associated with TU109 was identified in the Design Plan (TtEC 2007c).

Piping located immediately adjacent to the west side of Building 439 was located within the 10-foot buffer zone surrounding the structure and could not be removed without either adversely affecting the structural integrity of the building or impacting the potable water supply to Building 606. These trench segments were identified as 70-D27-67-2B, -2C, -2D, -2E, -2I and 70-E27-67-2F, -2L, and -3A in the Design Plan (TtEC 2007c). Trench segments 70-D27-67-2C, -2D, and -2E, and 70-E27-67-2F, -2L, and -3A are roof storm drain pipes that descend down the exterior of Building 439 and tie into trench segments 70-D27-67-2B and -2I underground. Trench segments 70-D27-67-2B and -2I run north to south and parallel to the west side of Building 439 within the buffer zone to manifold the roof storm drain segments together.

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The descending roof drain pipes were cut to prevent water accumulation on the roof of Building 439 and to preserve the pipeline that supplied potable water to Building 606.

11.1.1 TU109 Removal Action Activities

Excavation of TU109 was initiated on June 27, 2008 in trench segment 70-D27-00-2H. A total of 91 truckloads (approximately 1,092 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU109 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on September 20, 2008, TU109 had an exposed surface area of 934 m^2 and was 364 linear feet in length (Table 3-1). The maximum excavated TU109 depth was 11 feet bgs (Table 3-2).

A total of six sections of pipe and Manholes MH453, MH454, and MH455 were excavated from TU109 and placed on plastic pending further activities during the Parcel G removal action. The majority of the piping excavated from TU109 disintegrated upon removal and was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, trench segments 70-E27-00-2B and -2I contained 8-inch-diameter VCP located at depths between 1 foot and 7 feet bgs. Trench segments 70-E27-00-2F and -2J contained 4-inch-diameter and 6-inch-diameter CIP located at depths ranging from 2 feet to 6 feet bgs. In addition, trench segments 70-E27-00-2H and -2K contained 24-inch-diameter concrete pipe located at depths between 6 feet and 9 feet bgs.

Sufficient sediment for sample collection and analysis was obtained from Manholes MH453 and MH454 during the excavation activities (Table 3-6). An insufficient volume of sediment was available for sample collection in the remaining pipe sections or Manhole MH455. The laboratory analytical results did not identify the presence of radioactivity above the release criteria in these sediment samples for any ROC. The sediment sample analytical reports are provided in Appendix D.

Radiological surveys were performed on six sections of pipe and the materials forming Manholes MH453, MH454, and MH455 during the Parcel G removal action (Table 3-5). None of the pipe sections or manhole debris surveyed indicated elevated results. The final disposition of the TU109 piping is provided in Table 3-5. The radiological survey reports are presented in Appendix B.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU109 on September 20, 2008 and submitted to the laboratory for analysis. One soil sample identified the presence of Ra-226 activity above the release limit at 2.7728 pCi/g. To further define the potential extent of contamination, a total of eight characterization soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the characterization samples for any ROC. An estimated 5 cubic yards of soil was remediated from TU109 on November 6, 2008. The remediated soil was placed in LLRW bin GFLU001073G1 for disposal

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by the DON's radiological waste contractor (Table 3-9). Following the remediation efforts, three verification soil samples were collected and analyzed. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

In total, 29 investigative soil samples (including systematic, characterization, and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 5 cubic yards of soil was remediated during the removal action activities. Figure 11-2 depicts the approximate location of the contaminated soil sample in TU109 prior to remediation.

11.1.2 TU109 Piping Remaining In Place

Trench segments 70-D27-67-2B and -2I run north to south along the west side of Building 439 within the 10-foot buffer zone surrounding the structure. Based on historical drawings, an estimated 215 linear feet of trench segment 70-D27-67-2I and 113 linear feet of trench segment -2B remained in place following the completion of the removal action (Table 3-8). In addition, 10 linear feet each of trench segments 70-D27-67-2C, -2D, -2E, and -2F extending from the exterior Building 439 foundation to the trench segment 70-D27-67-2B and -2I pipe manifold were left in place following the completion of the Parcel G removal action (Table 3-8).

Based on the radiological history of Building 439, there was no potential for radiological contamination to have been transferred from the structure to the roof storm drains and from there to the storm drain sewers. Therefore, the DON determined that roof drain pipes were not radiologically impacted and could be left in place within the 10-foot safety buffer. This is supported by the radiological work performed during the FSS activities for TU109. Only one soil sample out of a total of 47 soil samples identified the presence of Ra-226 activity above the release limit in TU109. In addition, sediment samples collected from two manholes and the results of the radiological surveys performed on excavated pipe sections and three manholes did not identify the presence of radioactivity above the release criteria.

Trench segment 70-E27-00-2J extended toward the west from TU109 toward the Parcel E property boundary. A total of 20 linear feet of this trench segment was removed prior to its termination 10 feet from the main truck line, in accordance with the Work Plan (TtEC 2010). Generally, storm drain and sanitary sewer laterals were removed to within the first 10 feet of their union with a main trunk line. If no radiological contamination was present in this segment of the line, then the exposed ends of the lateral were capped or plugged, and the remaining portions were left in place. Since no evidence of radiological contamination was present, approximately 19 linear feet of trench segment 70-E27-00-2J was left in place following the completion of the Parcel G removal action.

No sediment samples collected from TU109 identified the presence of contamination and the radiological surveys performed on pipe sections and three manholes did not show elevated results. In addition, a total of 47 soil samples were collected from TU109 with only one sample

identifying the presence of Ra-226 activity above the release criteria. An estimated 5 cubic yards of soil was remediated and neither the three verification soil samples nor the final 18 FSS soil samples identified the presence of contamination. Based on these results, the DON concluded that the piping remaining in place on the west side of Building 439 and trench segment 70-E27-00-2J were unlikely to be contaminated.

11.1.3 TU109 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU109 on November 14, 2008 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 11-1 depicts the FSS soil sample collection locations in TU109.

For the FSS, TU109 was defined as the sum of the trench unit and the backfill material composed of both radiologically processed and released excavated soil and a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU109 were 0.048 pCi/g for Cs-137, 0.070 pCi/g for Sr-90, and 0.276 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.035 pCi/g for Cs-137, 0.104 pCi/g for Sr-90, and 0.145 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 4.911 mrem/y with an increased cancer risk of 7.798×10^{-5} for the backfill material and 2.854 mrem/y with an increased cancer risk of 4.450×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU109 SUPR provided in Appendix N.

The results of the modeling efforts determined that the potential TU109 dose due to activity concentrations greater than or equal to the MDL was 4.911 mrem/y with an increased cancer risk of 7.798×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU109 SUPR (Appendix N).

11.1.4 TU109 Backfill Activities

Radiologically processed and released excavated soil survey units were selected for use as backfill material in TU109 in addition to a volume of imported fill. The excavated soil survey units selected included:

- ES-0119
- ES-0120
- ES-0121

- ES-0129

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU109 SUPR (Appendix N). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

The RASO concurred with backfilling TU109 on February 11, 2009 and backfilling activities commenced on February 20, 2009. Approximately 1,517 cubic yards of soil was placed in TU109 and backfilling operations were completed on March 12, 2009. A summary of the activities performed to support the recommended radiological free release of TU109 is provided in Table 3-1.

11.2 TRENCH SURVEY UNIT 110

TU110 is located in the eastern portion of Work Area 27 South along H Street, just west of non-radiologically impacted Building 407 and radiologically surveyed and released Building 439 (Figures 3-2 and 11-1). The radiological activities performed for Building 439 are summarized in Section 11.6 of this RACR and detailed in the FSS report provided in Appendix W. TU110 connects to TU112 on the north, TU109 on the south, and TU111 on the west. The southeast portion of TU110 terminated adjacent to the subsurface storm drain manifold within the 10-foot buffer zone on the west side of Building 439. TU110 is not situated within the boundaries of an IR Program site.

TU110 consists of eight storm drain trench segments and three sanitary sewer trench segments. As identified on Figure 11-1, these trench segments include:

Storm Drain Trench Segments	Sanitary Sewer Trench Segments
• 70-E27-00-2K	• 70-E27-00-3B
• 70-E27-00-2L	• 70-E27-00-3D
• 70-E27-00-2M	• 70-E27-00-3E
• 70-E27-00-2N	
• 70-E27-00-2O	
• 70-E27-00-2P	
• 70-E27-00-8A	
• 70-E27-00-8B	

Trench segment 70-E27-00-2K extended toward the north from TU109 and transitioned into TU110. Trench segments 70-E27-00-2O, -3B, and -3D continued westward into TU111 and trench segment -2P continued northward into TU112. With the exception of trench segments

70-E27-00-8A and -8B, each of the trench segments associated with TU110 was identified in the Design Plan (TtEC 2007c).

Although identified in the Design Plan (TtEC 2007c), piping located immediately adjacent to the west side of Buildings 407 and 439 could not be removed without either adversely affecting the structural integrity of the buildings or impacting the active potable water supply pipe to Building 606. These trench segments were identified as storm drain trench segments 70-E27-66-2N and 70-E27-67-8A. Trench segment 70-E27-67-8A was a storm drain pipe that descended the exterior of Building 439 from the roof and tied into trench segment 70-D27-67-2I associated with TU109. As previously discussed, trench segment 70-D27-67-2I was a manifold line that tied the roof storm drain segments together along the west side of Building 439. The descending roof drain pipes were cut to prevent water accumulation on the Building 439 roof and to preserve the pipeline that supplied potable water to Building 606. Although identified in the Design Plan (TtEC 2007c), sanitary sewer trench segment 70-E27-66-3E could not be found during the excavation activities after several attempts.

11.2.1 TU110 Removal Action Activities

Excavation of TU110 began on June 30, 2008 in trench segment 70-E27-00-2K. A total of 80 truckloads (approximately 960 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU110 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on July 7, 2008, TU110 exhibited an exposed surface area of 871 m^2 and was 374 linear feet in length (Table 3-1). The maximum excavated TU110 depth was 11 feet bgs (Table 3-2).

One pipe section excavated from trench segment 70-E27-00-2M and Manholes MH447, MH448, MH451, and MH452 were excavated from TU110 and placed on plastic pending further activities during the Parcel G removal action. The majority of the piping excavated from TU110 crumbled upon removal and was transferred along with the surrounding soil to RSY2 for processing. As indicated in Table 3-2, trench segments 70-E27-00-2L, -2N, -2O, -3D, -3E, -8A, and -8B contained 6-inch-diameter VCP located at depths ranging from 3 feet to 11 feet bgs. Trench segments 70-E27-00-2M and -2P contained 18-inch-diameter VCP and concrete-encased VCP located at depths between 7 feet and 10 feet bgs. In addition, trench segment 70-E27-00-2K contained 24-inch-diameter concrete pipe and trench segment -3B contained 8-inch-diameter VCP. The pipes contained in these trench segments were found at depths ranging from 5 feet to 9 feet bgs.

Piping excavated from TU110 did not contain sufficient sediment for sample collection and analysis. Consequently, there were no sediment sample analytical results available for TU110.

Radiological surveys were performed on one section of pipe excavated from trench segment 70-E27-00-2M and the materials forming Manholes MH447, MH448, MH451, and MH452 during the Parcel G removal action (Table 3-5). None of the piping surveyed indicated elevated results. The final disposition of the TU110 piping is provided in Table 3-5. The radiological survey reports are presented in Appendix B.

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU110 on September 22, 2008 and submitted to the laboratory for analysis following the completion of the excavation activities. One soil sample identified the presence of Ra-226 activity above the release limit at 1.7656 pCi/g. To further identify the potential extent of contamination, 21 characterization soil samples were collected from TU110 and analyzed. Three of the characterization soil samples identified the presence of Ra-226 activity above the release limit at 1.8689 pCi/g, 2.1713 pCi/g, and 2.4674 pCi/g. Based on these results, roughly 30 cubic yards of soil was placed in LLRW bins for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation efforts, a total of six verification soil samples were collected and analyzed. None of the verification soil samples identified the presence of radioactivity above the release criteria for any ROC.

A second set of 18 systematic soil samples was collected from TU110 on April 21, 2009 and submitted to the laboratory for analysis. One soil sample identified Ra-226 contamination at 1.8008 pCi/g. Based on this result, approximately 7 cubic yards of soil was remediated from TU110. The remediated soil was placed in LLRW bin BFLU000396G9 for disposal (Table 3-9). Two verification soil samples were collected and analyzed following the remediation activities. No radioactivity above the release criteria was identified in these soil samples for any ROC.

A third set of 18 systematic soil samples was collected from the sidewalls and bottom of TU110 on May 8, 2009 and submitted to the laboratory for analysis. Five of the systematic soil samples identified the presence of Ra-226 activity above the release limit ranging from 1.4898 pCi/g to 3.6513 pCi/g. On May 18, 2009, roughly 27.5 cubic yards of soil was remediated from TU110 followed by the collection of 10 verification soil samples. One soil sample identified the presence of Ra-226 activity above the release limit at 1.5042 pCi/g. Based on this result, approximately 7 cubic yards of soil was removed from TU110 and placed in LLRW bin GFLU001043G11 on June 16, 2009 (Table 3-9). Following the remediation effort, three verification soil samples were collected and analyzed. None of the verification soil samples identified the presence of contamination.

On June 23, 2009, a fourth set of 18 systematic soil samples was collected from TU110 and submitted to the laboratory for analysis. Two of the systematic samples identified the continued presence of Ra-226 activity above the release limit at 1.5136 pCi/g and 2.8547 pCi/g. Based on these results, an estimated 11.5 cubic yards of soil was remediated from TU110 (Table 3-9). Six verification soil samples were collected on July 8, 2009 following the remediation efforts. No

radioactivity above the release criteria was identified in the verification soil samples for any ROC.

In total, 120 investigative soil samples (including systematic, characterization, and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 83 cubic yards of soil was remediated during the TU110 removal action activities. Figure 11-2 depicts the approximate locations of the contaminated soil samples in TU110 prior to remediation.

11.2.2 TU110 Piping Remaining In Place

Trench segment 70-E27-00-2N continued toward the east to become trench segment 70-E27-66-2N. All of trench segment 70-E27-00-2N was excavated until it crossed the IR Program Site IR-66 boundary just west of Building 407. Building 407 has never been identified as a radiologically impacted structure. Based on historical drawings, an estimated 20 linear feet of storm drain trench segment 70-E27-66-2N remained in place following the completion of the removal action (Table 3-8). This trench segment could not be removed without adversely affecting the active potable water supply pipeline to Building 606. Because Building 407 is not radiologically impacted, the DON concluded that the 20 linear feet of pipe extending westward from the structural foundation was unlikely to be contaminated.

Based on historical drawings, 20 linear feet of storm drain trench segment 70-E27-67-8A was left in place on Parcel G following the completion of the removal action (Table 3-8). This trench segment is associated with the Building 439 roof drain system and connects to the subsurface pipe manifold. Based on the radiological history of Building 439, there was no potential for radiological contamination to have been transferred from the building to the roof storm drains and from there to the storm drain sewers. Therefore, the DON determined that the roof drain pipes were not radiologically impacted and may be left in place.

11.2.3 TU110 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU110 on July 15, 2009 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 11-1 depicts the FSS soil sample collection locations in TU110.

TU110 was defined for the FSS as the sum of the trench unit and the backfill material composed of radiologically processed and released excavated soil. The average net residual radioactivity concentrations for material used as backfill in TU110 were 0.040 pCi/g for Cs-137, 0.097 pCi/g for Sr-90, and 0.267 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.041 pCi/g for Cs-137, 0.240 pCi/g for Sr-90, and 0.218 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

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RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 4.631 mrem/y with an increased cancer risk of 7.383×10^{-5} for the backfill material and 4.365 mrem/y with an increased cancer risk of 6.772×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU110 SUPR provided in Appendix N.

The results of the modeling efforts determined that the potential TU110 dose due to activity concentrations greater than or equal to the MDL was 4.631 mrem/y with an increased cancer risk of 7.383×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU110 SUPR (Appendix N).

11.2.4 TU110 Backfill Activities

Radiologically processed and released excavated soil survey units were selected for use as backfill material in TU110. The excavated soil survey units selected included:

- ES-0122
- ES-0124
- ES-0125
- ES-0127

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU110 SUPR (Appendix N).

Concurrence with backfilling TU110 was obtained from the RASO on September 1, 2009 and backfilling activities were initiated on September 3, 2009. Approximately 1,241 cubic yards of soil was placed in TU110 and backfilling operations were completed on September 9, 2009. A summary of the activities performed to support the recommended radiological free release of TU110 is provided in Table 3-1.

11.3 TRENCH SURVEY UNIT 111

TU111 is located on the west side of H Street in Work Area 27 South and east of non-radiologically impacted Building 406 (Figures 3-2 and 11-1). TU111 connects to TU113 on the north, TU112 on the east, and TU110 on the east and south. On the west, TU110 terminates near the Parcel E property boundary. TU111 is not situated within an IR Program Site; however, it is located immediately adjacent to the eastern boundary of IR-36. The chemicals of concern associated with IR-36 are listed in Table 3-10.

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TU111 is composed of one storm drain trench segment and six sanitary sewer trench segments. As identified on Figure 11-1, these trench segments include:

Storm Drain Trench Segment	Sanitary Sewer Trench Segments
• 70-E27-00-2O	• 70-E27-00-3B
	• 70-E27-00-3C
	• 70-E27-00-3D
	• 70-E27-00-3F
	• 70-E27-00-3G
	• 70-E27-00-3H

Trench segments 70-E27-00-2O, -3B, and -3D extended toward the east from TU110 and transitioned into TU111. Trench segment 70-E27-00-3H extended toward the north and continued into TU113. Each of the trench segments associated with TU111 was identified in the Design Plan (TtEC 2007c).

11.3.1 TU111 Removal Action Activities

Excavation of TU111 commenced on July 1, 2008 in trench segment 70-E27-00-3B. A total of 134 truckloads (approximately 1,608 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU111 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on July 12, 2008, TU111 had an exposed surface area of 664 m^2 and was 318 linear feet in length (Table 3-1). The maximum excavated TU111 depth was 11 feet bgs (Table 3-2).

The majority of the pipe excavated from TU111 crumbled upon removal and was transferred along with the surrounding soil to RSY2 for processing. One pipe section excavated from trench segment 70-E27-00-3H and Manholes MH446 and MH449 were excavated from TU111 and placed on plastic pending further activities during the Parcel G removal action. As indicated in Table 3-2, trench segment 70-E27-00-3H contained 16-inch-diameter steel and VCP located at depths ranging from 5 feet to 6 feet bgs. The pipe in the remaining trench segments was 6-inch-diameter to 10-inch-diameter VCP located at depths between 3 feet and 10 feet bgs.

An insufficient volume of sediment was available in the piping excavated from TU111 for sample collection and analysis. Consequently, there were no existing sediment sample analytical results for TU111.

Radiological surveys were performed on one section of pipe excavated from trench segment 70-E27-00-3H and the materials forming Manholes MH446 and MH449 during the Parcel G removal action (Table 3-5). None of the piping surveyed identified elevated results. The final

disposition of the TU111 piping is provided in Table 3-5. The radiological survey reports are presented in Appendix B.

11.3.2 TU111 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU111 remained in place on Parcel G following the completion of the removal action.

11.3.3 TU111 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU111 on September 24, 2008 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 11-1 depicts the FSS soil sample collection locations in TU111.

For the FSS, TU111 was defined as the sum of the trench unit and the backfill material composed of radiologically processed and released excavated soil. The average net residual radioactivity concentrations for material used as backfill in TU111 were 0.037 pCi/g for Cs-137, 0.066 pCi/g for Sr-90, and 0.177 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.043 pCi/g for Cs-137, 0.091 pCi/g for Sr-90, and 0.195 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 2.620 mrem/y with an increased cancer risk of 4.321×10^{-5} for the backfill material and 2.940 mrem/y with an increased cancer risk of 4.829×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU111 SUPR provided in Appendix N.

The results of the modeling efforts determined that the potential TU111 dose due to activity concentrations greater than or equal to the MDL was 2.940 mrem/y with an increased cancer risk of 4.829×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU111 SUPR (Appendix N).

11.3.4 TU111 Backfill Activities

Radiologically processed and released excavated soil survey units were selected for use as backfill material in TU111. The excavated soil survey units selected included:

- ES-0122
- ES-0123

- ES-0126
- ES-0128

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU111 SUPR (Appendix N).

The RASO concurred with backfilling TU111 on November 19, 2008 and backfilling activities commenced on November 26, 2008. Approximately 694 cubic yards of soil was placed in TU111 to grade followed by the application of road base material over the backfilled trench. Backfilling operations were completed for TU111 on December 2, 2008. A summary of the activities performed to support the recommended radiological free release of TU111 is provided in Table 3-1.

11.4 TRENCH SURVEY UNIT 112

TU112 is located in the northern portion of Work Area 27 South, just west of non-radiologically impacted Buildings 404 and 407 (Figures 3-2 and 11-1). TU112 connects to TU105 on the north, TU110 on the south, and TU111 on the west. TU112 terminates on the east at the active potable water supply pipeline supporting Building 606 that runs parallel to Buildings 404 and 407. The northern portion of TU112 is situated within IR Program Site IR-36. The chemicals of concern associated with IR-36 are listed in Table 3-10.

TU112 consists of five storm drain trench segments and one sanitary sewer trench segment. As identified on Figure 11-1, these trench segments include:

Storm Drain Trench Segments	Sanitary Sewer Trench Segment
• 70-D27-00-2Q	• 70-D27-00-3G
• 70-D27-00-2S	
• 70-E27-36-2Q	
• 70-E27-00-2P	
• 70-E27-00-3M	

Trench segment 70-D27-00-2S extended toward the north and transitioned into TU105. Trench segment 70-E27-00-2P extended northward from TU110 and continued into TU112. Each of the trench segments associated with TU112 was identified in the Design Plan (TtEC 2007c).

11.4.1 TU112 Removal Action Activities

Excavation of TU112 was initiated on June 26, 2008 in trench segment 70-D27-00-2S. A total of 70 truckloads (approximately 840 cubic yards) of soil were excavated during the removal

action activities (Table 3-3). Soil excavated from TU112 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on July 14, 2008, TU112 had an exposed surface area of 668 m^2 and was 375 linear feet in length (Table 3-1). The maximum excavated TU112 depth was 8 feet bgs (Table 3-2).

The majority of the piping excavated from TU112 disintegrated upon removal and was transferred with the surrounding soil to RSY2 for processing. A total of two sections of pipe and Manholes MH444 and MH445 were removed from TU112 and placed on plastic pending further activities during the Parcel G removal action. As indicated in Table 3-2, the TU112 trench segments contained 6-inch-diameter to 18-inch-diameter VCP located at depths ranging from 6 feet to 8 feet bgs.

An insufficient volume of sediment was found in the TU112 piping during the removal action activities for sample collection and analysis. Consequently, no sediment sample analytical results exist for TU112.

Radiological surveys were performed on one section of pipe excavated from trench segment 70-D27-36-2Q, one section of pipe excavated from trench segment 70-E27-00-2P, and the materials forming Manholes MH444 and MH445 during the Parcel G removal action (Table 3-5). None of the pipe sections or manhole debris surveyed indicated elevated results. The final disposition of the TU112 piping is provided in Table 3-5. The radiological survey reports are presented in Appendix B.

11.4.2 TU112 Piping Remaining In Place

Trench segment 70-D27-00-3G was excavated toward the east and terminated at the IR Program Site IR-66 boundary, which coincided with the pipeline that supplies potable water to Building 606. No further pipe was removed to prevent adversely affecting this supply pipeline. Based on historical drawings, approximately 10 linear feet of trench segment 70-E27-66-3G and about 16 linear feet of trench segment 70-E27-66-3E remained in place on Parcel G following the completion of the removal action (Table 3-8). Additional pipe could not be removed without adversely affecting both the structural foundation of Building 407 and the potable water supply line. Because no contamination was identified in TU112 and the piping remaining in place emanated from non-radiologically impacted Building 407, the DON concluded that the sanitary sewer pipes left in place were unlikely to be contaminated.

11.4.3 TU112 Final Status Survey Summary

A total of 18 systematic FSS soil samples were collected from the sidewalls and bottom of TU112 on September 25, 2008 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 11-1 depicts the FSS soil sample collection locations in TU112.

TU112 was defined for the FSS as the sum of the trench unit and the backfill material composed of both radiologically processed and released excavated soil and a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU112 were 0.047 pCi/g for Cs-137, 0.081 pCi/g for Sr-90, and 0.225 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.042 pCi/g for Cs-137, 0.103 pCi/g for Sr-90, and 0.240 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 3.334 mrem/y with an increased cancer risk of 5.498×10^{-5} for the backfill material and 3.586 mrem/y with an increased cancer risk of 5.896×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU112 SUPR provided in Appendix N.

The results of the modeling efforts determined that the potential TU112 dose due to activity concentrations greater than or equal to the MDL was 3.586 mrem/y with an increased cancer risk of 5.896×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU112 SUPR (Appendix N).

11.4.4 TU112 Backfill Activities

In addition to a volume of imported fill, radiologically processed and released excavated soil survey units were selected for use as backfill material in TU112. The excavated soil survey units selected included:

- ES-0117
- ES-0118
- ES-0132

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU112 SUPR (Appendix N). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

Concurrence with backfilling TU112 was obtained from the RASO on December 10, 2008 and backfilling activities were initiated on December 13, 2008. Approximately 517 cubic yards of soil was placed in TU112 and backfilling operations were completed on January 5, 2009. A summary of the activities performed to support the recommended radiological free release of TU112 is provided in Table 3-1.

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11.5 TRENCH SURVEY UNIT 113

TU113 is located in the northwest portion of Work Area 27 South along H Street and west of non-radiologically impacted Buildings 405 and 406 (Figures 3-2 and 11-1). It connects to TU105 on the north and east, TU111 on the south, and terminates on the west near the Parcel E property boundary. A portion of TU113 is situated within IR Program Site IR-36. The chemicals of concern associated with IR-36 are listed in Table 3-10.

TU113 is composed of three storm drain trench segments and three sanitary sewer trench segments. As identified on Figure 11-1, these trench segments include:

Storm Drain Trench Segments	Sanitary Sewer Trench Segments
• 70-D27-00-2R	• 70-E27-00-3H
• 70-E27-00-2R	• 70-E27-00-3I
• 70-E27-36-2R	• 70-E27-36-3H

Trench segment 70-E27-00-3I extended toward the north and transitioned into TU105 and trench segment 70-E27-00-3H extended toward the north from TU111 and continued into TU113. Each of the trench segments associated with TU113 was identified in the Design Plan (TtEC 2007c).

11.5.1 TU113 Removal Action Activities

Excavation of TU113 was initiated on June 25, 2008 in trench segment 70-D27-00-2R. A total of 43 truckloads (approximately 516 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU113 was radiologically processed in RSY2 (Table 3-4). Following the completion of excavation on September 20, 2008, TU113 had an exposed surface area of 874 m^2 and was 361 linear feet in length (Table 3-1). The maximum excavated TU113 depth was 12 feet bgs (Table 3-2).

All of the piping removed from TU113 crumbled during excavation and was transferred along with the surrounding soil to RSY2 for processing. Consequently, there were no sediment sample analytical results or radiological survey results available for TU113. As identified in Table 3-2, trench segments 70-D27-00-2R, 70-E27-00-2R, and 70-E27-36-2R contained 6-inch-diameter VCP located at depths between 4 feet and 6 feet bgs. Trench segments 70-E27-00-3H, -3I, and 70-E27-36-3H contained 8-inch-diameter and 16-inch-diameter steel and VCP located at depths between 9 feet and 11 feet bgs.

11.5.2 TU113 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU113 remained in place on Parcel G following the completion of the removal action.

11.5.3 TU113 Final Status Survey Summary

A total of 18 systematic soil samples were collected from the sidewalls and bottom of TU113 on September 26, 2008 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 11-1 depicts the FSS soil sample collection locations in TU113.

TU113 was defined for the FSS as the sum of the trench unit and the backfill material composed of both radiologically processed and released excavated soil and a volume of imported fill. The average net residual radioactivity concentrations for material used as backfill in TU113 were 0.051 pCi/g for Cs-137, 0.075 pCi/g for Sr-90, and 0.299 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.045 pCi/g for Cs-137, 0.100 pCi/g for Sr-90, and 0.257 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.091 mrem/y with an increased cancer risk of 8.152×10^{-5} for the backfill material and 4.504 mrem/y with an increased cancer risk of 7.170×10^{-5} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU113 SUPR provided in Appendix N.

The results of the modeling efforts determined that the potential TU113 dose due to activity concentrations greater than or equal to the MDL was 5.091 mrem/y with an increased cancer risk of 8.152×10^{-5}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU113 SUPR (Appendix N).

11.5.4 TU113 Backfill Activities

In addition to a volume of imported fill, radiologically processed and released excavated soil survey units were selected for use as backfill material in TU113. The excavated soil survey units selected included:

- ES-0115
- ES-0116

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU113 SUPR (Appendix N). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

The RASO concurred with backfilling TU113 on December 5, 2008 and backfilling operations were initiated on December 9, 2008. Approximately 775 cubic yards of soil was placed in

TU113 to grade followed by the application of road base material over the backfilled trench. Backfilling operations were completed for TU113 on December 13, 2008. A summary of the activities performed to support the recommended radiological free release of TU113 is provided in Table 3-1.

11.6 BUILDING 439

The following sections summarize the Building 439 FSS, provide an abbreviated history, describe the FSS results, and discuss regulatory concurrence for the unrestricted radiological release of the structure. The Building 439 FSS report is provided in Appendix W and details the radiological survey results. The location of Building 439 within Parcel G is depicted on Figures 3-3 and 11-1.

11.6.1 Description

Currently unoccupied, Building 439 is a vacant one-story structure measuring about 250 feet by 400 feet. Building 439 is bounded by 3rd Avenue, H Street, and Hussey Street. An enclosed 40-foot by 50-foot area located in the northwest corner of Building 439 has a separate entrance and is segregated from the remainder of the structure.

The planned future use for this property was identified in the SFRA Redevelopment Plan (SFRA 1997) as a "mixed use" area that may include residential development.

11.6.2 History

Building 439 previously was used by the DON as an equipment storage facility. According to the HRA, Volume II (NAVSEA 2004), Building 439 had no history of general radioactive materials use or storage. After HPNS closure, the majority of Building 439 was leased by a skateboard company for use as a manufacturing and assembly plant. In January 2002, Young Laboratories was relocated by the DON from Building 364 into a 40-foot by 50-foot enclosed area in the northwest corner of Building 439 with a separate entrance into the structure. As a civilian tenant, Young Laboratories processed and analyzed metals and other materials containing metals as part of its assay business.

During the Phase V surveillance activities performed in Building 364 an old kiln was found that likely had been used by Young Laboratories. A survey of the kiln interior identified residual slag material that contained a substantial concentration of Ra-226. The slag material was believed to have originated from the Young Laboratories assay operations. In addition, elevated Cs-137 activity was found throughout Building 364 during the Phase V surveillance activities. Based on the identification of elevated Cs-137 and Ra-226 in Building 364 that was likely due to Young Laboratories' assay operations, the DON determined that a scoping survey of the 40-foot by 50-foot enclosed lease area was warranted in Building 439. The purpose of the scoping

survey was to ascertain whether any cross-contamination from Building 364 occurred during the relocation of Young Laboratories into Building 439.

The isotopes selected by the RASO as the ROCs for the scoping survey included Cs-137 and Ra-226. Mobilization to the field for the scoping survey activities was initiated in January 2008. To perform the survey, the 40-foot by 50-foot enclosed area in Building 439 was divided into two Class 1 survey units (Survey Units 1 and 2) and one Class 2 survey unit (Survey Unit 3).

Initial surveys performed in Survey Unit 1 identified elevated total (fixed plus loose) alpha and beta contamination at about 10,000 dpm/100 cm^2 (100 times the release limit) and 37,000 dpm/ 100 cm^2 (7.4 times the release limit), respectively. Loose surface activity indicated alpha contamination of approximately 50 dpm/100 cm^2 (2.5 times the release limit). This elevated area was near an industrial paint booth (Hood 1). The remainder of the scoping survey activities performed in Survey Units 1, 2, and 3 did not identify additional elevated activity.

The contaminated area was immediately posted as an RCA, and the boundaries of the contaminated area were verified by scanning. A characterization survey was performed to determine the extent of the contamination and a work instruction was prepared to document the remedial actions to be performed on the contaminated area. With the RASO's concurrence, remediation was performed by mechanically abrading the contaminated surface and the dust and debris generated was collected using a high efficiency particulate air vacuum. Verification measurements were collected to confirm the effectiveness of the remediation efforts.

11.6.3 Final Status Survey Summary

After reviewing the applicable plans of Building 439, the southeastern end of the structure was selected for use as the background or reference area. This area previously had been leased by the skateboard company and historical documentation identified a distinct separation of activities, including separate entrances/exits and walls between the Young Laboratories lease area and the skateboard manufacturing operations.

The investigation levels for alpha and beta surveys were established at 100 dpm/100 cm^2 and 5,000 dpm/100 cm^2, respectively. Loose surface contamination investigations to determine the fraction of removable activity present relative to the total activity were set at 20 percent of the values for total activity and are different than other investigation levels due to the lower release criteria. A complete discussion of the reference area and investigation levels was provided in the Building 439 FSS report (Appendix W).

Material and equipment survey activities were performed on several Building 439 items including desks, shelves, and two pallet jacks. These items were discovered inside the Young Laboratories lease area. The survey results verified than the items surveyed were less than the

release criteria. Following a review of the survey results, the material and equipment items were transferred to Building 400 for storage.

Three drain lines in the Young Laboratories lease area were surveyed independently. These drain lines were not located in the contaminated area of Survey Unit 1, and the surfaces immediately adjacent to the drains were not contaminated. The release limits for these drainage systems were consistent with the other release criteria for surfaces in Building 439. Static alpha or beta measurements were not available inside the drain lines because the pipe diameter was too narrow for the probe. Accessible exterior surfaces of the three drain lines were surveyed. Scan measurements also were collected along the accessible exterior surfaces of the drain lines. No elevated activity was observed. In addition, swipe samples were collected within the accessible portions of the drain lines and submitted to the laboratory for analysis. No contamination was discovered and all sampling results indicated residual radioactivity below the MDA.

Survey activities were performed for the Building 439 ventilation ducts for alpha and beta contamination. A 100 percent scan survey was performed on the accessible exterior surfaces of the ventilation ducts. In addition, access covers to the ventilation ducts were removed and a 100 percent scan of the interior surfaces that could be reached from the access opening was performed. Swipe samples were collected from specified systematic and biased locations. Particular emphasis was placed on collecting survey data from likely accumulation points and areas that produced elevated scan measurement results. No contamination exceeding Regulatory Guide 1.86 limits (AEC 1974) was discovered during the ventilation duct survey activities.

Following the completion of the remediation efforts and verification of the results, Survey Unit 1 was divided into a Class 1 survey unit in the area where contamination had been remediated and a Class 2 survey unit (designated as Survey Unit 5) that encompassed the remaining portion of Survey Unit 1 where no contamination had been identified. An additional buffer area of 2 meters around the perimeter of former Survey Unit 1 and existing Survey Unit 2 was established as a Class 2 survey unit and designated as Survey Unit 6. The actual arrangement of each survey unit was provided in the Building 439 FSS report (Appendix W).

The alpha scan data identified 15 readings in Survey Unit 3 that exceeded the release criteria. The highest scan measurement was 160 dpm/100 cm^2. In addition, 10 readings in Survey Unit 2 identified patterns indicative of further investigation. However, follow-up static investigation measurements indicated that activity was not present above the release criteria in either Survey Units 2 or 3. The beta scan data did not identify any readings that exceeded the release criteria or 90 percent of the release criteria, including those readings logged in conjunction with the elevated alpha readings. None of the systematic alpha or beta static measurements logged in each of the survey units exceeded the release criteria. The survey units showed comparable gamma radiation levels when compared to background. In addition, none of the swipe sample measurements indicated loose surface activity greater than the release criteria, and all of the

swipe data were less than 20 percent of the total net residual activity identified within each survey unit.

Building 439 was subjected to reviews to ensure that radiation exposures to workers, the public, and the environment met ALARA principles. These reviews were conducted for Building 439 operations, practices, and procedures with potential for individual or collective doses. Results from radiological survey activities, and air and swipe samples were used to assess the potential radiological impacts of Building 439 activities. These activities included characterization to ensure complete removal of radioactive material exceeding the release criteria. Following the completion of survey activities, qualitative radiological impacts from operations were evaluated by performing a dose and risk assessment. Based on recent estimates of dose to the public from Building 439 survey activities, only qualitative ALARA analyses were required. Qualitative ALARA analyses for Building 439 did not result in alpha or beta measurements above the investigation levels and none of the alpha, beta, or gamma measurement results identified residual radioactivity above the release criteria for any ROC. A description of the ALARA process is presented in Section 3.2.6 of this RACR and detailed in the Building 439 FSS (Appendix W).

Dose modeling was performed for Building 439 using the RESRAD-BUILD residential scenario. Modeling efforts identified the maximum residual dose in Survey Unit 3 at 0.288 mrem/y and the maximum excess lifetime cancer risk in Survey Unit 6 at 1.65×10^{-7}. The input parameters to RESRAD-BUILD and the final resulting dose and risk were presented in the Building 439 FSS report (Appendix W).

Based on an evaluation of the survey results and modeling efforts, the DON concluded that Building 439 met the release criteria and recommended that the structure be radiologically released for unrestricted use.

11.6.4 Regulatory Concurrence

The final FSS results for Building 439 (Appendix W) were submitted to the regulatory agencies on July 8, 2009. Concurrence with the radiological release for unrestricted use of Building 439 was obtained from the DTSC and CDPH on August 27, 2009. Copies of the DTSC letter and the CDPH memorandum are provided in Appendix X. According to statements by the EPA, their decision for radiological free release of Building 439 will be based on the data and analyses presented in this RACR.

12.0 WORK AREAS 17, 18, 19, AND 27 SOUTH

Work Areas 17, 18, 19, and 27 South are located on the south side of Parcel G and immediately north of Parcel D-1 (Figures 3-2, 3-3, and 12-1). Formerly part of Parcel D, Parcel G was separated in July 2008 along with Parcels D-1, D-2, and UC1. In addition, a small area perpendicular to H Street was added to Parcel G so that the property boundary extended straight along H Street. However, fieldwork for the storm drain and sanitary sewer removal action was initiated in June 2007, prior to the designation of the Parcel G property boundaries in July 2008. Consequently, the work area boundaries specified in the Design Plan (TtEC 2007c) did not precisely correspond to the established Parcel G property boundaries. As a result, some storm drain and sanitary sewer lines physically located on the south end of Parcel G near 3rd Avenue were left in place. At the direction of the DON, these storm drain and sanitary sewer lines were added to TtEC's scope of work to ensure that all storm drain and sanitary sewer piping within the Parcel G property boundaries was addressed. The following sections summarize the work activities completed within Work Areas 17, 18, 19, and 27 South to support the recommended radiological release for unrestricted use of the Parcel G property.

12.1 TRENCH SURVEY UNIT 204

TU204 is composed of four physically separated sections of trench located in the southern portions of Work Areas 17, 18, 19, and 27 South on Parcel G (Figures 3-2 and 12-1). The trench sections comprising TU204 are located at the south ends of Morrell, Cochrane, Hussey, and H Streets. On the north, the sections of TU204 located at the south ends of Morrell and Cochrane Streets connect to TU73 and TU99, respectively. The TU204 section located at the south end of Hussey Street connects to TU107 and TU108 on the north. The section of TU204 located at the south end of H Street connects to TU109 on the north. Each of these sections was terminated on the south at the Parcel D-1 property boundary. Two IR Program sites identified as SI-32 and IR-44 are associated with TU204. The chemicals of concern associated with SI-32 and IR-44 are listed in Table 3-10.

TU204 is composed of 10 storm drain trench segments and 3 sanitary sewer trench segments. As indicated on Figure 12-1, these trench segments include:

Storm Drain Trench Segments

- 70-D17-00-1G
- 70-D17-00-8K
- 70-D17-00-8L
- 70-D17-32-1G

Sanitary Sewer Trench Segments

- 70-D17-00-2F
- 70-D17-00-2G
- 70-D19-00-3P

- 70-D18-00-1J
- 70-D19-44-1L
- 70-D19-44-8A
- 70-E27-00-2A
- 70-E27-00-2B
- 70-E27-00-2H

Some trench segments associated with TU204 were identified on the Design Drawings (TtEC 2007c). Trench segments 70-D17-00-8K, -8L, and 70-D19-44-8A were found during excavation activities.

12.1.1 TU204 Removal Action Activities

Excavation of TU204 was initiated on April 4, 2011 in trench segment 70-D17-00-1G. A total of 116 truckloads (approximately 1,392 cubic yards) of soil were excavated during the removal action activities (Table 3-3). Soil excavated from TU204 was radiologically processed in both RSY2 and RSY4 (Table 3-4). Following the completion of excavation on June 13, 2011, TU204 exhibited an exposed surface area of 974 m^2 and was 461 linear feet in length (Table 3-1). The maximum excavated TU204 depth ranged between 4 feet and 12 feet bgs (Table 3-2).

During the excavation activities, a total of 46 sections of pipe and Manholes MH309, MH456, MH481, MH482, and MH483 were removed from TU204 and placed on plastic pending further action. Piping that disintegrated during removal was transferred along with the surrounding soil to RSY2 or RSY4 for processing. As indicated in Table 3-2, storm drain trench segments 70-D17-00-1G, 70-D17-32-1G, 70-D18-00-1J, 70-D19-44-1L, and 70-E27-00-2H contained 15-inch-diameter and 24-inch-diameter concrete pipe located at depths between 6 feet and 10 feet bgs. Storm drain trench segments 70-D17-00-8K, 70-D19-44-8A, 70-E27-00-2A, and 70-E27-00-2H contained 6-inch-diameter to 24-inch-diameter VCP located at depths between 4 feet and 11 feet bgs. Storm drain trench segment 70-D17-00-1L contained 8-inch-diameter CMP located at depths between 4 feet and 5 feet bgs. In addition, sanitary sewer trench segments 70-D17-00-2F, -2G, and 70-D19-00-3P contained 10-inch-diameter and 15-inch-diameter concrete pipe located at depths ranging from 6 feet to 9 feet bgs.

A sufficient volume of sediment for sample collection and analysis was found in three sections of pipe and Manholes MH309, MH481, and MH482 (Table 3-6). Neither the sediment samples collected from pipes removed from trench segments 70-D17-00-1G and -2F nor any of the three manholes identified the presence of radioactivity above the release criteria for any ROC. The sediment sample collected from a pipe section removed from trench segment 70-D19-44-1L identified the presence of Cs-137 contamination at 0.2626 pCi/g. This pipe section was placed in

LLRW bin BKRU025707G3 on June 27, 2011 for off-site disposal by the DON's radiological waste contractor. The sediment sample analytical reports are provided in Appendix D.

Radiological surveys were performed on 43 sections of pipe and the materials forming Manholes MH309, MH456, MH481, MH482, and MH483 (Table 3-5). No elevated results were identified for any of the pipe sections or manhole debris surveyed. Each of the surveyed and released pipe sections and materials forming the manholes were transferred to the DON's non-radiological waste contractor in August 2011 for off-site disposal or recycling. The final disposition of piping excavated from TU204 is provided in Tables 3-5 and 3-6. The radiological survey reports are provided in Appendix B.

Due to the presence of Cs-137 contamination in one sediment sample collected from TU204 pipe, a total of three investigative soil samples were collected along the bottom of the trench in May 2006 and submitted to the laboratory for analysis by gamma spectroscopy. One soil sample identified the presence of Ra-226 activity above the release limit at 2.381 pCi/g. Based on this result, an estimated 3 cubic yards was remediated from TU204. The remediated soil was placed in LLRW bin DB400D4 for disposal by the DON's radiological waste contractor (Table 3-9). Following the remediation efforts, three verification soil samples were collected and analyzed. Two soil samples identified the continued presence of Ra-226 contamination at 1.730 pCi/g and 2.096 pCi/g. Approximately 6.5 cubic yards of soil was remediated from TU204 on May 23, 2011 (Table 3-9). Six verification soil samples were collected from TU204 on May 23, 2011 following the remediation efforts. No radioactivity above the release criteria was identified in the verification soil samples for any ROC.

In total, 12 investigative soil samples (including investigative and verification samples) were collected prior to the 18 systematic FSS soil samples and an estimated 9.5 cubic yards of soil was remediated from TU204 during the removal action. Figure 12-2 depicts the approximate locations of the contaminated soil samples prior to remediation.

12.1.2 TU204 Piping Remaining In Place

No known storm drain or sanitary sewer piping associated with TU204 remained in place on Parcel G following the completion of the removal action.

12.1.3 TU204 Final Status Survey Summary

Eighteen systematic soil samples were collected from the sidewalls and bottom of TU204 on June 15, 2011 and submitted to the laboratory for analysis. The analytical results did not indicate the presence of radioactivity above the release criteria for any ROC. Figure 12-1 depicts the FSS soil sample collection locations in TU204.

TU204 was defined for the FSS as the sum of the trench unit and backfill material composed of both radiologically processed and released excavated soil and a volume of imported fill. The

average net residual radioactivity concentrations for material used as backfill in TU204 were 0.021 pCi/g for Cs-137, 0.159 pCi/g for Sr-90, and -0.200 pCi/g for Ra-226. The trench unit average net residual radioactivity concentrations were 0.018 pCi/g for Cs-137, 0.175 pCi/g for Sr-90, and -0.293 pCi/g for Ra-226. The activity used to model each radionuclide was based on the isotopic net concentration.

RESRAD modeling using the larger of the MDL or reported activity resulted in a net residual dose of 0.669 mrem/y with an increased cancer risk of 8.610×10^{-6} for the backfill material and 0.7262 mrem/y with an increased cancer risk of 9.311×10^{-6} for the trench unit. The modeling parameters and results were presented in Attachments 7 and 8 of the TU204 SUPR provided in Appendix O.

The results of the modeling efforts determined that the potential TU204 dose due to activity concentrations greater than or equal to the MDL was 0.7262 mrem/y with an increased cancer risk of 9.311×10^{-6}. These results met the EPA risk criterion of less than 3×10^{-4}, which supports radiological free release. No further radiological action was recommended in the TU204 SUPR (Appendix O).

12.1.4 TU204 Backfill Activities

In addition to a volume of imported fill, radiologically processed and released excavated soil survey units were selected for use as backfill material in TU204. The excavated soil survey units selected included:

- ES-0466
- ES-0470
- ES-0471
- ES-0472
- ES-0474

Radiological information related to the processing of these excavated soil survey units is summarized in Table 3-4 and the associated laboratory analytical results were discussed in the TU204 SUPR (Appendix O). The radiological and chemical analytical reports for the imported fill were provided in Attachment 1 of the SUPRA (Appendix A).

Concurrence with backfilling TU204 was obtained from the RASO on August 3, 2011 and backfilling operations commenced the following day. An estimated 979 cubic yards of soil was placed in TU204 and backfilling operations were completed on August 10, 2011. Table 3-1 summarizes the activities performed to support the recommended radiological free release of TU204.

13.0 SITE RESTORATION AND SWALE CONSTRUCTION

Site restoration activities and construction of the temporary swale system were performed following the completion of the excavation and backfill of the Parcel G trench survey units. The primary goals of these activities were for stormwater management, sediment control, and to maintain access to and within Parcel G. Details of these activities are described in the following sections.

13.1 SITE RESTORATION

Backfill and compaction activities for the Parcel G storm drain and sanitary sewer excavations were performed in accordance with the Parcel G Design Plan (TtEC 2007c) and the Basewide Construction Specifications (TtEC 2007b).

Backfill material consisting of radiologically processed and released excavated soil, imported fill, or a combination of the two was placed in 1-foot-thick loose lifts in the exposed trenches. The soil placed in the trench survey units was compacted by pressing the soil down using mechanical compaction equipment. Compaction provided for adequate road stability as well as dust control; however, no compaction testing was required. This process was repeated until soil in the trench corresponded to the existing grade. Limited stormwater ponding was expected and no street repaving was performed since the Parcel G property will be transferred for future development.

13.2 TEMPORARY SWALE CONSTRUCTION

To temporarily replace the removed underground storm drain system, a surface-based system consisting of 5,258 linear feet of swales was installed. Figure 13-1 depicts the locations of the swales (drainage channels) and overall storm management system. The surface stormwater system was designed to handle a 2-year return period storm. The design calculations were based upon 2.07 inches of rainfall per hour for a 10 minute rain event that removes stormwater at a rate of 4.43 cubic feet per second or approximately 2,000 gallons per hour.

The design of the swales provides for trapping sediments and a gradual slope for gravity flow (Figures 13-1 and 13-2). In addition to collecting runoff from Parcel G, the swale system collects and drains the on-flow of stormwater from the SFRA property (formerly Parcel A) and Parcels UC1 and UC2 (Fisher/Spear Avenues). Although requested, no stormwater volume calculations were provided by the SFRA for discharges to the HPNS temporary swale system. Consequently, the temporary swale design could only be based on the typical 2-year return period storm.

A new catch basin was constructed as part of the site restoration and swale construction activities for Parcels UC1 and UC2 at the intersection of Fisher and Spear Avenues and the flow into this catch basin is routed to the Parcel G swales (Figure 13-1). The details of the catch basins and tie-in are shown on Figure 13-2.

The temporary swale system was strategically placed to route flow toward three existing outfalls along the perimeter shoreline. Currently, the four temporary swales constructed in Parcel G continue into 3rd Avenue and eventually will tie into swales being constructed in Parcel D-1. The design of the temporary swale system enabled continued traffic access along the main roads at HPNS.

14.0 REMOVAL ACTION COST SUMMARY

This section provides a summary of the estimated costs incurred in performing the Parcel G removal action and FSS activities. The cost of this removal action is approximate due to numerous factors including changes in contract vehicles and overlapping removal action activities performed for other HPNS parcels within the same time period.

ACTIVITY	ESTIMATED COST	
Removal	$	5,985,918
Remediation (including laboratory costs)	$	5,491,505
Site Restoration	$	2,381,871
LLRW Disposal	$	10,721,654
Building 351 FSS	$	570,845
Building 351A FSS	$	717,155
Buildings 317/364/365 Site FSS	$	1,104,516
Building 366 FSS	$	436,230
Building 401 FSS	$	626,849
Building 408 FSS	$	695,249
Building 411 FSS	$	244,368
Building 439 FSS	$	27,331
Estimated Total	$	29,003,491

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15.0 CONCLUSIONS AND RECOMMENDATION

This RACR was prepared at the direction of the DON to describe and summarize the storm drain and sanitary sewer removal action and building and former buildings site FSS activities for Parcel G located at HPNS in San Francisco, California. Based on its radiological operational history, the DON determined that potential radioactive contamination in soil and debris at HPNS required a response action. This decision was documented in the AM (DON 2006). The purpose of this RACR was to summarize the Parcel G activities performed to protect the public health, welfare, and the environment from actual or potential releases of radiologic contaminants and document the results of the implemented time-critical radiological remedy selected in the ROD (DON 2009). The Parcel G removal action was performed in accordance with the requirements of CERCLA as amended by SARA and, to the extent practicable, the NCP.

The cleanup goals for localized radioactive contamination at HPNS presented in the AM (DON 2006) were derived in consultation with federal and state regulators to meet the most conservative requirements at the time the AM was being written. The maximum radiological dose release criteria delineated in the AM was based on the NRC dose limit of 25 mrem/y. However, the residual dose for the majority of the release criteria is well below that limit. The DON reviewed all surveys and remedial actions during the Parcel G removal action to ensure that residual radioactivity at HPNS meets the dose criterion of less than 15 mrem/y and the risk criterion of less than 3×10^{-4} when clearing radiologically impacted sites for unrestricted release.

The RAO for Parcel G was to prevent exposure to ROCs in concentrations that exceed remediation goals for all potentially complete exposure pathways by 1) identifying and decontaminating any radiologically impacted structures and 2) removing the source of contamination in soils by excavating the storm drain and sanitary sewers with proper off-site disposal of radiologically contaminated material. By achieving the RAO, the potential migration of radiologically contaminated material within or outside Parcel G was substantially reduced or eliminated. Completion of the Parcel G removal action under the AM (DON 2006) achieved the RAO and remediation goals selected in the ROD (DON 2009).

Parcel G was separated from Parcel D in July 2008 and a small area perpendicular to H Street was added so that the Parcel G property boundary extended straight along H Street. In its current configuration, Parcel G is approximately 40 acres in area and extends from Spear Avenue on the north, to Morrell Street on the east, to 3rd Avenue on the south, and to H Street on the west. Located in the central portion of HPNS, Parcel G is bounded on the north by Parcel UC1, on the east by Parcels C and D-1, on the south by Parcels D-1 and E, and on the west by Parcel E.

Radiologically surveyed and released Buildings 351, 351A, 366, 401, 408, 411, and 439 and the Buildings 316/364/365 Site are located within the boundaries of Parcel G. Currently, each of the

buildings located on Parcel G is vacant. Based on the City of San Francisco's Redevelopment Plan (SFRA 1997), Parcel G is expected to be zoned to accommodate several uses in the future including educational and cultural, mixed use, industrial, and open space.

15.1 STORM DRAIN AND SANITARY SEWER SYSTEMS

The present-day configuration of the storm drain and sanitary sewer system is the result of an evolutionary process that likely caused radiological contamination from the same sources to impact piping and other components of the HPNS storm drain and sanitary sewer systems. The CSM is based on the supposition that radioactive materials likely were discharged from numerous locations throughout HPNS into the storm drain and sanitary sewer system and may have been released into surrounding soils during the course of normal operations and maintenance or repair activities (DON 2008). The storm drain and sanitary sewer removal actions performed to date support the accuracy of the CSM.

Fieldwork for the Parcel G removal action began in June 2007 and excavation of the storm drain and sanitary sewers was initiated on July 19, 2007. The excavation of the Parcel G storm drain and sanitary sewer systems resulted in the designation of 63 trench survey units. The last truckload of Parcel G soil was excavated on June 13, 2011. In total, 23,166 linear feet of storm drain and sanitary sewer lines (inclusive of soil and piping) was excavated during the Parcel G removal action. At the completion of the excavation and remediation activities, the exposed Parcel G trench surface area was 39,440 m^2 with 22,449 linear feet of trench. Table 3-1 summarizes the activities performed for each trench survey unit that supports the recommendation for radiological free release.

The soil generated during the Parcel G removal action was excavated in accordance with the Work Plan (TtEC 2010) and often included small sections of crumbled pipe and crushed manhole pieces that were processed along with the excavated soil in RSY2 or RSY4. In total, 4,224 truckloads (approximately 50,688 cubic yards) of soil were derived from the excavation of the Parcel G storm drain and sanitary sewer systems and transferred to RSY2 or RSY4 for processing. A total of 181 excavated soil survey units containing material derived from the excavation of the Parcel G storm drain and sanitary sewer systems were processed in RSY2 and RSY4. During the processing activities, 7,742 soil samples were collected from the Parcel G excavated soil survey units in RSY2 and RSY4 and analyzed by the laboratory. Based on the analytical results, 16 excavated soil survey units were disposed of as LLRW in their entirety and about 2,828 cubic yards of soil was remediated directly from the excavated soil survey units for disposal by the DON's radiological waste contractor. Radionuclide concentrations above the release criteria in the Parcel G soil processed in RSY2 and RSY4 included Cs-137 ranging from 0.11899 pCi/g to 0.53132 pCi/g, and Ra-226 ranging from 1.4882 pCi/g to 4.4928 pCi/g. The majority of the processed excavated soil survey units derived from Parcel G storm drain and sanitary sewer excavation activities were backfilled into appropriate trench survey units. Excavated soil survey

units unacceptable for use as backfill due to odor, staining, or chemical contamination were staged and subsequently transferred to the DON's non-radiological waste contractor for off-site disposal.

During the storm drain and sanitary sewer removal action, a total of 185 manholes and 1,959 sections of pipe were removed and staged pending further activities. A sufficient volume of sediment was available for sample collection and analysis in 35 manholes and 90 sections of pipe excavated from the Parcel G storm drain and sanitary sewer systems. The highest concentration of Cs-137 and Ra-226 identified in the sediment samples analyzed was 0.87795 pCi/g and 4.2369 pCi/g, respectively. Pipe sections and manholes associated with sediment sample analytical results that exceeded the release criteria were placed in LLRW bins for off-site disposal by the DON's radiological waste contractor. In addition, radiological survey activities were performed for a total of 1,406 pipe sections and the materials forming 150 manholes. The majority of the Parcel G piping was released for off-site disposal or recycling.

Survey activities for the trench survey units included gamma scans of the exposed trench surfaces, static measurements, and soil sampling. Numerous soil samples were collected from the excavated trench survey units to determine whether radionuclide contamination was present above the release criteria. Based on the analytical results, approximately 3,400 cubic yards of contaminated soil was remediated from the 63 designated trench survey units in Parcel G during the removal action activities. The remediated soil was placed in LLRW bins for off-site disposal by the DON's radiological waste contractor. The majority of the contaminated soil was remediated from TU84 (794 cubic yards) located in Work Area 18 North.

A minimum of 18 soil samples were collected from each trench survey unit and analyzed by the laboratory. During the Parcel G removal action, a total of 5,709 trench survey unit soil samples were collected and analyzed. Of these, 4,575 were investigative and 1,134 were final systematic FSS soil samples. The highest Cs-137 investigative soil sample analytical result was found in TU99 (1.0335 pCi/g) and the highest Ra-226 investigative soil sample analytical result was found in TU84 (5.816 pCi/g). None of the final systematic FSS soil samples indicated the presence of contamination above the release criteria for any ROC.

Dose and risk modeling was performed for each of the 63 Parcel G trench survey units. The backfill material and the trenches were modeled separately with input parameters using the larger of the MDL or reported activity concentrations. The results of the modeling efforts for the 63 Parcel G trench survey units met the less than 15 mrem/y dose criterion and less than 3×10^{-4} risk criterion, which supports radiological free release. Based on the dose and risk modeling results, the greatest net dose to workers or members of the public as a result of exposure to residual radioactive material in soil on Parcel G was identified in TU115 (7.696 mrem/y with an excess lifetime cancer risk of 1.387×10^{-4}).

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The environmental ALARA process was implemented for each of the 63 trench survey units in addition to the dose and risk modeling efforts. ALARA analyses were performed based on recent estimates of dose to the public from HPNS operations. Based on qualitative ALARA analyses, excavation projects that could cause the potential dose to the public to exceed 1 millirem (individual) or 10 person-rem (collective) were subject to quantitative ALARA analyses. To date, no Parcel G operations have resulted in an individual dose to the public greater than 1 millirem or a collective dose greater than 10 person-rem. In addition, air monitoring results have not exceeded 10 percent of the derived air concentration and the processed personnel dosimetry badges did not identify a single gamma dose above background levels.

Relatively short segments of the storm drain and sanitary sewer systems remained in place on Parcel G following the completion of the removal action because: 1) their removal would adversely affect the integrity of nearby structures; 2) they could not be removed due to worker safety issues; or 3) they were within 10 feet of building walls or other obstructions such as stairways. Storm drain and sanitary sewer piping laterals were removed to within the 10-foot safety buffer surrounding buildings or other associated obstructions. Based on the completed fieldwork, survey activities, and laboratory analytical results, the DON concluded that the piping remaining in place was unlikely to be contaminated.

Although the Design Plan (TtEC 2007c) specified the storm drain and sanitary sewer pipelines to be removed in Work Areas 17, 18, 19, and 27, the DON revised the Parcel D property boundaries in July 2008 to create Parcels D-1, D-2, G, and UC1, UC2, and UC3. Consequently, the work area boundaries specified in the Design Plan did not exactly correspond to the current Parcel G property boundaries. As a result, some storm drain and sanitary sewer lines that are physically located on the south end of Parcel G near 3rd Avenue were left in place because the piping was outside the designated Work Areas 17, 18, 19, and 27 boundaries. The DON subsequently removed these pipes and manholes left in place on the south end of Parcel G to complete the storm drain and sanitary sewer removal action and support the recommendation for radiological release for unrestricted use of Parcel G.

The radiological details of the storm drain and sanitary sewer removal work completed for Parcel G were provided in each of the SUPRs included in Appendices G through O. The goal of the SUPRs was to demonstrate that identified residual radioactivity levels inside the excavated trenches and within the backfill material met the established release criteria. Based on the conclusions presented in each of the SUPRs, the DON achieved its stated objective.

15.2 RADIOLOGICALLY IMPACTED BUILDINGS AND BUILDING SITE

The DON elected to conduct a time-critical removal action to address potential radioactive contamination in the HPNS buildings and former building sites. Nine radiologically impacted buildings (Buildings 351, 351A, 364, 365, 366, 401, 408, 411, and 439) and one former

buildings site (Buildings 317/364/365 Site) were identified in Volume II of the HRA (NAVSEA 2004) within Parcel G. Buildings 364 and 365 were demolished following the completion of the survey activities and their footprints were incorporated in the Buildings 317/364/365 Site. The NRC release limit for unrestricted radiological use was applied in assessing the results of the building and former buildings site survey activities. These results were analyzed to determine whether residual radioactivity, distinguishable from background radiation, resulted in a total effective dose equivalent to an average member of the critical (screening) group exceeded 15 mrem/y or an excess lifetime cancer risk of 1×10^{-4}, and if the residual radioactivity had been reduced to levels that were ALARA.

The ALARA process was followed for each of the Parcel G buildings and former buildings site and was implemented through identification of potential radiological impacts, a review of the radiological impacts, and the performance of qualitative and quantitative analyses. The majority of the data and analysis used for the environmental ALARA evaluations were developed as part of the routine work processes. Results from radiological survey activities, and air, swipe, and soil samples were used to assess the potential Parcel G building and former buildings site radiological impacts. These activities included characterization to ensure complete removal of radioactive material exceeding the release criteria. Qualitative ALARA analyses for Parcel G resulted in no alpha or beta measurements above the investigation levels. In addition, qualitative ALARA analyses did not identify residual activity above the release criteria for any ROC. The FSS reports for each of the buildings and former buildings site are presented in Appendices P through W.

The FSS activities performed for the Parcel G buildings and former buildings site demonstrated that residual radioactivity levels met the radionuclide-specific release criterion for each ROC. No evidence of residual radioactivity above the release criteria was found to be present in the structures or site based on the results of the survey activities and laboratory analytical results. Analysis and evaluation of the collected field data showed that the residual radioactivity in the Parcel G buildings and former buildings site achieved the stated release criteria, and the buildings and former buildings site were ready for unconditional radiological release for unrestricted use.

Radiological release for unrestricted use of Buildings 351, 351A, 366, 401, 408, 411, and 439 as well as the Buildings 317/364/365 Site has been obtained from the DTSC and CDPH. According to statements by the EPA, their decision for radiological free release of the Parcel G buildings and former buildings site will be based on the data and analyses presented in this RACR.

15.3 RECOMMENDATION

The DON has met its stated remediation goals and achieved its RAO for the approximately 40 acres of Parcel G property. The RAO was developed to protect public health, welfare, and the environment from actual or potential releases of radiologic contaminants and preclude potential exposure to future residents or workers by physically removing and disposing of radioactive

contaminants that exceeded the radiological remediation criteria. The results of the implemented radiological remedy selected in the ROD (DON 2009) are documented in this RACR. By achieving the RAO, the possible migration of contaminated material within or outside Parcel G was substantially reduced and potential exposure to the ROCs in concentrations that exceed remediation goals was eliminated for all potentially complete exposure pathways.

Each of the 63 trench survey units associated with the Parcel G storm drain and sanitary sewer systems was modeled. The modeling results met the dose criterion of less than 15 mrem/y and risk criterion of less than 3×10^{-4}, which supports radiological free release.

The Parcel G storm drain and sanitary sewer removal action supports the accuracy of the CSM. Identified radiological contamination was found primarily in excavated soil and there was little indication of historical spills or accidental releases based on historical research and site investigations.

Each of the Parcel G impacted buildings and the former buildings site have been radiologically surveyed. Concurrence for the radiological release for unrestricted use of Buildings 351, 351A, 366, 401, 408, 411, and 439 as well as the Buildings 317/364/365 Site has been obtained from the DTSC and CDPH.

The DON has met its stated goals and achieved its RAO for the Parcel G property within designated Work Areas 17, 18, 19, and 27. The information summarized in this RACR, each of the 63 SUPRs, and the building and former buildings site FSS results support the DON's conclusion that Parcel G is ready for unconditional, unrestricted radiological free release. Reduction of the potential risks to levels below remediation goals associated with potential exposure to the ROCs has been achieved. Each of the radiologically impacted buildings, former buildings site, and storm drain and sanitary sewers was investigated through the CERCLA process. Based on the fieldwork performed, data collected and evaluated, subsequent remediation of identified contamination, off-site disposal of contaminated material, verification activities, and DTSC and CDPH concurrence with radiological release for unrestricted use of the impacted buildings and former buildings site, the classification of "radiologically impacted" should be removed. No further radiological action is required for Parcel G.

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TABLES

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TABLE 2-1

RELEASE CRITERIA (ACTION MEMORANDUM)

Radionuclide	Surfaces			Soil[d] (pCi/g)				Water[h] (pCi/L)
	Equipment, Waste (dpm/100 cm^2)[a]	Structures (dpm/100 cm^2)[b]	Residual Dose (mrem/yr)[c]	Outdoor Worker (pCi/g)[c]	Residual Dose (mrem/yr)[c]	Residential (pCi/g)[c]	Residual Dose (mrem/yr)[c]	
Americium-241	100	100	18.7	5.67	0.8661	1.36	24.84	15
Cesium-137	5,000	5,000	1.72	0.113	0.2142	0.113	0.2561	119
Cobalt-60	5,000	5,000	6.01	0.0602	0.5164	0.0361	0.3918	100
Europium-152	5,000	5,000	3.21	0.13[f]	0.5018	0.13[f]	0.502	60
Europium-154	5,000	5,000	3.49	0.23[f]	0.9593	0.23[f]	0.9599	200
Plutonium-239	100	100	18.1	14.0	1.743	2.59	1.138	15
Radium-226	100	100	0.612	1.0[g]	6.342	1.0[g]	14.59	5[i]
Strontium-90	1,000	1,000	0.685	10.8	0.1931	0.331	1.648	8
Thorium-232	1,000	36.5	24.9	2.7	24.91	1.69	25	15
Tritium	5,000	5,000	0.00053	4.23	0.00179	2.28	0.05263	20,000
Uranium-235+D	5,000	488	25	0.398	0.178	0.195	0.8453	30

Reference: Final Base-wide Radiological Removal Action, Action Memorandum - Revision 2006, Hunters Point Shipyard, San Francisco, CA (DON 2006)

Notes:

[a] These limits are based on AEC Regulatory Guide 1.86 (AEC 1974). Limits for removable surface activity are 20 percent of these values.

[b] These limits are based on 25 mrem/yr, using RESRAD-Build Version 3.3 or Regulatory Guide 1.86 (AEC 1974), whichever is lower.

[c] The resulting dose is based on modeling using RESRAD-Build Version 3.3 or RESRAD Version 6.3, with radon pathways turned off.

[d] EPA PRGs for two future-use scenarios.

[e] The on-site and off-site laboratory will ensure that the MDA meets the listed release criteria by increasing sample size or counting time as necessary. The MDA is defined as the lowest net response level, in counts, that can be seen with a fixed level of certainty, customarily 95 percent. The MDA is calculated per sample by considering background counts, amount of sample used, and counting time.

[f] Based on EPA-decay corrected PRGs for commercial reuse and a previous action memorandum (TtEMI 2000 and 2001).

[g] Limit is 1 pCi/g above background, per agreement with EPA.

TABLE 2-1

RELEASE CRITERIA (ACTION MEMORANDUM)

Notes (Continued):

[h] Release criteria for water have been derived from Radionuclides Notice of Data Availability Technical Document (EPA 2000) by comparing the limits from two criteria and using the most conservative limit.

[i] Limit is for total radium concentration.

Abbreviations and Acronyms:

AEC – Atomic Energy Commission
cm^2 – square centimeter
DON – U.S. Department of the Navy
dpm – disintegrations per minute
EPA – U.S. Environmental Protection Agency
MDA – minimum detectable activity
mrem/yr – millirems per year
pCi/g – picocuries per gram
pCi/L – picocuries per liter
PRG – preliminary remediation goal
TtEMI – Tetra Tech EM, Inc.

TABLE 2-2

PARCEL G REMEDIATION GOALS FOR RADIONUCLIDES

Remediation Goals for Radionuclides					
Radionuclide	Surfaces (dpm/100 cm^2)		Soil (pCi/g)		Water (pCi/L)
	Equipment and Waste[a]	Structures[b]	Construction Worker	Residential[d]	
Cesium-137	5,000	5,000	0.113	0.113	119
Cobalt-60	5,000	5,000	0.0602	0.0361	100
Plutonium-239	100	100	14.0	2.59	15
Radium-226	100	100	1.0[c]	1.0[c]	5.0
Strontium-90	1,000	1,000	10.8	0.331	8.0
Thorium-232	1,000	36.5	19.0	1.69	15.0
Hydrogen-3	5,000	5,000	4.23	2.28	20,000
Uranium-235 + daughters	5,000	488	0.398	0.195	30.0

Reference **:** Table 5 of the Record of Decision for Parcel G (DON 2009)

Notes:

[a] Limits for removable surface activity are 20 percent of these values.

[b] Remediation goals are consistent with those issued in the Action Memorandum (DON 2006). Remediation goals meet the 25 mrem/y residual dose level consistent with 10 CFR Section 20.1402. Furthermore, for most ROCs, goals meet the 15 mrem/y residual dose level consistent with the 1997 EPA OSWER Directive (OSWER No. 9200.4-18). Of exception is the goal for thorium-232, which due to detection limit technical limitations, corresponds to a dose of 25 mrem/y.

[c] Goal is 1 pCi/g above background per agreement with EPA.

[d] All radiologically impacted soils in this parcel will be remediated according to Residential Remediation Goals.

Abbreviations and Acronyms:

CFR – *Code of Federal Regulations*
cm^2 – square centimeter
dpm – disintegration per minute
EPA – U.S. Environmental Protection Agency
mrem/y – millirems per year
pCi/g – picocuries per gram
pCi/L – picocuries per liter
OSWER – Office of Solid Waste and Emergency Response
ROC – radionuclide of concern

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TABLE 2-3

STORM DRAIN AND SANITARY SEWER RELEASE CRITERIA (SURVEY UNIT PROJECT REPORTS ABSTRACT)

Radionuclide	Soil			
	Outdoor Worker (pCi/g)	Residual Dose (mrem/yr)[a]	Residential (pCi/g)	Residual Dose (mrem/yr)[a]
Cesium-137	0.113	0.2142	0.113	0.2561
Radium-226	1.0[b]	6.342	1.0[b]	14.59
Strontium-90	10.8	0.1931	0.331	1.648

***Reference*:** Table 2-2 of the SUPRA (TtEC 2010a)

Notes:

a The resulting dose is based on modeling using RESRAD Version 6.3, with radon pathways turned off.

b Limit is 1 pCi/g above background, per agreement with EPA.

Abbreviations and Acronyms:

EPA – U.S. Environmental Protection Agency
mrem/yr – millirems per year
pCi/g – picocuries per gram
SUPRA – Survey Unit Project Reports Abstract

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TABLE 3-1

PARCEL G TRENCH SURVEY UNIT DATA SUMMARY

Trench Survey Unit	Work Area	Associated Trench Segments	Surface Area (m^2)	Linear Feet	Total Soil Samples Collected	Elevated ROC	Elevated Soil Samples (pCi/g)	Total Soil Volume Remediated (cy)	Survey Unit Backfill Data				Comments	Net Residual Dose/Risk	Recommendation
									Backfill Material Source[a]	Estimated Backfill Quantity (cy)	Date RASO Concurred	Date Backfill Complete			
TU66	17 North	70-D17-00-3C 70-D17-00-3D 70-D17-00-3G 70-D17-00-3H 70-D17-00-3I 70-D17-00-8A 70-D17-33-3G 70-D17-33-8A	651	378	109	NA	NA	0	ES-0003 ES-0004 ES-0007	774	2-Nov-07	14-Nov-07	A total of 91 investigative soil samples were collected based on the presence of Ra-226 and Cs-137 contamination in piping and Manhole MH287 sediment samples.	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.568 mrem/y with an increased cancer risk of 9.314×10^{-5} for the backfill material and 4.491 mrem/y with an increased cancer risk of 7.496×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU67	17 North	70-C17-00-2C 70-C17-00-3E 70-D17-00-2C 70-D17-00-2L 70-D17-00-3E 70-D17-00-3F 70-D17-00-3H	467	298	110	Ra-226	1.5580 1.8383 2.2936	15.5	ES-0001 ES-0028 ES-0029	411	8-Jan-08	18-Feb-08	A total of 41 investigative soil samples were collected based on the presence of Cs-137 contamination in Manhole MH284.	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 4.457 mrem/y with an increased cancer risk of 7.768×10^{-5} for the backfill material and 3.409 mrem/y with an increased cancer risk of 5.922×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU68	17 North	70-D17-00-1L 70-D17-00-2N 70-D17-00-2O 70-D17-00-2P 70-D17-00-3I 70-D17-00-3J	825	433	151	Ra-226	1.5198 1.5691 1.6107 1.6135 1.7537 1.8355 1.9161 1.9210 1.9372 2.1174 2.2815 2.3142 2.7739	37.25	ES-0012 ES-0013 and Imported fill	1,021	18-Mar-08	24-Mar-08	A total of 33 investigative soil samples were collected based on the presence of Cs-137 in one pipe sediment sample.	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.868 mrem/y with an increased cancer risk of 9.495×10^{-5} for the backfill material and 3.635 mrem/y with an increased cancer risk of 5.816×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.

TABLE 3-1

PARCEL G TRENCH SURVEY UNIT DATA SUMMARY

Trench Survey Unit	Work Area	Associated Trench Segments	Surface Area (m^2)	Linear Feet	Total Soil Samples Collected	Elevated ROC	Elevated Soil Samples (pCi/g)	Total Soil Volume Remediated (cy)	Survey Unit Backfill Data				Comments	Net Residual Dose/Risk	Recommendation
									Backfill Material Source[a]	Estimated Backfill Quantity (cy)	Date RASO Concurred	Date Backfill Complete			
TU69	17 North	70-C17-00-1W 70-C17-00-2P 70-D17-00-1R 70-D17-00-1T 70-D17-00-1U 70-D17-00-1V 70-D17-00-1W 70-D17-00-2P 70-D17-00-3F	793	521	106	Ra-226	1.8448 2.5175 2.9060	20.5	ES-0006 ES-0010 ES-0026 ES-0030 ES-0031 and Imported fill	895	2-Jan-08	7-Mar-08	A total of 32 investigative soil samples were collected and analyzed due to the presence of Cs-137 contamination in sediment collected from upstream Manhole MH284 associated with TU67.	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 6.187 mrem/y with an increased cancer risk of 1.009×10^{-4} for the backfill material and 4.309 mrem/y with an increased cancer risk of 7.007×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU70	17 North	70-D17-00-1L 70-D17-00-1S 70-D17-00-2M 70-D17-34-1S 70-D17-34-2M 70-D17-34-3K 70-D17-34-8A through -8P 70-D17-34-9B	944	547	18	NA	NA	0	ES-0005 ES-0008 ES-0011 ES-0014 ES-0015 and Imported fill	1,282	1-Nov-07	16-Nov-07	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.455 mrem/y with an increased cancer risk of 8.683×10^{-5} for the backfill material and 5.145 mrem/y with an increased cancer risk of 8.189×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.

TABLE 3-1

PARCEL G TRENCH SURVEY UNIT DATA SUMMARY

Trench Survey Unit	Work Area	Associated Trench Segments	Surface Area (m^2)	Linear Feet	Total Soil Samples Collected	Elevated ROC	Elevated Soil Samples (pCi/g)	Total Soil Volume Remediated (cy)	Survey Unit Backfill Data				Comments	Net Residual Dose/Risk	Recommendation
									Backfill Material Source[a]	Estimated Backfill Quantity (cy)	Date RASO Concurred	Date Backfill Complete			
TU71	17 North	70-D17-00-1L 70-D17-00-1O 70-D17-00-1P 70-D17-00-1Q 70-D17-00-1R 70-D17-00-2H 70-D17-00-2I 70-D17-34-1P 70-D17-34-1Q 70-D17-34-2I 70-D17-34-2J 70-D17-34-2K 70-D17-34-8Q through -8Z 70-D17-34-9A	872	888	55	Ra-226	2.2638	1	ES-0009 ES-0022 ES-0023 and Imported fill	1,025	5-Nov-07	14-Nov-07	Collected a total of 34 investigative soil samples due to the presence of Cs-137 contamination in one pipe section and Manhole MH300.	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.895 mrem/y with an increased cancer risk of 9.492×10^{-5} for the backfill material and 5.067 mrem/y with an increased cancer risk of 8.164×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU72	17 South	70-D17-00-1M 70-D17-00-1N 70-D17-00-1O 70-D17-00-1X 70-D17-00-2H 70-D17-00-8B 70-D17-00-8C 70-D17-00-8D	935	557	184	Cs-137 Ra-226	0.12516 1.6698 1.7103 1.7501 1.9416 1.9668 2.4945	26	ES-0017 ES-0018 ES-0019 ES-0020 ES-0021 ES-0038 ES-0039 and Imported fill	1,293	23-Jan-08	15-Feb-08	A total of 91 investigative soil samples were collected based on the presence of Cs-137 contamination in one pipe sediment sample.	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.675 mrem/y with an increased cancer risk of 9.042×10^{-5} for the backfill material and 5.690 mrem/y with an increased cancer risk of 9.088×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.

TABLE 3-1

PARCEL G TRENCH SURVEY UNIT DATA SUMMARY

Trench Survey Unit	Work Area	Associated Trench Segments	Surface Area (m^2)	Linear Feet	Total Soil Samples Collected	Elevated ROC	Elevated Soil Samples (pCi/g)	Total Soil Volume Remediated (cy)	Survey Unit Backfill Data				Comments	Net Residual Dose/Risk	Recommendation
									Backfill Material Source[a]	Estimated Backfill Quantity (cy)	Date RASO Concurred	Date Backfill Complete			
TU73	17 South	70-D17-00-1G 70-D17-00-2E 70-D17-00-2G 70-D17-00-2H 70-D17-00-3B 70-D17-00-8E 70-D17-00-8F	928	528	175	Ra-226	1.8145 1.9254	26	ES-0016 ES-0024 ES-0025 ES-0027 and Imported fill	1,067	15-Nov-07	7-Dec-07	A total of 97 investigative soil samples were collected based on the presence of Ra-226 in one pipe sediment sample and Cs-137 contamination in an upstream sediment sample.	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 7.646 mrem/y with an increased cancer risk of 1.222×10^{-4} for the backfill material and 5.150 mrem/y with an increased cancer risk of 8.222×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU74	18 North	70-D19-00-3Y 76-D19-00-8A	384	195	18	NA	NA	0	ES-0045 and Imported fill	260	14-Dec-07	24-Mar-08	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 2.617 mrem/y with an increased cancer risk of 4.657×10^{-5} for the backfill material and 2.542 mrem/y with an increased cancer risk of 4.529×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU75	18 North	70-D19-00-1K 70-D19-00-2N 70-D19-00-2O 70-D19-00-2P 70-D19-00-2Q 70-D19-00-2R 70-D19-09-2N 70-D19-09-2R	410	344	42	Cs-137 Ra-226	0.20684 2.2373 3.5353 3.6907	4.5	ES-0044 ES-0046 and Imported fill	456	2-Jan-08	26-Mar-08	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 3.201 mrem/y with an increased cancer risk of 5.661×10^{-5} for the backfill material and 3.025 mrem/y with an increased cancer risk of 5.337×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.

TABLE 3-1

PARCEL G TRENCH SURVEY UNIT DATA SUMMARY

Trench Survey Unit	Work Area	Associated Trench Segments	Surface Area (m^2)	Linear Feet	Total Soil Samples Collected	Elevated ROC	Elevated Soil Samples (pCi/g)	Total Soil Volume Remediated (cy)	Survey Unit Backfill Data				Comments	Net Residual Dose/Risk	Recommendation
									Backfill Material Source[a]	Estimated Backfill Quantity (cy)	Date RASO Concurred	Date Backfill Complete			
TU76	19 South	70-D19-00-1U 70-D19-00-1X 70-D19-00-1Y 70-D19-00-2A 70-D19-00-2B 70-D19-00-2D 70-D19-00-2E 70-D19-00-2G 70-D19-00-3T 70-D19-00-4B	908	531	114	Ra-226	1.7969 1.8773 1.9991 2.0789 2.2166 2.4086 2.4745 3.2175 3.5144	34.5	ES-0047 ES-0055 ES-0058 and Imported fill	1,732	24-Mar-09	27-Mar-09	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.415 mrem/y with an increased cancer risk of 8.638×10^{-5} for the backfill material and 5.371 mrem/y with an increased cancer risk of 8.546×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU77	19 South	70-D19-00-2A 70-D19-00-3S 70-D19-66-2A	951	317	345	Ra-226	1.4961 to 3.7540	454	Imported fill	2,109	6-Oct-09	12-Oct-09	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 6.598 mrem/y with an increased cancer risk of 1.048×10^{-4} for the backfill material and 4.541 mrem/y with an increased cancer risk of 7.102×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU78	19 South	70-D19-00-1O 70-D19-00-1P 70-D19-00-1Q 70-D19-00-1R 70-D19-00-1S 70-D19-00-1T 70-D19-00-1W 70-D19-00-4B 70-D19-00-4C 70-D19-00-4D 70-D19-00-8D 70-D19-00-8E 70-D19-00-8F	909	560	97	Ra-226	1.6342 1.6419 1.6896 1.7879 1.8187 1.9203 2.1259	16.5	ES-0054 ES-0059 ES-0062 and Imported fill	875	7-May-08	10-May-08	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 4.946 mrem/y with an increased cancer risk of 7.883×10^{-5} for the backfill material and 3.160 mrem/y with an increased cancer risk of 4.964×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.

TABLE 3-1

PARCEL G TRENCH SURVEY UNIT DATA SUMMARY

Trench Survey Unit	Work Area	Associated Trench Segments	Surface Area (m^2)	Linear Feet	Total Soil Samples Collected	Elevated ROC	Elevated Soil Samples (pCi/g)	Total Soil Volume Remediated (cy)	Survey Unit Backfill Data				Comments	Net Residual Dose/Risk	Recommendation
									Backfill Material Source[a]	Estimated Backfill Quantity (cy)	Date RASO Concurred	Date Backfill Complete			
TU79	19 South	70-D19-00-1S 70-D19-00-3Q 70-D19-00-3R 70-D19-00-3S 70-D19-00-8E 70-D19-00-8G	963	423	18	NA	NA	0	ES-0057 ES-0060 ES-0061 ES-0063 ES-0064 ES-0065	1,297	19-Dec-07	16-Jan-08	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 4.228 mrem/y with an increased cancer risk of 6.713×10^{-5} for the backfill material and 4.382 mrem/y with an increased cancer risk of 6.952×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU80	19 South	70-D19-00-1U 70-D19-00-1Z 70-D19-09-1U 70-D19-09-1Z 70-D19-09-5E	502	270	18	NA	NA	0	ES-0053 and Imported fill	500	3-Jan-08	26-Mar-08	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 4.093 mrem/y with an increased cancer risk of 7.054×10^{-5} for the backfill material and 2.451 mrem/y with an increased cancer risk of 4.226×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.

TABLE 3-1

PARCEL G TRENCH SURVEY UNIT DATA SUMMARY

Trench Survey Unit	Work Area	Associated Trench Segments	Surface Area (m^2)	Linear Feet	Total Soil Samples Collected	Elevated ROC	Elevated Soil Samples (pCi/g)	Total Soil Volume Remediated (cy)	Survey Unit Backfill Data				Comments	Net Residual Dose/Risk	Recommendation
									Backfill Material Source[a]	Estimated Backfill Quantity (cy)	Date RASO Concurred	Date Backfill Complete			
TU81	19 North	70-D19-00-2F 70-D19-00-2G 70-D19-00-2H 70-D19-00-2J 70-D19-00-2K 70-D19-00-2O 70-D19-00-2S 70-D19-00-3X 70-D19-00-3Y 70-D19-00-5D 70-D19-09-2J 70-D19-09-2R 70-D19-09-3A 70-D19-37-1F 70-D19-37-2F 70-D19-37-2G 70-D19-37-5C	812	526	226	Cs-137 Ra-226	0.13339 1.5141 to 3.5569	215	ES-0043 ES-0092 and Imported fill	927	2-Nov-09	9-Nov-09	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.173 mrem/y with an increased cancer risk of 8.376×10^{-5} for the backfill material and 4.562 mrem/y with an increased cancer risk of 7.215×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU82	19 South	70-D19-00-1J 70-D19-00-1U 70-D19-00-1V 70-D19-00-2D 70-D19-00-2F 70-D19-00-3S 70-D19-00-8C 70-D19-37-1F	913	521	86	Ra-226	1.5171 1.5796 2.2541 2.5339 2.5394 2.6810	21	ES-0050 ES-0051 ES-0052 ES-0056	1,180	11-Dec-08	7-Jan-09	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 4.234 mrem/y with an increased cancer risk of 6.740×10^{-5} for the backfill material and 5.525 mrem/y with an increased cancer risk of 8.773×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.

TABLE 3-1

PARCEL G TRENCH SURVEY UNIT DATA SUMMARY

Trench Survey Unit	Work Area	Associated Trench Segments	Surface Area (m^2)	Linear Feet	Total Soil Samples Collected	Elevated ROC	Elevated Soil Samples (pCi/g)	Total Soil Volume Remediated (cy)	Survey Unit Backfill Data				Comments	Net Residual Dose/Risk	Recommendation
									Backfill Material Source[a]	Estimated Backfill Quantity (cy)	Date RASO Concurred	Date Backfill Complete			
TU83	19 North	70-D19-00-3G 70-D19-00-3J 70-D19-00-3Y 70-D19-00-4A 70-D19-00-5A	367	252	67	Ra-226	1.5327 1.6784 2.0252 2.3185 2.4731 2.5476	13.25	ES-0066 ES-0067 and Imported fill	369	15-May-08	20-May-08	Bedrock was encountered about 5 feet bgs at the west end of TU83.	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 2.852 mrem/y with an increased cancer risk of 5.100×10^{-5} for the backfill material and 1.594 mrem/y with an increased cancer risk of 2.820×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU84	18 North	70-D18-09-3P 70-D18-09-3Q 70-D18-09-3R 70-D18-09-3S 70-D18-09-4R 70-D18-09-8D 70-D18-09-8E 70-D18-09-8F	651	240	293	Cs-137 Ra-226	0.12271 1.5075 to 5.8160	794	Imported fill	1,080	22-Apr-10	3-May-10	Parts of TU84 were segregated during the sampling and remediation activities to become TU114, TU119, and TU151.	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.228 mrem/y with an increased cancer risk of 8.715×10^{-5} for the backfill material and 4.608 mrem/y with an increased cancer risk of 7.597×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU85	18 North	70-D18-09-4R 70-D18-09-8A 70-D18-09-8B 70-D18-09-8C	907	415	91	Ra-226	1.6414 to 4.1906	59	Imported fill	1,487	3-Jun-08	5-Jun-08	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 6.397 mrem/y with an increased cancer risk of 1.022×10^{-4} for the backfill material and 5.957 mrem/y with an increased cancer risk of 9.472×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.

TABLE 3-1

PARCEL G TRENCH SURVEY UNIT DATA SUMMARY

Trench Survey Unit	Work Area	Associated Trench Segments	Surface Area (m^2)	Linear Feet	Total Soil Samples Collected	Elevated ROC	Elevated Soil Samples (pCi/g)	Total Soil Volume Remediated (cy)	Survey Unit Backfill Data				Comments	Net Residual Dose/Risk	Recommendation
									Backfill Material Source[a]	Estimated Backfill Quantity (cy)	Date RASO Concurred	Date Backfill Complete			
TU86	18 North	70-D18-09-3I 70-D18-09-3J 70-D18-09-3K 70-D18-09-3L 70-D18-09-3M 70-D18-09-3N 70-D18-09-3O 70-D18-09-3V 70-D18-09-8H	670	398	175	Ra-226	1.5350 to 4.0296	75	Imported fill	702	14-Oct-08	16-Oct-08	A total of 46 investigative soil samples were collected and analyzed due to the presence of Cs-137 in sediment samples colected from Manholes MH337 and MH338.	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.315 mrem/y with an increased cancer risk of 8.828×10^{-5} for the backfill material and 3.073 mrem/y with an increased cancer risk of 5.034×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU87	18 North	70-D18-09-3A 70-D18-09-3B 70-D18-09-3C 70-D18-09-3D 70-D18-09-3E 70-D18-09-3F 70-D18-09-3G 70-D18-09-3H 70-D18-09-3I 70-D18-09-3W	669	357	18	NA	NA	0	Imported fill	710	14-Oct-08	17-Oct-08	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.310 mrem/y with an increased cancer risk of 8.822×10^{-5} for the backfill material and 3.010 mrem/y with an increased cancer risk of 4.929×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.

TABLE 3-1

PARCEL G TRENCH SURVEY UNIT DATA SUMMARY

Trench Survey Unit	Work Area	Associated Trench Segments	Surface Area (m^2)	Linear Feet	Total Soil Samples Collected	Elevated ROC	Elevated Soil Samples (pCi/g)	Total Soil Volume Remediated (cy)	Survey Unit Backfill Data				Comments	Net Residual Dose/Risk	Recommendation
									Backfill Material Source[a]	Estimated Backfill Quantity (cy)	Date RASO Concurred	Date Backfill Complete			
TU88	18 North	70-D18-33-3X 70-D18-33-4B 70-D18-33-4C 70-D18-33-4D 70-D18-33-4E 70-D18-33-4R 70-D18-33-4S 70-D18-33-4W 70-D18-33-5B 70-D18-33-6A 70-D18-33-6C 70-D18-33-8A 70-D18-33-8B 70-D18-33-8C	690	403	118	Ra-226	1.8175 1.8584 2.3650 2.4251 2.5672 2.5741 2.6075 2.7378	26.75	Imported fill	1,328	2-May-08	6-May-08	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.406 mrem/y with an increased cancer risk of 8.946×10^{-5} for the backfill material and 2.275 mrem/y with an increased cancer risk of 3.691×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU89	18 North	70-D18-33-3U 70-D18-33-4P 70-D18-33-4R 70-D18-33-4V 70-D18-33-8A 70-D18-33-8B 70-D18-33-8C 70-D18-33-8X	926	475	18	NA	NA	0	Imported fill	1,958	7-May-08	15-May-08	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 6.484 mrem/y with an increased cancer risk of 1.034×10^{-4} for the backfill material and 3.376 mrem/y with an increased cancer risk of 5.331×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.

TABLE 3-1

PARCEL G TRENCH SURVEY UNIT DATA SUMMARY

Trench Survey Unit	Work Area	Associated Trench Segments	Surface Area (m^2)	Linear Feet	Total Soil Samples Collected	Elevated ROC	Elevated Soil Samples (pCi/g)	Total Soil Volume Remediated (cy)	Survey Unit Backfill Data				Comments	Net Residual Dose/Risk	Recommendation
									Backfill Material Source[a]	Estimated Backfill Quantity (cy)	Date RASO Concurred	Date Backfill Complete			
TU90	18 North	70-D18-33-4O 70-D18-33-4P 70-D18-33-4Q 70-D18-33-8E	328	154	18	NA	NA	0	Imported fill	451	5-Sep-08	9-Sep-08	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 3.711 mrem/y with an increased cancer risk of 6.721×10^{-5} for the backfill material and 2.811 mrem/y with an increased cancer risk of 5.074×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU91	18 North	70-D18-33-1M 70-D18-33-2T 70-D18-33-2U 70-D18-33-2V 70-D18-33-2X 70-D18-33-2Y 70-D18-33-2Z 70-D18-33-8D 70-D18-33-8E 70-D18-33-8F 70-D18-33-8G	718	313	77	Ra-226	1.7229 2.1157 2.2303 2.3942 2.4914 2.5276 2.5401 2.7682 2.7839 2.8293 3.2371	208	Imported fill	815	24-Mar-09	31-Mar-09	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.534 mrem/y with an increased cancer risk of 9.111×10^{-5} for the backfill material and 4.769 mrem/y with an increased cancer risk of 7.804×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU92	19 South	70-D18-44-2G 70-D18-44-2H 70-D18-44-8A 70-D18-44-8B 70-D19-44-1O	275	125	55	NA	NA	0	Imported fill	306	7-May-08	9-Jun-08	A total of 37 investigative soil samples were collected due to the presence of Cs-137 contamination in pipe sediment.	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 3.454 mrem/y with an increased cancer risk of 6.376×10^{-5} for the backfill material and 2.439 mrem/y with an increased cancer risk of 4.483×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.

TABLE 3-1

PARCEL G TRENCH SURVEY UNIT DATA SUMMARY

Trench Survey Unit	Work Area	Associated Trench Segments	Surface Area (m^2)	Linear Feet	Total Soil Samples Collected	Elevated ROC	Elevated Soil Samples (pCi/g)	Total Soil Volume Remediated (cy)	Survey Unit Backfill Data				Comments	Net Residual Dose/Risk	Recommendation
									Backfill Material Source[a]	Estimated Backfill Quantity (cy)	Date RASO Concurred	Date Backfill Complete			
TU93	19 South	70-D18-44-2I 70-D18-44-2J 70-D18-44-2K 70-D18-44-8C 70-D18-44-8D	722	249	83	Ra-226	2.1459 2.2837	11.5	Imported fill	840	17-Jun-08	11-Jul-08	A total of 23 investigative soil samples were collected due to the presence of Cs-137 contamination in pipe sediment.	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.552 mrem/y with an increased cancer risk of 9.135×10^{-5} for the backfill material and 3.377 mrem/y with an increased cancer risk of 5.466×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU94	19 South	70-D18-44-1L 70-D18-44-1M 70-D18-44-1N 70-D18-44-1O 70-D18-44-1P 70-D18-44-1Q 70-D18-44-1R 70-D18-44-1S 70-D18-44-1T	716	394	18	NA	NA	0	Imported fill	741	19-Nov-08	9-Dec-08	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.525 mrem/y with an increased cancer risk of 9.099×10^{-5} for the backfill material and 2.93 mrem/y with an increased cancer risk of 4.764×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU95	18 South	70-D18-00-1G 70-D18-00-2K 70-D18-33-1F 70-D18-33-1G 70-D18-33-2L 70-D18-33-2M 70-D18-33-2N 70-D18-33-8O 70-D18-33-8R 70-D18-33-8S 70-D18-33-8T	698	362	94	NA	NA	0	ES-0032 ES-0035 ES-0036 ES-0107	809	5-Sep-08	11-Sep-08	A total of 76 investigative soil samples were collected due to the presence of Cs-137 and Ra-226 contamination in sediment samples.	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.383 mrem/y with an increased cancer risk of 8.926×10^{-5} for the backfill material and 2.151 mrem/y with an increased cancer risk of 3.520×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.

TABLE 3-1

PARCEL G TRENCH SURVEY UNIT DATA SUMMARY

Trench Survey Unit	Work Area	Associated Trench Segments	Surface Area (m^2)	Linear Feet	Total Soil Samples Collected	Elevated ROC	Elevated Soil Samples (pCi/g)	Total Soil Volume Remediated (cy)	Survey Unit Backfill Data				Comments	Net Residual Dose/Risk	Recommendation
									Backfill Material Source[a]	Estimated Backfill Quantity (cy)	Date RASO Concurred	Date Backfill Complete			
TU96	18 South	70-D18-33-2M 70-D18-33-2O 70-D18-33-2P 70-D18-33-2R 70-D18-33-4M 70-D18-33-4O 70-D18-33-8L 70-D18-33-8M 70-D18-33-8O 70-D18-33-8P 70-D18-33-8Q 70-D18-33-8R	825	416	18	NA	NA	0	Imported fill	764	3-Oct-08	9-Oct-08	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 6.023 mrem/y with an increased cancer risk of 9.742×10^{-5} for the backfill material and 3.363 mrem/y with an increased cancer risk of 5.383×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU97	18 South	70-D18-33-2N 70-D18-33-2O 70-D18-33-2P 70-D18-33-2Q 70-D18-33-2S 70-D18-33-8J 70-D18-33-8K 70-D18-33-8M 70-D18-33-8N 70-D18-34-2S 70-D18-34-8J 70-D18-34-8K	623	317	143	Ra-226	1.7360 to 2.9211	35.5	ES-0037 and Imported fill	556	5-Aug-09	10-Aug-09	A total of 79 investigative soil samples were collected due to the presence of Cs-137 and Ra-226 in sediment samples collected from pipes.	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 4.196 mrem/y with an increased cancer risk of 7.027×10^{-5} for the backfill material and 1.395 mrem/y with an increased cancer risk of 2.118×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU98	18 South	70-D18-33-2T 70-D18-33-2U 70-D18-33-2W 70-D18-33-4O 70-D18-33-8G 70-D18-33-8H 70-D18-33-8I	560	253	143	Ra-226	1.4940 to 3.7863	55	Imported fill	596	4-Aug-09	10-Aug-09	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 4.811 mrem/y with an increased cancer risk of 8.177×10^{-5} for the backfill material and 2.234 mrem/y with an increased cancer risk of 3.632×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.

TABLE 3-1

PARCEL G TRENCH SURVEY UNIT DATA SUMMARY

Trench Survey Unit	Work Area	Associated Trench Segments	Surface Area (m^2)	Linear Feet	Total Soil Samples Collected	Elevated ROC	Elevated Soil Samples (pCi/g)	Total Soil Volume Remediated (cy)	Survey Unit Backfill Data				Comments	Net Residual Dose/Risk	Recommendation
									Backfill Material Source[a]	Estimated Backfill Quantity (cy)	Date RASO Concurred	Date Backfill Complete			
TU99	18 South	70-D18-00-1H 70-D18-00-1I 70-D18-00-1J 70-D18-00-1K 70-D18-00-1L 70-D18-44-1L	545	250	226	Ra-226 Ra-226 Ra-226 Cs-137	1.6488 1.9637 2.2193 0.12161 to 1.03350	180	ES-0144 ES-0145 and Imported fill	720	18-Sep-09	22-Sep-09	A total of 54 investigative soil samples were collected due to the presence of both Cs-137 and Ra-226 contaminated sediment samples in piping.	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 3.191 mrem/y with an increased cancer risk of 5.420×10^{-5} for the backfill material and 0.600 mrem/y with an increased cancer risk of 8.640×10^{-6} for the trench unit	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU100	17 North	72-D17-34-8E 72-D17-34-9L 72-D17-34-9Q 72-D17-34-9R	55	122	18	NA	NA	0	ES-0033	21	5-Sep-08	29-Oct-08	Associated with Building 366. A total of 10 investigative soil samples were collected and analyzed due to Cs-137 contamination in one pipe sediment sample	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 1.489 mrem/y with an increased cancer risk of 3.067×10^{-5} for the backfill material and 1.199 mrem/y with an increased cancer risk of 2.450×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.

TABLE 3-1

PARCEL G TRENCH SURVEY UNIT DATA SUMMARY

Trench Survey Unit	Work Area	Associated Trench Segments	Surface Area (m^2)	Linear Feet	Total Soil Samples Collected	Elevated ROC	Elevated Soil Samples (pCi/g)	Total Soil Volume Remediated (cy)	Survey Unit Backfill Data				Comments	Net Residual Dose/Risk	Recommendation
									Backfill Material Source[a]	Estimated Backfill Quantity (cy)	Date RASO Concurred	Date Backfill Complete			
TU101	17 North	72-D17-34-8A 72-D17-34-8B 72-D17-34-8C 72-D17-34-9C 72-D17-34-9D 72-D17-34-9E 72-D17-34-9F 72-D17-34-9G 72-D17-34-9H 72-D17-34-9I 72-D17-34-9J 72-D17-34-9K 72-D17-34-9M 72-D17-34-9N 72-D17-34-9O 72-D17-34-9P	204	357	42	Ra-226	1.5036 1.9910 2.1552	11	ES-0033	94	20-Aug-08	29-Oct-08	Associated with Building 366. A total of 10 investigative soil samples were collected and analyzed due to Cs-137 contamination in one pipe sediment sample	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 2.152 mrem/y with an increased cancer risk of 4.093×10^{-5} for the backfill material and 1.689 mrem/y with an increased cancer risk of 3.190×10^{-5} for the trench unit	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU102	17 North	72-D17-34-8D 72-D17-34-8F 72-D17-34-8G	67	100	49	Ra-226	1.8155	2.5	ES-0033	33	20-Aug-08	29-Oct-08	Associated with Building 366. A total of 10 investigative soil samples were collected and analyzed due to Cs-137 contamination in one pipe sediment sample.	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 1.559 mrem/y with an increased cancer risk of 3.186×10^{-5} for the backfill material and 1.940 mrem/y with an increased cancer risk of 3.966×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.

TABLE 3-1

PARCEL G TRENCH SURVEY UNIT DATA SUMMARY

Trench Survey Unit	Work Area	Associated Trench Segments	Surface Area (m^2)	Linear Feet	Total Soil Samples Collected	Elevated ROC	Elevated Soil Samples (pCi/g)	Total Soil Volume Remediated (cy)	Survey Unit Backfill Data				Comments	Net Residual Dose/Risk	Recommendation
									Backfill Material Source[a]	Estimated Backfill Quantity (cy)	Date RASO Concurred	Date Backfill Complete			
TU103	27 North	70-D27-00-2T 70-D27-00-2W 70-D27-37-2T 70-D27-37-2V 70-D27-37-2W 70-E27-00-2V	380	310	87	Ra-226	1.6693 1.7496 1.8394 2.2949 3.9525	92.75	Imported fill	314	12-Aug-09	13-Aug-09	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 3.961 mrem/y with an increased cancer risk of 7.056×10^{-5} for the backfill material and 1.249 mrem/y with an increased cancer risk of 2.060×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU104	27 North	70-D27-00-2Y 70-D27-00-8A 70-E27-00-2V 70-E27-00-3K 70-E27-00-3L 70-E27-36-2V	897	297	18	NA	NA	0	ES-0109 ES-0110 ES-0113 ES-0114	745	19-Nov-08	25-Nov-08	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 3.133 mrem/y with an increased cancer risk of 4.952×10^{-5} for the backfill material and 3.231 mrem/y with an increased cancer risk of 5.083×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU105	27 North	70-D27-00-2R 70-D27-00-2S 70-D27-00-8B 70-E27-00-3I 70-E27-00-3J 70-E27-00-3K 70-E27-36-3J	650	260	80	Ra-226	1.7479 2.2017 2.4251 2.4936	35	ES-0113 ES-0131 and Imported fill	692	6-Apr-09	8-Apr-09	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 4.598 mrem/y with an increased cancer risk of 7.651×10^{-5} for the backfill material and 3.593 mrem/y with an increased cancer risk of 5.989×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.

TABLE 3-1

PARCEL G TRENCH SURVEY UNIT DATA SUMMARY

Trench Survey Unit	Work Area	Associated Trench Segments	Surface Area (m^2)	Linear Feet	Total Soil Samples Collected	Elevated ROC	Elevated Soil Samples (pCi/g)	Total Soil Volume Remediated (cy)	Survey Unit Backfill Data				Comments	Net Residual Dose/Risk	Recommendation
									Backfill Material Source[a]	Estimated Backfill Quantity (cy)	Date RASO Concurred	Date Backfill Complete			
TU106	19 South	70-D18-44-1L 70-D18-44-1U 70-D18-44-1V 70-D18-44-1W 70-D18-44-1X 70-D18-44-1Y 70-D18-44-1Z 70-D18-44-2A 70-D18-44-2B	687	353	130	Ra-226	1.5083 1.5150 1.7027 1.7477 2.0554 2.3955 2.5391 2.6642 2.8207 2.8456	25.25	Imported fill	815	11-May-09	21-May-09	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.392 mrem/y with an increased cancer risk of 8.928×10^{-5} for the backfill material and 2.700 mrem/y with an increased cancer risk of 4.404×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU107	19 South	70-D19-00-1M 70-D19-00-6A 70-D19-00-6B 70-D19-00-6C 70-D19-44-1L	272	152	73	Ra-226	1.5773 1.5947 1.7352 2.3629 2.4902	13	ES-0143 and Imported fill	287	19-Nov-08	4-Dec-08	A total of 46 investigative soil samples were collected and analyzed due to the presence of Cs-137 and Ra-226 contamination in pipes and Manhole MH430.	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 2.224 mrem/y with an increased cancer risk of 4.090×10^{-5} for the backfill material and 2.721 mrem/y with an increased cancer risk of 5.005×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU108	19 South	70-D19-00-3P 70-D19-00-6A 70-D19-00-6B 70-D19-00-8G 70-D19-67-8G	396	254	76	Ra-226	1.8011 1.8073 1.8960 1.9493 2.0019 2.1369 2.1511 2.4970 2.5177 2.5222 2.5958	92.5	ES-0142 and Imported fill	438	15-Jul-09	17-Jul-09	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 3.460 mrem/y with an increased cancer risk of 6.138×10^{-5} for the backfill material and 2.627 mrem/y with an increased cancer risk of 4.469×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.

TABLE 3-1

PARCEL G TRENCH SURVEY UNIT DATA SUMMARY

Trench Survey Unit	Work Area	Associated Trench Segments	Surface Area (m^2)	Linear Feet	Total Soil Samples Collected	Elevated ROC	Elevated Soil Samples (pCi/g)	Total Soil Volume Remediated (cy)	Survey Unit Backfill Data				Comments	Net Residual Dose/Risk	Recommendation
									Backfill Material Source[a]	Estimated Backfill Quantity (cy)	Date RASO Concurred	Date Backfill Complete			
TU109	27 South	70-E27-00-2B 70-E27-00-2F 70-E27-00-2H 70-E27-00-2I 70-E27-00-2J 70-E27-00-2K	934	364	47	Ra-226	2.7728	5	ES-0119 ES-0120 ES-0121 ES-0129 and Imported fill	1,517	11-Feb-09	12-Mar-09	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 4.911 mrem/y with an increased cancer risk of 7.798×10^{-5} for the backfill material and 2.854 mrem/y with an increased cancer risk of 4.450×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU110	27 South	70-E27-00-2K 70-E27-00-2L 70-E27-00-2M 70-E27-00-2N 70-E27-00-2O 70-E27-00-2P 70-E27-00-3B 70-E27-00-3D 70-E27-00-3E 70-E27-00-8A 70-E27-00-8B	871	374	138	Ra-226	1.4898 1.5042 1.5136 1.7204 1.7656 1.7886 1.8008 1.8689 2.1713 2.4674 2.8547 2.8978 3.6513	83	ES-0122 ES-0124 ES-0125 ES-0127	1,241	1-Sep-09	9-Sep-09	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 4.631 mrem/y with an increased cancer risk of 7.383×10^{-5} for the backfill material and 4.365 mrem/y with an increased cancer risk of 6.772×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU111	27 South	70-E27-00-2O 70-E27-00-3B 70-E27-00-3C 70-E27-00-3D 70-E27-00-3F 70-E27-00-3G 70-E27-00-3H	664	318	18	NA	NA	0	ES-0122 ES-0123 ES-0126 ES-0128	694	19-Nov-08	2-Dec-08	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 2.620 mrem/y with an increased cancer risk of 4.321×10^{-5} for the backfill material and 2.940 mrem/y with an increased cancer risk of 4.829×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.

TABLE 3-1

PARCEL G TRENCH SURVEY UNIT DATA SUMMARY

Trench Survey Unit	Work Area	Associated Trench Segments	Surface Area (m^2)	Linear Feet	Total Soil Samples Collected	Elevated ROC	Elevated Soil Samples (pCi/g)	Total Soil Volume Remediated (cy)	Survey Unit Backfill Data				Comments	Net Residual Dose/Risk	Recommendation
									Backfill Material Source[a]	Estimated Backfill Quantity (cy)	Date RASO Concurred	Date Backfill Complete			
TU112	27 South	70-D27-00-2Q 70-D27-00-2S 70-D27-00-3G 70-D27-36-2Q 70-E27-00-2P 70-E27-00-3M	668	375	18	NA	NA	0	ES-0117 ES-0118 ES-0132 and Imported fill	517	10-Dec-08	5-Jan-09	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 3.334 mrem/y with an increased cancer risk of 5.498×10^{-5} for the backfill material and 3.586 mrem/y with an increased cancer risk of 5.896×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU113	27 South	70-D27-00-2R 70-E27-00-2R 70-E27-00-3H 70-E27-00-3I 70-E27-36-2R 70-E27-36-3H	874	361	18	NA	NA	0	ES-0115 ES-0116 and Imported fill	775	5-Dec-08	13-Dec-08	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.091 mrem/y with an increased cancer risk of 8.152×10^{-5} for the backfill material and 4.504 mrem/y with an increased cancer risk of 7.170×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU114	18 North	70-D18-09-8D 70-D19-09-8A	173	68	192	Ra-226	1.5309 to 3.6085	244.5	ES-0229 and Imported fill	355	27-Jan-10	29-Apr-10	Portions of TU114 were originally part of TU84.	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 0.895 mrem/y with an increased cancer risk of 1.647×10^{-5} for the backfill material and 1.811 mrem/y with an increased cancer risk of 3.425×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.

TABLE 3-1

PARCEL G TRENCH SURVEY UNIT DATA SUMMARY

Trench Survey Unit	Work Area	Associated Trench Segments	Surface Area (m^2)	Linear Feet	Total Soil Samples Collected	Elevated ROC	Elevated Soil Samples (pCi/g)	Total Soil Volume Remediated (cy)	Survey Unit Backfill Data				Comments	Net Residual Dose/Risk	Recommendation
									Backfill Material Source[a]	Estimated Backfill Quantity (cy)	Date RASO Concurred	Date Backfill Complete			
TU115	18 South	72-D18-34-8A 72-D18-34-8B 72-D18-34-8C 72-D18-34-8D 72-D18-34-8E	290	285	151	Ra-226	1.6389 to 3.3319	45.75	ES-0033 ES-0108 and Imported fill	250	8-Apr-09	15-Apr-09	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 7.060 mrem/y with an increased cancer risk of 1.244×10^{-4} for the backfill material and 7.696 mrem/y with an increased cancer risk of 1.387×10^{-4} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU116	19 South	70-D18-44-1L 70-D18-44-2C 70-D18-44-2D 70-D18-44-2E 70-D18-44-2F	342	229	80	Ra-226	1.5615 2.0033 2.0441 2.1529 2.1970 2.8485 2.9163 3.1054 3.7794 4.0260 4.1986	61.75	Imported fill	350	5-Jun-09	15-Jun-09	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 3.778 mrem/y with an increased cancer risk of 6.812×10^{-5} for the backfill material and 2.797 mrem/y with an increased cancer risk of 5.022×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU117	18 South	70-D17-00-8H 70-D18-00-1A 70-D18-00-8C 70-D18-71-1A	335	112	18	NA	NA	0	ES-0034 and Imported fill	265	11-Feb-09	12-Mar-09	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 4.327 mrem/y with an increased cancer risk of 7.856×10^{-5} for the backfill material and 2.826 mrem/y with an increased cancer risk of 5.088×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.

TABLE 3-1

PARCEL G TRENCH SURVEY UNIT DATA SUMMARY

Trench Survey Unit	Work Area	Associated Trench Segments	Surface Area (m^2)	Linear Feet	Total Soil Samples Collected	Elevated ROC	Elevated Soil Samples (pCi/g)	Total Soil Volume Remediated (cy)	Survey Unit Backfill Data				Comments	Net Residual Dose/Risk	Recommendation
									Backfill Material Source[a]	Estimated Backfill Quantity (cy)	Date RASO Concurred	Date Backfill Complete			
TU118	18 South	70-D17-00-8E 70-D17-00-8I 70-D18-00-1A 70-D18-00-1B 70-D18-00-1C 70-D18-00-8A	712	387	18	NA	NA	0	ES-0146 ES-0148	708	11-Feb-09	14-Mar-09	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 2.715 mrem/y with an increased cancer risk of 4.436×10^{-5} for the backfill material and 3.762 mrem/y with an increased cancer risk of 6.155×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU119	18 North	70-D18-09-3S 70-D18-09-3T 70-D18-09-3U 70-D18-09-8F 70-D18-09-8G 70-D18-33-3U 70-D18-33-4R	579	374	122	Cs-137 Ra-226	0.11563 1.7818 1.8136 2.2887 2.3052 2.3729 2.5556 2.7285 3.2420	24	Imported fill	582	14-Aug-09	19-Aug-09	Portions of TU119 were originally part of TU84. A total of 51 investigative soil samples were collected and analyzed due to Cs-137 contamination in one pipe sediment sample.	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 4.898 mrem/y with an increased cancer risk of 8.290×10^{-5} for the backfill material and 3.530 mrem/y with an increased cancer risk of 5.790×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU120	18 North	70-D18-00-4S 70-D18-00-4T 70-D18-00-4U 70-D18-00-8F 70-D18-33-3Y 70-D18-33-4S 70-D18-33-8W	762	427	18	NA	NA	0	ES-0155 ES-0158 and Imported fill	719	11-Feb-09	18-Mar-09	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 4.563 mrem/y with an increased cancer risk of 7.419×10^{-5} for the backfill material and 5.363 mrem/y with an increased cancer risk of 8.721×10^{-5} for the trench unit	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.

TABLE 3-1

PARCEL G TRENCH SURVEY UNIT DATA SUMMARY

Trench Survey Unit	Work Area	Associated Trench Segments	Surface Area (m^2)	Linear Feet	Total Soil Samples Collected	Elevated ROC	Elevated Soil Samples (pCi/g)	Total Soil Volume Remediated (cy)	Survey Unit Backfill Data				Comments	Net Residual Dose/Risk	Recommendation
									Backfill Material Source[a]	Estimated Backfill Quantity (cy)	Date RASO Concurred	Date Backfill Complete			
TU121	18 North	70-D18-00-4F 70-D18-00-4H 70-D18-00-4I 70-D18-00-4J 70-D18-00-4K 70-D18-00-4X 70-D18-00-8D 70-D18-00-8E 70-D18-33-4E 70-D18-33-5B 70-D18-33-5C 70-D18-33-6C 70-D18-33-8U 70-D18-33-8V	638	647	106	Ra-226	2.1108 2.1116	2.5	ES-0154 ES-0166 and Imported fill	442	24-Mar-09	2-Apr-09	A total of 82 investigative soil samples were collected due to the presence of Cs-137 contamination in sediment collected from Manhole MH315.	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 4.289 mrem/y with an increased cancer risk of 7.158×10^{-5} for the backfill material and 2.756 mrem/y with an increased cancer risk of 4.532×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU122	19 North	70-D18-00-4G 70-D18-00-4V 70-D19-00-2U 70-D19-00-2V 70-D19-00-2W 70-D19-00-2X 70-D19-00-2Y 70-D19-00-2Z 70-D19-00-3M 70-D19-00-8H	636	582	205	Cs-137	0.11593 0.11975 0.13034	2.5	ES-0152 and Imported fill	475	23-Apr-09	28-Apr-09	A total of 187 investigative soil samples were collected based on Cs-137 contamination identified in the sediment sample collected from Manhole MH391.	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 3.039 mrem/y with an increased cancer risk of 5.045×10^{-5} for the backfill material and 4.354 mrem/y with an increased cancer risk of 7.269×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.

TABLE 3-1

PARCEL G TRENCH SURVEY UNIT DATA SUMMARY

Trench Survey Unit	Work Area	Associated Trench Segments	Surface Area (m^2)	Linear Feet	Total Soil Samples Collected	Elevated ROC	Elevated Soil Samples (pCi/g)	Total Soil Volume Remediated (cy)	Survey Unit Backfill Data				Comments	Net Residual Dose/Risk	Recommendation
									Backfill Material Source[a]	Estimated Backfill Quantity (cy)	Date RASO Concurred	Date Backfill Complete			
TU123	19 North	70-D19-00-1K 70-D19-00-2Z 70-D19-00-3A 70-D19-00-3B 70-D19-00-3C 70-D19-00-3E 70-D19-00-3G 70-D19-00-3H 70-D19-00-3I 70-D19-00-3K 70-D19-00-3L 70-D19-00-3O 70-D19-00-3Z	777	591	72	Ra-226	1.5473 1.5782 1.6379 1.6795 1.8500 1.9512 2.0465 2.2822 2.4069 2.4260 2.5699 2.6022	28.5	ES-0162 and Imported fill	654	25-Aug-09	27-Aug-09	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 5.290 mrem/y with an increased cancer risk of 8.600×10^{-5} for the backfill material and 3.919 mrem/y with an increased cancer risk of 6.181×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU124	19 North	70-D29-00-2X 70-D19-00-3E 70-D19-00-3F 70-D19-00-3J 70-D19-00-4A 70-D19-00-8C 70-D19-00-8D	477	369	184	Ra-226	1.4924 to 3.0701	188.25	ES-0199 and Imported fill	493	31-Aug-09	2-Sep-09	A total of 98 investigative soil samples were collected based on Cs-137 contamination in the sediment sample collected from Manhole MH402.	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 3.477 mrem/y with an increased cancer risk of 5.929×10^{-5} for the backfill material and 2.306 mrem/y with an increased cancer risk of 3.743×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU129	19 North	70-D19-00-3X 70-D19-00-5B 70-D19-37-2I 70-D19-37-2J 70-D29-37-2M 70-D19-37-3X 70-D19-37-5C 70-D19-37-8A	326	229	72	Cs-137 Ra-226	0.16 1.5335 to 3.3147	72.5	Imported fill	335	18-Sep-09	23-Sep-09	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 3.701 mrem/y with an increased cancer risk of 6.708×10^{-5} for the backfill material and 1.086 mrem/y with an increased cancer risk of 1.846×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.

TABLE 3-1

PARCEL G TRENCH SURVEY UNIT DATA SUMMARY

Trench Survey Unit	Work Area	Associated Trench Segments	Surface Area (m^2)	Linear Feet	Total Soil Samples Collected	Elevated ROC	Elevated Soil Samples (pCi/g)	Total Soil Volume Remediated (cy)	Survey Unit Backfill Data				Comments	Net Residual Dose/Risk	Recommendation
									Backfill Material Source[a]	Estimated Backfill Quantity (cy)	Date RASO Concurred	Date Backfill Complete			
TU151	18 North	70-D18-09-3P	185	113	18	NA	NA	0	ES-0221 and Imported fill	156	14-Dec-09	30-Apr-10	A small portion of TU151 was originally associated with TU84.	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 1.842 mrem/y with an increased cancer risk of 3.479×10^{-5} for the backfill material and 1.945 mrem/y with an increased cancer risk of 3.625×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.
TU153	18 South	70-D18-00-1D 70-D18-00-1F 70-D18-00-8G 70-D18-00-8H 70-D18-00-8I 70-D18-00-8J 70-D18-33-1D 70-D18-33-1E	558	368	84	Cs-137	0.14645 0.14877 0.18699 0.19665 0.35353	21.5	ES-0175 ES-0225 and Imported fill	493	23-Sep-09	25-Sep-09	NA	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 2.972 mrem/y with an increased cancer risk of 4.931×10^{-5} for the backfill material and 2.189 mrem/y with an increased cancer risk of 3.593×10^{-5} for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.

TABLE 3-1

PARCEL G TRENCH SURVEY UNIT DATA SUMMARY

Trench Survey Unit	Work Area	Associated Trench Segments	Surface Area (m^2)	Linear Feet	Total Soil Samples Collected	Elevated ROC	Elevated Soil Samples (pCi/g)	Total Soil Volume Remediated (cy)	Survey Unit Backfill Data				Comments	Net Residual Dose/Risk	Recommendation
									Backfill Material Source[a]	Estimated Backfill Quantity (cy)	Date RASO Concurred	Date Backfill Complete			
TU204	17, 18, 19, and 27 South	70-D17-00-1G 70-D17-00-2F 70-D17-00-2G 70-D17-00-8K 70-D17-00-8L 70-D17-32-1G 70-D18-00-1J 70-D19-00-3P 70-D19-44-1L 70-D19-44-8A 70-E27-00-2A 70-E27-00-2B 70-E27-00-2H	974	461	30	Ra-226	1.730 2.096 2.381	9.5	ES-0466 ES-0470 ES-0471 ES-0472 ES-0474 and Imported fill	979	3-Aug-11	10-Aug-11	A total of three investigative soil samples were collected based on the presence of Cs-137 contamination in a pipe sediment sample.	Modeling using the larger of the MDL or reported activity resulted in a net residual dose of 0.669 mrem/y with an increased cancer risk of 8.610 $\times 10^{-6}$ for the backfill material and 0.7262 mrem/y with an increased cancer risk of 9.311 $\times 10^{-6}$ for the trench unit.	Based on the modeled net residual dose/risk, and because the results were less than the EPA criterion of 3×10^{-4}, no further action was recommended.

Notes:

[a] All imported fill backfilled into Parcel G trenches was identified as Mills Peninsula Hospital imported fill in the SUPRA (TtEC 2011).

Abbreviations and Acronyms:

Cs-137 – cesium-137
cy – cubic yard
EPA – U.S. Environmental Protection Agency
ES – Excavated Soil Survey Unit
LLRW – low-level radioactive waste
m^2 – square meter
MDL – method detection limit
MH – manhole
mrem/y – millirems per year
NA – not applicable
pCi/g – picocuries per gram
Ra-226 – radium-226
RASO – Radiological Affairs Support Office
ROC – radionuclide of concern
SUPRA – Survey Unit Project Reports Abstract
TU – Trench Survey Unit

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TABLE 3-2

PARCEL G TRENCH SURVEY UNITS AND ASSOCIATED SEGMENTS SUMMARY

Trench Survey Unit	Trench Segment Identification No.	Type of Segment	Pipe Material	Pipe Diameter (inches)	Minimum Depth of Trench (feet)	Maximum Depth of Trench (feet)	Minimum Depth of Pipe (feet)	Maximum Depth of Pipe (feet)
TU66	70-D17-00-3C	Storm	VCP	8	4.00	6.00	3.33	5.33
TU66	70-D17-00-3D	Sanitary	Concrete	21	10.00	14.00	8.25	12.25
TU66	70-D17-00-3G	Storm	Steel	3	3.00	5.00	2.75	4.75
TU66	70-D17-00-3H	Storm	VCP	10	4.00	5.00	3.17	4.17
TU66	70-D17-00-3I	Sanitary	Concrete	21	8.00	10.00	6.25	8.25
TU66	70-D17-00-8A	Storm	CMP	6	3.00	5.00	2.50	4.50
TU66	70-D17-33-3G	Storm	Steel	3	3.00	5.00	2.75	4.75
TU66	70-D17-33-8A	Storm	CMP	6	3.00	5.00	2.50	4.50
TU67	70-C17-00-2C	Storm	Concrete	10	5.00	6.00	4.17	5.17
TU67	70-C17-00-3E	Storm	CIP	10	5.00	7.00	4.17	6.17
TU67	70-D17-00-2C	Storm	Concrete	10	5.00	7.00	4.17	6.17
TU67	70-D17-00-2L	Storm	Concrete	24	5.00	7.00	3.00	5.00
TU67	70-D17-00-3E	Storm	CIP	10	5.00	6.00	4.17	5.17
TU67	70-D17-00-3F	Storm	Concrete	24	8.00	10.00	6.00	8.00
TU67	70-D17-00-3H	Storm	VCP	10	4.00	5.00	3.17	4.17
TU68	70-D17-00-1L	Sanitary	Concrete	15	9.00	13.00	7.75	11.75
TU68	70-D17-00-2N	Sanitary	VCP	8	9.00	10.00	8.33	9.33
TU68	70-D17-00-2O	Sanitary	VCP	8	9.00	12.00	8.33	11.33
TU68	70-D17-00-2P	Sanitary	Concrete	12	9.00	11.00	8.00	10.00
TU68	70-D17-00-3I	Sanitary	Concrete	21	7.00	10.00	5.25	8.25
TU68	70-D17-00-3J	Storm	VCP	8	9.00	13.00	8.33	12.33
TU69	70-C17-00-1W	Storm	VCP	10	8.00	9.00	7.17	8.17
TU69	70-C17-00-2P	Sanitary	Concrete	12	12.00	13.00	11.00	12.00
TU69	70-D17-00-1R	Storm	Concrete/VCP	24	8.00	9.00	6.00	7.00
TU69	70-D17-00-1T	Storm	VCP	8	7.00	9.00	6.33	8.33

TABLE 3-2

PARCEL G TRENCH SURVEY UNITS AND ASSOCIATED SEGMENTS SUMMARY

Trench Survey Unit	Trench Segment Identification No.	Type of Segment	Pipe Material	Pipe Diameter (inches)	Minimum Depth of Trench (feet)	Maximum Depth of Trench (feet)	Minimum Depth of Pipe (feet)	Maximum Depth of Pipe (feet)
TU69	70-D17-00-1U	Storm	Concrete	24	7.00	9.00	5.00	7.00
TU69	70-D17-00-1V	Storm	VCP	8	8.00	9.00	7.33	8.33
TU69	70-D17-00-1W	Storm	VCP	10	8.00	9.00	7.17	8.17
TU69	70-D17-00-2P	Sanitary	Concrete	12	12.00	13.00	11.00	12.00
TU69	70-D17-00-3F	Storm	Concrete	24	7.00	8.00	5.00	6.00
TU70	70-D17-00-1L	Sanitary	Concrete	15	8.00	12.00	6.75	10.75
TU70	70-D17-00-1S	Storm	VCP	12	12.00	12.00	11.00	11.00
TU70	70-D17-00-2M	Sanitary	VCP	6	7.00	12.00	6.50	11.50
TU70	70-D17-34-1S	Storm	VCP	6	7.00	9.00	6.50	8.50
TU70	70-D17-34-2M	Sanitary	VCP	6	6.00	7.00	5.50	6.50
TU70	70-D17-34-3K	Storm	VCP	6	7.00	9.00	6.50	8.50
TU70	70-D17-34-8A	Storm	CIP	4	7.00	7.00	6.67	6.67
TU70	70-D17-34-8B	Storm	CIP	6	7.00	7.00	6.50	6.50
TU70	70-D17-34-8C	Storm	CIP	6	7.00	7.00	6.50	6.50
TU70	70-D17-34-8D	Storm	CIP	6	7.00	7.00	6.50	6.50
TU70	70-D17-34-8E	Storm	CIP	6	7.00	7.00	6.50	6.50
TU70	70-D17-34-8F	Storm	CIP	6	7.00	7.00	6.50	6.50
TU70	70-D17-34-8G	Storm	CIP	6	7.00	7.00	6.50	6.50
TU70	70-D17-34-8H	Storm	CIP	6	7.00	7.00	6.50	6.50
TU70	70-D17-34-8I	Storm	CIP	4	7.00	7.00	6.67	6.67
TU70	70-D17-34-8J	Storm	CIP	4	7.00	7.00	6.67	6.67
TU70	70-D17-34-8K	Storm	CIP	4	7.00	7.00	6.67	6.67
TU70	70-D17-34-8L	Storm	CIP	4	7.00	7.00	6.67	6.67
TU70	70-D17-34-8M	Storm	CIP	4	7.00	7.00	6.67	6.67
TU70	70-D17-34-8N	Storm	CIP	4	7.00	7.00	6.67	6.67

TABLE 3-2

PARCEL G TRENCH SURVEY UNITS AND ASSOCIATED SEGMENTS SUMMARY

Trench Survey Unit	Trench Segment Identification No.	Type of Segment	Pipe Material	Pipe Diameter (inches)	Minimum Depth of Trench (feet)	Maximum Depth of Trench (feet)	Minimum Depth of Pipe (feet)	Maximum Depth of Pipe (feet)
TU70	70-D17-34-8O	Storm	CIP	4	7.00	7.00	6.67	6.67
TU70	70-D17-34-8P	Storm	CIP	4	7.00	7.00	6.67	6.67
TU70	70-D17-34-9B	Storm	CIP	4	7.00	7.00	6.67	6.67
TU71	70-D17-00-1L	Sanitary	Concrete	15	9.00	13.00	7.75	11.75
TU71	70-D17-00-1O	Storm	VCP	24	7.00	9.00	5.00	7.00
TU71	70-D17-00-1P	Storm	CIP	10	7.00	9.00	6.17	8.17
TU71	70-D17-00-1Q	Storm	VCP	10	6.00	6.00	5.17	5.17
TU71	70-D17-00-1R	Storm	Concrete/VCP	24	8.00	9.00	6.00	7.00
TU71	70-D17-00-2H	Sanitary	Concrete	15	7.00	12.00	5.75	10.75
TU71	70-D17-00-2I	Sanitary	CIP	15	7.00	12.00	5.75	10.75
TU71	70-D17-34-1P	Storm	CIP	10	3.00	7.00	2.17	6.17
TU71	70-D17-34-1Q	Storm	VCP	10	6.00	6.00	5.17	5.17
TU71	70-D17-34-2I	Sanitary	CIP	15	4.00	8.00	2.75	6.75
TU71	70-D17-34-2J	Sanitary	VCP	6	4.00	8.00	3.50	7.50
TU71	70-D17-34-2K	Storm	VCP	8	3.50	7.00	2.83	6.33
TU71	70-D17-34-8Q	Storm	CIP	4	6.00	6.00	5.67	5.67
TU71	70-D17-34-8R	Storm	CIP	6	6.00	6.00	5.50	5.50
TU71	70-D17-34-8S	Storm	CIP	6	6.00	6.00	5.50	5.50
TU71	70-D17-34-8T	Storm	CIP	6	6.00	6.00	5.50	5.50
TU71	70-D17-34-8U	Storm	CIP	6	6.00	6.00	5.50	5.50
TU71	70-D17-34-8V	Storm	CIP	6	6.00	6.00	5.50	5.50
TU71	70-D17-34-8W	Storm	CIP	6	6.00	6.00	5.50	5.50
TU71	70-D17-34-8X	Storm	CIP	4	6.00	6.00	5.67	5.67
TU71	70-D17-34-8Y	Storm	CIP	4	6.00	6.00	5.67	5.67
TU71	70-D17-34-8Z	Storm	CIP	4	6.00	6.00	5.67	5.67

TABLE 3-2

PARCEL G TRENCH SURVEY UNITS AND ASSOCIATED SEGMENTS SUMMARY

Trench Survey Unit	Trench Segment Identification No.	Type of Segment	Pipe Material	Pipe Diameter (inches)	Minimum Depth of Trench (feet)	Maximum Depth of Trench (feet)	Minimum Depth of Pipe (feet)	Maximum Depth of Pipe (feet)
TU71	70-D17-34-9A	Storm	CIP	4	6.00	6.00	5.67	5.67
TU72	70-D17-00-1M	Storm	VCP	6	6.00	7.00	5.50	6.50
TU72	70-D17-00-1N	Storm	VCP	24	8.00	8.00	6.00	6.00
TU72	70-D17-00-1O	Storm	VCP	24	7.00	9.00	5.00	7.00
TU72	70-D17-00-1X	Storm	VCP	24	8.00	11.00	6.00	9.00
TU72	70-D17-00-2H	Sanitary	Concrete	15	7.00	7.00	5.75	5.75
TU72	70-D17-00-8B	Storm	VCP	4	9.00	10.00	8.67	9.67
TU72	70-D17-00-8C	Sanitary	VCP	10	7.00	7.00	6.17	6.17
TU72	70-D17-00-8D	Storm	VCP	10	8.00	8.00	7.17	7.17
TU73	70-D17-00-1G	Storm	Concrete	15	6.00	7.00	4.75	5.75
TU73	70-D17-00-2E	Sanitary	VCP	6	7.00	9.00	6.50	8.50
TU73	70-D17-00-2G	Sanitary	Concrete	15	6.00	7.00	4.75	5.75
TU73	70-D17-00-2H	Sanitary	Concrete	15	7.00	9.00	5.75	7.75
TU73	70-D17-00-3B	Storm	Concrete	15	7.00	10.00	5.75	8.75
TU73	70-D17-00-8E	Sanitary	VCP	6	9.00	10.00	8.50	9.50
TU73	70-D17-00-8F	Sanitary	VCP	15	7.00	10.00	5.75	8.75
TU74	70-D19-00-3Y	Sanitary	VCP	12	8.00	10.00	7.00	9.00
TU74	70-D19-00-8A	Sanitary	VCP	10	3.00	3.00	2.17	2.17
TU75	70-D19-00-1K	Storm	VCP	10	4.00	6.00	3.17	5.17
TU75	70-D19-00-2N	Storm	VCP	8	5.00	6.00	4.33	5.33
TU75	70-D19-00-2O	Storm	VCP	8	5.00	6.00	4.33	5.33
TU75	70-D19-00-2P	Storm	VCP	10	4.00	6.00	3.17	5.17
TU75	70-D19-00-2Q	Storm	Concrete	10	4.00	6.00	3.17	5.17
TU75	70-D19-00-2R	Storm	VCP	10	5.00	6.00	4.17	5.17
TU75	70-D19-09-2N	Storm	VCP	8	5.00	6.00	4.33	5.33

TABLE 3-2

PARCEL G TRENCH SURVEY UNITS AND ASSOCIATED SEGMENTS SUMMARY

Trench Survey Unit	Trench Segment Identification No.	Type of Segment	Pipe Material	Pipe Diameter (inches)	Minimum Depth of Trench (feet)	Maximum Depth of Trench (feet)	Minimum Depth of Pipe (feet)	Maximum Depth of Pipe (feet)
TU75	70-D19-09-2R	Storm	VCP	10	5.00	6.00	4.17	5.17
TU76	70-D19-00-1U	Sanitary	VCP	8	8.00	8.00	7.33	7.33
TU76	70-D19-00-1X	Storm	VCP	8	7.50	8.00	6.83	7.33
TU76	70-D19-00-1Y	Storm	VCP	8	6.00	8.00	5.33	7.33
TU76	70-D19-00-2A	Storm	Fiberglass	8	7.00	8.00	6.33	7.33
TU76	70-D19-00-2B	Storm	Concrete	12	7.00	8.00	6.00	7.00
TU76	70-D19-00-2D	Storm	VCP	6	7.00	8.00	6.50	7.50
TU76	70-D19-00-2E	Storm	VCP	8	7.00	8.00	6.33	7.33
TU76	70-D19-00-2G	Storm	Concrete	12	7.00	8.00	6.00	7.00
TU76	70-D19-00-3T	Storm	VCP	8	6.00	6.00	5.33	5.33
TU76	70-D19-00-4B	Storm	Concrete	18	7.00	8.00	5.50	6.50
TU77	70-D19-00-2A	Storm	Fiberglass	8	8.00	8.00	7.33	7.33
TU77	70-D19-00-3S	Sanitary	VCP	10	10.00	22.00	9.17	21.17
TU77	70-D19-66-2A	Storm	Fiberglass	8	8.00	10.00	7.33	9.33
TU78	70-D19-00-1O	Storm	CMP	10	8.00	9.00	7.17	8.17
TU78	70-D19-00-1P	Storm	Concrete	24	8.00	8.00	6.00	6.00
TU78	70-D19-00-1Q	Storm	VCP	8	8.00	8.00	7.33	7.33
TU78	70-D19-00-1R	Storm	VCP	8	8.00	8.00	7.33	7.33
TU78	70-D19-00-1S	Storm	VCP	10	7.00	7.00	6.17	6.17
TU78	70-D19-00-1T	Storm	VCP	8	7.00	8.00	6.33	7.33
TU78	70-D19-00-1W	Storm	VCP	6	5.00	8.00	4.50	7.50
TU78	70-D19-00-4B	Storm	Concrete	18	8.00	8.00	6.50	6.50
TU78	70-D19-00-4C	Storm	VCP	8	8.00	9.00	7.33	8.33
TU78	70-D19-00-4D	Storm	VCP	6	7.00	8.00	6.50	7.50
TU78	70-D19-00-8D	Storm	Concrete/VCP	6	8.00	8.50	7.50	8.00

TABLE 3-2

PARCEL G TRENCH SURVEY UNITS AND ASSOCIATED SEGMENTS SUMMARY

Trench Survey Unit	Trench Segment Identification No.	Type of Segment	Pipe Material	Pipe Diameter (inches)	Minimum Depth of Trench (feet)	Maximum Depth of Trench (feet)	Minimum Depth of Pipe (feet)	Maximum Depth of Pipe (feet)
TU78	70-D19-00-8E	Storm	VCP	6	7.00	8.00	6.50	7.50
TU78	70-D19-00-8F	Storm	VCP	6	8.00	8.00	7.50	7.50
TU79	70-D19-00-1S	Storm	VCP	10	6.00	7.00	5.17	6.17
TU79	70-D19-00-3Q	Sanitary	VCP	10	7.00	10.00	6.17	9.17
TU79	70-D19-00-3R	Sanitary	VCP	10	7.00	10.00	6.17	9.17
TU79	70-D19-00-3S	Sanitary	VCP	10	7.00	10.00	6.17	9.17
TU79	70-D19-00-8E	Storm	VCP	6	7.00	8.00	6.50	7.50
TU79	70-D19-00-8G	Sanitary	CIP	6	6.00	7.00	5.50	6.50
TU80	70-D19-00-1U	Sanitary	VCP	8	3.00	8.00	2.33	7.33
TU80	70-D19-00-1Z	Storm	Concrete	15	8.00	9.00	6.75	7.75
TU80	70-D19-09-1U	Sanitary	VCP	8	3.00	8.00	2.33	7.33
TU80	70-D19-09-1Z	Storm	Concrete	15	8.00	9.00	6.75	7.75
TU80	70-D19-09-5E	Sanitary	Concrete	16	7.00	8.00	5.67	6.67
TU81	70-D19-00-2F	Storm	VCP	6	4.00	5.00	3.50	4.50
TU81	70-D19-00-2G	Storm	Concrete	12	6.00	7.00	5.00	6.00
TU81	70-D19-00-2H	Storm	Concrete	12	9.00	10.00	8.00	9.00
TU81	70-D19-00-2J	Storm	VCP	12	3.50	8.00	2.50	7.00
TU81	70-D19-00-2K	Storm	VCP	8	7.00	9.00	6.33	8.33
TU81	70-D19-00-2O	Storm	VCP	8	6.00	7.00	5.33	6.33
TU81	70-D19-00-2S	Storm	VCP	10	6.00	7.00	5.17	6.17
TU81	70-D19-00-3X	Sanitary	VCP	10	9.00	10.00	8.17	9.17
TU81	70-D19-00-3Y	Sanitary	VCP	12	10.00	12.00	9.00	11.00
TU81	70-D19-00-5D	Sanitary	VCP	10	9.00	10.00	8.17	9.17
TU81	70-D19-09-2J	Storm	VCP	12	3.50	8.00	2.50	7.00
TU81	70-D19-09-2R	Storm	VCP	10	4.00	7.00	3.17	6.17

TABLE 3-2

PARCEL G TRENCH SURVEY UNITS AND ASSOCIATED SEGMENTS SUMMARY

Trench Survey Unit	Trench Segment Identification No.	Type of Segment	Pipe Material	Pipe Diameter (inches)	Minimum Depth of Trench (feet)	Maximum Depth of Trench (feet)	Minimum Depth of Pipe (feet)	Maximum Depth of Pipe (feet)
TU81	70-D19-09-3A	Storm	VCP	8	10.00	11.00	9.33	10.33
TU81	70-D19-37-1F	Sanitary	Steel	10	9.00	11.00	8.17	10.17
TU81	70-D19-37-2F	Storm	VCP	6	4.00	5.00	3.50	4.50
TU81	70-D19-37-2G	Storm	Concrete	12	6.00	7.00	5.00	6.00
TU81	70-D19-37-5C	Storm	VCP	8	8.00	10.00	7.33	9.33
TU82	70-D19-00-1J	Sanitary	Steel	10	8.00	10.00	7.17	9.17
TU82	70-D19-00-1U	Sanitary	VCP	8	5.00	10.00	4.33	9.33
TU82	70-D19-00-1V	Sanitary	PVC	4	2.00	3.00	1.67	2.67
TU82	70-D19-00-2D	Storm	VCP	6	4.00	5.00	3.50	4.50
TU82	70-D19-00-2F	Storm	VCP	6	4.00	5.00	3.50	4.50
TU82	70-D19-00-3S	Sanitary	VCP	10	8.00	10.00	7.17	9.17
TU82	70-D19-00-8C	Sanitary	PVC	4	2.00	3.00	1.67	2.67
TU82	70-D19-37-1F	Sanitary	Steel	10	9.00	10.00	8.17	9.17
TU83	70-D19-00-3G	Storm	VCP	10	5.00	6.00	4.17	5.17
TU83	70-D19-00-3J	Storm	VCP	10	3.00	5.00	2.17	4.17
TU83	70-D19-00-3Y	Sanitary	VCP	12	5.00	7.00	4.00	6.00
TU83	70-D19-00-4A	Sanitary	CIP	4	3.00	5.00	2.67	4.67
TU83	70-D19-00-5A	Sanitary	VCP	8	5.00	6.00	4.33	5.33
TU84	70-D18-09-3P	Storm	Concrete	12	5.00	6.00	4.00	5.00
TU84	70-D18-09-3Q	Storm	Concrete	10	7.00	8.00	6.17	7.17
TU84	70-D18-09-3R	Storm	Concrete/VCP	10	5.00	6.00	4.17	5.17
TU84	70-D18-09-3S	Storm	Concrete	10	5.00	7.00	4.17	6.17
TU84	70-D18-09-4R	Sanitary	VCP	8	5.00	10.00	4.33	9.33
TU84	70-D18-09-8D	Storm	VCP	6	4.00	10.00	3.50	9.50
TU84	70-D18-09-8E	Storm	CIP	4	5.00	6.00	4.67	5.67

TABLE 3-2

PARCEL G TRENCH SURVEY UNITS AND ASSOCIATED SEGMENTS SUMMARY

Trench Survey Unit	Trench Segment Identification No.	Type of Segment	Pipe Material	Pipe Diameter (inches)	Minimum Depth of Trench (feet)	Maximum Depth of Trench (feet)	Minimum Depth of Pipe (feet)	Maximum Depth of Pipe (feet)
TU84	70-D18-09-8F	Storm	CIP	4	5.00	6.00	4.67	5.67
TU85	70-D18-09-4R	Sanitary	VCP	8	10.00	18.00	9.33	17.33
TU85	70-D18-09-8A	Sanitary	VCP	8	7.00	8.00	6.33	7.33
TU85	70-D18-09-8B	Sanitary	VCP	8	6.00	8.00	5.33	7.33
TU85	70-D18-09-8C	Sanitary	VCP	8	7.00	8.00	6.33	7.33
TU86	70-D18-09-3I	Storm	Concrete	12	8.00	10.00	7.00	9.00
TU86	70-D18-09-3J	Storm	CMP	8	2.00	2.00	1.33	1.33
TU86	70-D18-09-3K	Storm	CMP	8	2.00	6.00	1.33	5.33
TU86	70-D18-09-3L	Storm	CMP	8	3.00	4.50	2.33	3.83
TU86	70-D18-09-3M	Storm	CMP	8	3.50	4.50	2.83	3.83
TU86	70-D18-09-3N	Storm	CMP	8	3.00	4.00	2.33	3.33
TU86	70-D18-09-3O	Storm	Concrete	10	7.00	9.00	6.17	8.17
TU86	70-D18-09-3V	Storm	CMP	8	8.00	9.00	7.33	8.33
TU86	70-D18-09-8H	Storm	PVC	2	3.00	4.00	2.83	3.83
TU87	70-D18-09-3A	Storm	Concrete	15	10.00	12.00	8.75	10.75
TU87	70-D18-09-3B	Storm	Concrete	15	10.00	12.00	8.75	10.75
TU87	70-D18-09-3C	Storm	CMP	8	3.00	4.00	2.33	3.33
TU87	70-D18-09-3D	Storm	Concrete	10	5.00	6.00	4.17	5.17
TU87	70-D18-09-3E	Storm	CMP	8	3.00	4.00	2.33	3.33
TU87	70-D18-09-3F	Storm	CMP	8	3.00	6.00	2.33	5.33
TU87	70-D18-09-3G	Storm	CMP	8	3.00	6.00	2.33	5.33
TU87	70-D18-09-3H	Storm	CMP	8	5.00	6.00	4.33	5.33
TU87	70-D18-09-3I	Storm	Concrete	12	6.00	8.00	5.00	7.00
TU87	70-D18-09-3W	Storm	CIP	4	10.00	12.00	9.67	11.67
TU88	70-D18-33-3X	Storm	Concrete	10	5.00	6.00	4.17	5.17

TABLE 3-2

PARCEL G TRENCH SURVEY UNITS AND ASSOCIATED SEGMENTS SUMMARY

Trench Survey Unit	Trench Segment Identification No.	Type of Segment	Pipe Material	Pipe Diameter (inches)	Minimum Depth of Trench (feet)	Maximum Depth of Trench (feet)	Minimum Depth of Pipe (feet)	Maximum Depth of Pipe (feet)
TU88	70-D18-33-4B	Storm	VCP	10	6.00	7.00	5.17	6.17
TU88	70-D18-33-4C	Storm	VCP	10	6.00	7.00	5.17	6.17
TU88	70-D18-33-4D	Storm	VCP	10	6.00	7.00	5.17	6.17
TU88	70-D18-33-4E	Storm	VCP	4	5.00	6.00	4.67	5.67
TU88	70-D18-33-4R	Sanitary	VCP	8	5.00	6.00	4.33	5.33
TU88	70-D18-33-4S	Sanitary	VCP	8	5.00	6.00	4.33	5.33
TU88	70-D18-33-4W	Sanitary	CIP	8	6.00	7.00	5.33	6.33
TU88	70-D18-33-5B	Sanitary	VCP	4	6.00	7.00	5.67	6.67
TU88	70-D18-33-6A	Storm	Concrete	10	5.00	6.00	4.17	5.17
TU88	70-D18-33-6C	Sanitary	CIP	4	4.00	6.00	3.67	5.67
TU88	70-D18-33-8A	Sanitary	VCP	6	6.00	6.00	5.50	5.50
TU88	70-D18-33-8B	Sanitary	VCP	10	6.00	7.00	5.17	6.17
TU88	70-D18-33-8C	Sanitary	VCP	10	5.00	6.00	4.17	5.17
TU89	70-D18-33-3U	Storm	Concrete	10	5.00	6.00	4.17	5.17
TU89	70-D18-33-4P	Sanitary	Steel	12	6.00	10.00	5.00	9.00
TU89	70-D18-33-4R	Sanitary	VCP	8	5.00	6.00	4.33	5.33
TU89	70-D18-33-4V	Sanitary	Steel/VCP	18	5.00	6.00	3.50	4.50
TU89	70-D18-33-8A	Sanitary	VCP	6	5.00	6.00	4.50	5.50
TU89	70-D18-33-8B	Sanitary	VCP	10	5.00	6.00	4.17	5.17
TU89	70-D18-33-8C	Sanitary	VCP	10	6.00	7.00	5.17	6.17
TU89	70-D18-33-8X	Sanitary	VCP	10	5.00	6.00	4.17	5.17
TU90	70-D18-33-4O	Sanitary	Steel	8	6.00	8.00	5.33	7.33
TU90	70-D18-33-4P	Sanitary	Steel	12	6.00	10.00	5.00	9.00
TU90	70-D18-33-4Q	Sanitary	CIP	4	4.00	6.00	3.67	5.67
TU90	70-D18-33-8E	Storm	CIP	4	6.00	8.00	5.67	7.67

TABLE 3-2

PARCEL G TRENCH SURVEY UNITS AND ASSOCIATED SEGMENTS SUMMARY

Trench Survey Unit	Trench Segment Identification No.	Type of Segment	Pipe Material	Pipe Diameter (inches)	Minimum Depth of Trench (feet)	Maximum Depth of Trench (feet)	Minimum Depth of Pipe (feet)	Maximum Depth of Pipe (feet)
TU91	70-D18-33-1M	Storm	Concrete	18	6.00	8.00	4.50	6.50
TU91	70-D18-33-2T	Storm	VCP	12	6.00	8.00	5.00	7.00
TU91	70-D18-33-2U	Storm	VCP	10	6.00	8.00	5.17	7.17
TU91	70-D18-33-2V	Storm	VCP	4	8.00	12.00	7.67	11.67
TU91	70-D18-33-2X	Storm	Concrete	15	8.00	14.00	6.75	12.75
TU91	70-D18-33-2Y	Storm	VCP	8	5.00	6.00	4.33	5.33
TU91	70-D18-33-2Z	Storm	VCP	8	8.00	12.00	7.33	11.33
TU91	70-D18-33-8D	Storm	CIP	4	5.00	6.00	4.67	5.67
TU91	70-D18-33-8E	Storm	CIP	4	5.00	6.00	4.67	5.67
TU91	70-D18-33-8F	Storm	CIP	8	6.00	10.00	5.33	9.33
TU91	70-D18-33-8G	Storm	CIP	8	8.00	10.00	7.33	9.33
TU92	70-D18-44-2G	Storm	CMP	10	8.00	10.00	7.17	9.17
TU92	70-D18-44-2H	Storm	CIP	8	7.00	9.00	6.33	8.33
TU92	70-D18-44-8A	Storm	CIP	4	7.00	9.00	6.67	8.67
TU92	70-D18-44-8B	Storm	CIP	4	7.00	9.00	6.67	8.67
TU92	70-D19-44-1O	Storm	CMP	10	10.00	11.00	9.17	10.17
TU93	70-D18-44-2I	Storm	CMP	10	7.00	11.00	6.17	10.17
TU93	70-D18-44-2J	Storm	CMP	10	10.00	18.00	9.17	17.17
TU93	70-D18-44-2K	Storm	CMP	10	9.00	20.00	8.17	19.17
TU93	70-D18-44-8C	Storm	CIP	4	8.00	10.00	7.67	9.67
TU93	70-D18-44-8D	Storm	CIP	4	8.00	10.00	7.67	9.67
TU94	70-D18-44-1L	Storm	CMP	10	6.00	8.00	5.17	7.17
TU94	70-D18-44-1M	Storm	CMP	10	7.00	9.00	6.17	8.17
TU94	70-D18-44-1N	Storm	CMP	10	6.00	8.00	5.17	7.17
TU94	70-D18-44-1O	Storm	CMP	10	6.00	8.00	5.17	7.17

TABLE 3-2

PARCEL G TRENCH SURVEY UNITS AND ASSOCIATED SEGMENTS SUMMARY

Trench Survey Unit	Trench Segment Identification No.	Type of Segment	Pipe Material	Pipe Diameter (inches)	Minimum Depth of Trench (feet)	Maximum Depth of Trench (feet)	Minimum Depth of Pipe (feet)	Maximum Depth of Pipe (feet)
TU94	70-D18-44-1P	Storm	CMP	10	6.00	8.00	5.17	7.17
TU94	70-D18-44-1Q	Storm	CMP	10	6.00	9.00	5.17	8.17
TU94	70-D18-44-1R	Storm	CMP	10	6.00	8.00	5.17	7.17
TU94	70-D18-44-1S	Storm	CMP	10	7.00	9.00	6.17	8.17
TU94	70-D18-44-1T	Storm	CMP	10	7.00	9.00	6.17	8.17
TU95	70-D18-00-1G	Storm	Concrete	24	8.00	10.00	6.00	8.00
TU95	70-D18-00-2K	Storm	CMP	10	9.00	10.00	8.17	9.17
TU95	70-D18-33-1F	Storm	VCP	10	4.00	8.00	3.17	7.17
TU95	70-D18-33-1G	Storm	Concrete	24	8.00	10.00	6.00	8.00
TU95	70-D18-33-2L	Storm	VCP	8	8.00	10.00	7.33	9.33
TU95	70-D18-33-2M	Storm	VCP	12	8.00	10.00	7.00	9.00
TU95	70-D18-33-2N	Storm	Concrete	21	9.00	11.00	7.25	9.25
TU95	70-D18-33-8O	Storm	Steel	4	3.00	3.00	2.67	2.67
TU95	70-D18-33-8R	Storm	VCP	6	8.00	10.00	7.50	9.50
TU95	70-D18-33-8S	Sanitary	VCP	6	4.00	10.00	3.50	9.50
TU95	70-D18-33-8T	Storm	VCP	6	4.00	10.00	3.50	9.50
TU96	70-D18-33-2M	Storm	VCP	12	8.00	10.00	7.00	9.00
TU96	70-D18-33-2O	Storm	VCP	6	4.00	5.00	3.50	4.50
TU96	70-D18-33-2P	Storm	VCP	8	3.00	4.00	2.33	3.33
TU96	70-D18-33-2R	Storm	VCP	6	2.00	7.00	1.50	6.50
TU96	70-D18-33-4M	Sanitary	VCP	8	8.00	10.00	7.33	9.33
TU96	70-D18-33-4O	Sanitary	VCP	8	9.00	11.00	8.33	10.33
TU96	70-D18-33-8L	Storm	Steel	4	3.00	5.00	2.67	4.67
TU96	70-D18-33-8M	Storm	CIP	4	2.00	3.00	1.67	2.67
TU96	70-D18-33-8O	Storm	Steel	4	3.00	5.00	2.67	4.67

TABLE 3-2

PARCEL G TRENCH SURVEY UNITS AND ASSOCIATED SEGMENTS SUMMARY

Trench Survey Unit	Trench Segment Identification No.	Type of Segment	Pipe Material	Pipe Diameter (inches)	Minimum Depth of Trench (feet)	Maximum Depth of Trench (feet)	Minimum Depth of Pipe (feet)	Maximum Depth of Pipe (feet)
TU96	70-D18-33-8P	Sanitary	VCP	6	8.00	10.00	7.50	9.50
TU96	70-D18-33-8Q	Storm	VCP	6	6.00	8.00	5.50	7.50
TU96	70-D18-33-8R	Storm	VCP	6	8.00	10.00	7.50	9.50
TU97	70-D18-33-2N	Storm	Concrete	21	9.00	11.00	7.25	9.25
TU97	70-D18-33-2O	Storm	VCP	6	4.00	5.00	3.50	4.50
TU97	70-D18-33-2P	Storm	VCP	8	3.00	4.00	2.33	3.33
TU97	70-D18-33-2Q	Storm	VCP	10	8.00	10.00	7.17	9.17
TU97	70-D18-33-2S	Storm	VCP	8	4.00	5.00	3.33	4.33
TU97	70-D18-33-8J	Storm	VCP	6	5.00	6.00	4.50	5.50
TU97	70-D18-33-8K	Storm	VCP	4	5.00	6.00	4.67	5.67
TU97	70-D18-33-8M	Storm	CIP	4	2.00	3.00	1.67	2.67
TU97	70-D18-33-8N	Storm	VCP	5	3.00	4.00	2.58	3.58
TU97	70-D18-34-2S	Storm	VCP	8	4.00	5.00	3.33	4.33
TU97	70-D18-34-8J	Storm	VCP	6	5.00	6.00	4.50	5.50
TU97	70-D18-34-8K	Storm	VCP	4	5.00	6.00	4.67	5.67
TU98	70-D18-33-2T	Storm	VCP	12	6.00	8.00	5.00	7.00
TU98	70-D18-33-2U	Storm	VCP	10	6.00	8.00	5.17	7.17
TU98	70-D18-33-2W	Storm	VCP	4	6.00	8.00	5.67	7.67
TU98	70-D18-33-4O	Sanitary	VCP	8	8.00	11.00	7.33	10.33
TU98	70-D18-33-8G	Storm	CIP	8	6.00	8.00	5.33	7.33
TU98	70-D18-33-8H	Storm	Concrete/VCP	6	6.00	8.00	5.50	7.50
TU98	70-D18-33-8I	Storm	Concrete/VCP	8	8.00	10.00	7.33	9.33
TU99	70-D18-00-1H	Storm	Concrete	24	9.00	10.00	7.00	8.00
TU99	70-D18-00-1I	Storm	VCP	8	8.00	10.00	7.33	9.33
TU99	70-D18-00-1J	Storm	Concrete	24	9.00	11.00	7.00	9.00

TABLE 3-2

PARCEL G TRENCH SURVEY UNITS AND ASSOCIATED SEGMENTS SUMMARY

Trench Survey Unit	Trench Segment Identification No.	Type of Segment	Pipe Material	Pipe Diameter (inches)	Minimum Depth of Trench (feet)	Maximum Depth of Trench (feet)	Minimum Depth of Pipe (feet)	Maximum Depth of Pipe (feet)
TU99	70-D18-00-1K	Storm	VCP	8	9.00	11.00	8.33	10.33
TU99	70-D18-00-1L	Storm	CMP	12	8.00	10.00	7.00	9.00
TU99	70-D18-44-1L	Storm	CMP	10	8.00	10.00	7.17	9.17
TU100	72-D17-34-8E	Sanitary	CIP	4	2.50	3.50	2.17	3.17
TU100	72-D17-34-9L	Sanitary	CIP	4	2.50	3.50	2.17	3.17
TU100	72-D17-34-9Q	Sanitary	CIP	4	2.50	3.50	2.17	3.17
TU100	72-D17-34-9R	Connector	NA	NA	1.00	1.00	NA	NA
TU101	72-D17-34-8A	Sanitary	CIP	2	2.00	3.00	1.83	2.83
TU101	72-D17-34-8B	Sanitary	CIP	4	2.00	3.00	1.67	2.67
TU101	72-D17-34-8C	Sanitary	CIP	4	2.00	3.00	1.67	2.67
TU101	72-D17-34-9C	Sanitary	CIP	4	2.50	3.50	2.17	3.17
TU101	72-D17-34-9D	Sanitary	CIP	4	2.50	3.50	2.17	3.17
TU101	72-D17-34-9E	Sanitary	CIP	4	2.50	3.50	2.17	3.17
TU101	72-D17-34-9F	Sanitary	CIP	4	2.50	3.50	2.17	3.17
TU101	72-D17-34-9G	Sanitary	CIP	4	2.50	3.50	2.17	3.17
TU101	72-D17-34-9H	Sanitary	CIP	4	2.50	3.50	2.17	3.17
TU101	72-D17-34-9I	Sanitary	CIP	4	2.50	3.50	2.17	3.17
TU101	72-D17-34-9J	Sanitary	CIP	4	2.50	3.50	2.17	3.17
TU101	72-D17-34-9K	Sanitary	CIP	4	2.50	3.50	2.17	3.17
TU101	72-D17-34-9M	Sanitary	CIP	4	2.50	3.50	2.17	3.17
TU101	72-D17-34-9N	Sanitary	CIP	3	2.50	3.50	2.25	3.25
TU101	72-D17-34-9O	Sanitary	CIP	4	2.50	3.50	2.17	3.17
TU101	72-D17-34-9P	Connector	NA	NA	1.00	1.00	NA	NA
TU102	72-D17-34-8D	Sanitary	CIP	4	2.50	3.50	2.17	3.17
TU102	72-D17-34-8F	Sanitary	CIP	4	2.00	2.50	1.67	2.17

TABLE 3-2

PARCEL G TRENCH SURVEY UNITS AND ASSOCIATED SEGMENTS SUMMARY

Trench Survey Unit	Trench Segment Identification No.	Type of Segment	Pipe Material	Pipe Diameter (inches)	Minimum Depth of Trench (feet)	Maximum Depth of Trench (feet)	Minimum Depth of Pipe (feet)	Maximum Depth of Pipe (feet)
TU102	72-D17-34-8G	Sanitary	CIP	3	2.00	2.50	1.75	2.25
TU103	70-D27-00-2T	Storm	VCP	10	3.50	8.00	2.67	7.17
TU103	70-D27-00-2W	Storm	VCP	10	3.00	4.00	2.17	3.17
TU103	70-D27-37-2T	Storm	Steel	8	3.00	3.50	2.33	2.83
TU103	70-D27-37-2V	Storm	VCP	6	4.00	6.00	3.50	5.50
TU103	70-D27-37-2W	Storm	VCP	10	3.00	4.00	2.17	3.17
TU103	70-E27-00-2V	Storm	VCP	6	4.00	6.00	3.50	5.50
TU104	70-D27-00-2Y	Sanitary	VCP	8	15.00	17.00	14.33	16.33
TU104	70-D27-00-8A	Sanitary	VCP	8	3.00	6.00	2.33	5.33
TU104	70-E27-00-2V	Storm	VCP	6	4.00	6.00	3.50	5.50
TU104	70-E27-00-3K	Sanitary	Steel/VCP	16	13.00	15.00	11.67	13.67
TU104	70-E27-00-3L	Sanitary	Steel/VCP	16	15.00	17.00	13.67	15.67
TU104	70-E27-36-2V	Storm	VCP	6	3.00	4.00	2.50	3.50
TU105	70-D27-00-2R	Storm	VCP	6	7.00	8.00	6.50	7.50
TU105	70-D27-00-2S	Storm	VCP	15	7.00	8.00	5.75	6.75
TU105	70-D27-00-8B	Sanitary	VCP	6	6.00	8.00	5.50	7.50
TU105	70-E27-00-3I	Sanitary	Steel/VCP	8	12.00	13.00	11.33	12.33
TU105	70-E27-00-3J	Sanitary	VCP	6	5.00	6.00	4.50	5.50
TU105	70-E27-00-3K	Sanitary	Steel/VCP	16	13.00	15.00	11.67	13.67
TU105	70-E27-36-3J	Sanitary	VCP	6	5.00	6.00	4.50	5.50
TU106	70-D18-44-1L	Storm	CMP	10	7.00	8.00	6.17	7.17
TU106	70-D18-44-1U	Storm	CMP	10	7.00	8.00	6.17	7.17
TU106	70-D18-44-1V	Storm	CMP	10	7.00	8.00	6.17	7.17
TU106	70-D18-44-1W	Storm	CMP	10	7.00	8.00	6.17	7.17
TU106	70-D18-44-1X	Storm	CMP	10	7.00	8.00	6.17	7.17

TABLE 3-2

PARCEL G TRENCH SURVEY UNITS AND ASSOCIATED SEGMENTS SUMMARY

Trench Survey Unit	Trench Segment Identification No.	Type of Segment	Pipe Material	Pipe Diameter (inches)	Minimum Depth of Trench (feet)	Maximum Depth of Trench (feet)	Minimum Depth of Pipe (feet)	Maximum Depth of Pipe (feet)
TU106	70-D18-44-1Y	Storm	CMP	12	7.00	8.00	6.00	7.00
TU106	70-D18-44-1Z	Storm	CMP	10	7.00	8.00	6.17	7.17
TU106	70-D18-44-2A	Storm	CMP	10	7.00	8.00	6.17	7.17
TU106	70-D18-44-2B	Storm	CMP	10	7.00	8.00	6.17	7.17
TU107	70-D19-00-1M	Storm	Concrete	24	6.00	7.50	4.00	5.50
TU107	70-D19-00-6A	Storm	VCP	10	3.00	6.00	2.17	5.17
TU107	70-D19-00-6B	Sanitary	CIP	6	3.00	6.00	2.50	5.50
TU107	70-D19-00-6C	Storm	VCP	8	5.00	6.00	4.33	5.33
TU107	70-D19-44-1L	Storm	Concrete	24	6.00	8.00	4.00	6.00
TU108	70-D19-00-3P	Sanitary	VCP	10	8.00	9.00	7.17	8.17
TU108	70-D19-00-6A	Storm	VCP	10	3.00	6.00	2.17	5.17
TU108	70-D19-00-6B	Sanitary	CIP	6	3.00	6.00	2.50	5.50
TU108	70-D19-00-8G	Sanitary	CIP	6	1.00	2.00	0.50	1.50
TU108	70-D19-67-8G	Sanitary	CIP	6	1.00	2.00	0.50	1.50
TU109	70-E27-00-2B	Storm	VCP	8	6.00	8.00	5.33	7.33
TU109	70-E27-00-2F	Storm	CIP	6	3.00	6.00	2.50	5.50
TU109	70-E27-00-2H	Storm	Concrete	24	8.00	11.00	6.00	9.00
TU109	70-E27-00-2I	Storm	VCP	8	2.00	6.00	1.33	5.33
TU109	70-E27-00-2J	Storm	CIP	4	2.00	6.00	1.67	5.67
TU109	70-E27-00-2K	Storm	Concrete	24	8.00	11.00	6.00	9.00
TU110	70-E27-00-2K	Storm	Concrete	24	8.00	11.00	6.00	9.00
TU110	70-E27-00-2L	Storm	VCP	6	6.00	8.00	5.50	7.50
TU110	70-E27-00-2M	Storm	Concrete/VCP	18	8.00	11.00	6.50	9.50
TU110	70-E27-00-2N	Storm	VCP	6	7.00	10.00	6.50	9.50
TU110	70-E27-00-2O	Storm	VCP	6	3.00	4.00	2.50	3.50

TABLE 3-2

PARCEL G TRENCH SURVEY UNITS AND ASSOCIATED SEGMENTS SUMMARY

Trench Survey Unit	Trench Segment Identification No.	Type of Segment	Pipe Material	Pipe Diameter (inches)	Minimum Depth of Trench (feet)	Maximum Depth of Trench (feet)	Minimum Depth of Pipe (feet)	Maximum Depth of Pipe (feet)
TU110	70-E27-00-2P	Storm	VCP	18	8.00	10.00	6.50	8.50
TU110	70-E27-00-3B	Sanitary	VCP	8	6.00	8.00	5.33	7.33
TU110	70-E27-00-3D	Sanitary	VCP	6	3.00	4.00	2.50	3.50
TU110	70-E27-00-3E	Sanitary	VCP	6	6.00	7.00	5.50	6.50
TU110	70-E27-00-8A	Storm	VCP	6	8.00	11.00	7.50	10.50
TU110	70-E27-00-8B	Storm	VCP	6	4.00	4.00	3.50	3.50
TU111	70-E27-00-2O	Storm	VCP	6	3.00	4.00	2.50	3.50
TU111	70-E27-00-3B	Sanitary	VCP	8	6.00	8.00	5.33	7.33
TU111	70-E27-00-3C	Sanitary	VCP	8	9.00	11.00	8.33	10.33
TU111	70-E27-00-3D	Sanitary	VCP	6	3.00	4.00	2.50	3.50
TU111	70-E27-00-3F	Sanitary	VCP	10	6.00	7.00	5.17	6.17
TU111	70-E27-00-3G	Sanitary	VCP	6	6.00	7.00	5.50	6.50
TU111	70-E27-00-3H	Sanitary	Steel/VCP	16	6.00	7.00	4.67	5.67
TU112	70-D27-00-2Q	Storm	VCP	15	7.00	8.00	5.75	6.75
TU112	70-D27-00-2S	Storm	VCP	15	7.00	8.00	5.75	6.75
TU112	70-D27-00-3G	Sanitary	VCP	6	7.00	8.00	6.50	7.50
TU112	70-D27-36-2Q	Storm	VCP	15	7.00	8.00	5.75	6.75
TU112	70-E27-00-2P	Storm	VCP	18	8.00	8.00	6.50	6.50
TU112	70-E27-00-3M	Storm	VCP	8	7.00	8.00	6.33	7.33
TU113	70-D27-00-2R	Storm	VCP	6	6.00	6.00	5.50	5.50
TU113	70-E27-00-2R	Storm	VCP	6	4.00	6.00	3.50	5.50
TU113	70-E27-00-3H	Sanitary	Steel/VCP	16	10.00	11.00	8.67	9.67
TU113	70-E27-00-3I	Sanitary	Steel/VCP	8	11.00	12.00	10.33	11.33
TU113	70-E27-36-2R	Storm	VCP	6	4.00	6.00	3.50	5.50
TU113	70-E27-36-3H	Sanitary	Steel/VCP	16	10.00	11.00	8.67	9.67

TABLE 3-2

PARCEL G TRENCH SURVEY UNITS AND ASSOCIATED SEGMENTS SUMMARY

Trench Survey Unit	Trench Segment Identification No.	Type of Segment	Pipe Material	Pipe Diameter (inches)	Minimum Depth of Trench (feet)	Maximum Depth of Trench (feet)	Minimum Depth of Pipe (feet)	Maximum Depth of Pipe (feet)
TU114	70-D18-09-8D	Storm	VCP	6	4.00	4.00	3.50	3.50
TU114	70-D19-09-8A	Storm	VCP	6	4.00	4.00	3.50	3.50
TU115	72-D18-34-8A	Sanitary	CIP	4	1.00	1.00	0.67	0.67
TU115	72-D18-34-8B	Sanitary	CIP	3	2.00	3.00	1.75	2.75
TU115	72-D18-34-8C	Sanitary	CIP	4	3.00	4.00	2.67	3.67
TU115	72-D18-34-8D	Sanitary	CIP	4	3.00	5.00	2.67	4.67
TU115	72-D18-34-8E	Sanitary	CIP	3	3.00	3.00	2.75	2.75
TU116	70-D18-44-1L	Storm	CMP	10	5.00	6.00	4.17	5.17
TU116	70-D18-44-2C	Storm	CMP	10	6.00	8.00	5.17	7.17
TU116	70-D18-44-2D	Storm	CMP	10	6.00	7.00	5.17	6.17
TU116	70-D18-44-2E	Storm	CMP	10	6.00	8.00	5.17	7.17
TU116	70-D18-44-2F	Storm	CMP	10	6.00	8.00	5.17	7.17
TU117	70-D17-00-8H	Storm	Steel	10	5.00	6.00	4.17	5.17
TU117	70-D18-00-1A	Storm	CMP	8	6.00	8.00	5.33	7.33
TU117	70-D18-00-8C	Storm	VCP	8	5.00	6.00	4.33	5.33
TU117	70-D18-71-1A	Storm	CMP	8	4.00	6.00	3.33	5.33
TU118	70-D17-00-8E	Sanitary	VCP	6	8.00	9.00	7.50	8.50
TU118	70-D17-00-8I	Storm	Steel	10	7.00	8.00	6.17	7.17
TU118	70-D18-00-1A	Storm	CMP	8	6.00	8.00	5.33	7.33
TU118	70-D18-00-1B	Storm	VCP	4	1.00	2.00	0.67	1.67
TU118	70-D18-00-1C	Storm	VCP	8	6.00	10.00	5.33	9.33
TU118	70-D18-00-8A	Sanitary	VCP	6	9.00	10.00	8.50	9.50
TU119	70-D18-09-3S	Storm	Concrete	10	6.00	7.00	5.17	6.17
TU119	70-D18-09-3T	Storm	VCP	8	6.00	7.00	5.33	6.33
TU119	70-D18-09-3U	Storm	Concrete	10	6.00	7.00	5.17	6.17

TABLE 3-2

PARCEL G TRENCH SURVEY UNITS AND ASSOCIATED SEGMENTS SUMMARY

Trench Survey Unit	Trench Segment Identification No.	Type of Segment	Pipe Material	Pipe Diameter (inches)	Minimum Depth of Trench (feet)	Maximum Depth of Trench (feet)	Minimum Depth of Pipe (feet)	Maximum Depth of Pipe (feet)
TU119	70-D18-09-8F	Storm	CIP	4	2.00	2.00	1.67	1.67
TU119	70-D18-09-8G	Storm	Concrete	12	6.00	7.00	5.00	6.00
TU119	70-D18-33-3U	Storm	Concrete	10	6.00	7.00	5.17	6.17
TU119	70-D18-33-4R	Sanitary	VCP	8	5.00	6.00	4.33	5.33
TU120	70-D18-00-4S	Sanitary	VCP	8	7.00	8.00	6.33	7.33
TU120	70-D18-00-4T	Sanitary	VCP	8	8.00	9.00	7.33	8.33
TU120	70-D18-00-4U	Sanitary	VCP	6	5.00	6.00	4.50	5.50
TU120	70-D18-00-8F	Sanitary	VCP	6	8.00	10.00	7.50	9.50
TU120	70-D18-33-3Y	Storm	VCP	6	2.00	3.00	1.50	2.50
TU120	70-D18-33-4S	Sanitary	VCP	8	6.00	7.00	5.33	6.33
TU120	70-D18-33-8W	Sanitary	VCP	8	8.00	10.00	7.33	9.33
TU121	70-D18-00-4F	Storm	Concrete	12	4.00	5.00	3.00	4.00
TU121	70-D18-00-4H	Storm	CMP	18	6.00	10.00	4.50	8.50
TU121	70-D18-00-4I	Storm	VCP	10	4.00	6.00	3.17	5.17
TU121	70-D18-00-4J	Storm	VCP	12	4.00	6.00	3.00	5.00
TU121	70-D18-00-4K	Storm	Concrete	21	5.00	6.00	3.25	4.25
TU121	70-D18-00-4X	Sanitary	CIP	8	2.00	5.00	1.33	4.33
TU121	70-D18-00-8D	Storm	VCP	6	5.00	6.00	4.50	5.50
TU121	70-D18-00-8E	Storm	CMP	8	2.42	5.42	1.75	4.75
TU121	70-D18-33-4E	Storm	VCP	6	4.00	5.00	3.50	4.50
TU121	70-D18-33-5B	Sanitary	VCP	4	5.00	6.00	4.67	5.67
TU121	70-D18-33-5C	Sanitary	CIP	3	5.00	6.00	4.75	5.75
TU121	70-D18-33-6C	Sanitary	CIP	4	3.00	4.00	2.67	3.67
TU121	70-D18-33-8U	Storm	VCP	6	3.00	4.00	2.50	3.50
TU121	70-D18-33-8V	Sanitary	CIP	4	3.00	4.00	2.67	3.67

TABLE 3-2

PARCEL G TRENCH SURVEY UNITS AND ASSOCIATED SEGMENTS SUMMARY

Trench Survey Unit	Trench Segment Identification No.	Type of Segment	Pipe Material	Pipe Diameter (inches)	Minimum Depth of Trench (feet)	Maximum Depth of Trench (feet)	Minimum Depth of Pipe (feet)	Maximum Depth of Pipe (feet)
TU122	70-D18-00-4G	Storm	CMP	18	4.00	5.00	2.50	3.50
TU122	70-D18-00-4V	Sanitary	Steel/VCP	18	5.00	10.00	3.50	8.50
TU122	70-D19-00-2U	Storm	CMP	10	4.00	5.00	3.17	4.17
TU122	70-D19-00-2V	Storm	CMP	18	4.00	5.00	2.50	3.50
TU122	70-D19-00-2W	Storm	CMP	6	2.00	2.00	1.50	1.50
TU122	70-D19-00-2X	Storm	CMP	6	2.00	2.00	1.50	1.50
TU122	70-D19-00-2Y	Storm	CMP	10	2.00	3.00	1.17	2.17
TU122	70-D19-00-2Z	Storm	Steel	21	4.00	5.00	2.25	3.25
TU122	70-D19-00-3M	Storm	CMP	10	4.00	6.00	3.17	5.17
TU122	70-D19-00-8H	Storm	CMP	6	3.00	3.00	2.50	2.50
TU123	70-D19-00-1K	Storm	VCP	10	4.00	6.00	3.17	5.17
TU123	70-D19-00-2Z	Storm	Steel	21	4.00	5.00	2.25	3.25
TU123	70-D19-00-3A	Storm	Concrete	10	4.00	4.00	3.17	3.17
TU123	70-D19-00-3B	Storm	VCP	10	5.00	7.00	4.17	6.17
TU123	70-D19-00-3C	Storm	Concrete	10	5.00	5.00	4.17	4.17
TU123	70-D19-00-3E	Storm	Concrete	18	5.00	6.00	3.50	4.50
TU123	70-D19-00-3G	Storm	VCP	10	5.00	6.00	4.17	5.17
TU123	70-D19-00-3H	Storm	VCP	10	5.00	5.00	4.17	4.17
TU123	70-D19-00-3I	Storm	Concrete	15	5.00	6.00	3.75	4.75
TU123	70-D19-00-3K	Storm	Concrete	15	5.00	6.00	3.75	4.75
TU123	70-D19-00-3L	Storm	Concrete	10	5.00	6.00	4.17	5.17
TU123	70-D19-00-3O	Storm	Concrete	18	4.00	5.00	2.50	3.50
TU123	70-D19-00-3Z	Sanitary	VCP	10	10.00	14.00	9.17	13.17
TU124	70-D19-00-3E	Storm	Concrete	18	4.00	5.00	2.50	3.50
TU124	70-D19-00-3F	Storm	Concrete	18	4.00	4.00	2.50	2.50

TABLE 3-2

PARCEL G TRENCH SURVEY UNITS AND ASSOCIATED SEGMENTS SUMMARY

Trench Survey Unit	Trench Segment Identification No.	Type of Segment	Pipe Material	Pipe Diameter (inches)	Minimum Depth of Trench (feet)	Maximum Depth of Trench (feet)	Minimum Depth of Pipe (feet)	Maximum Depth of Pipe (feet)
TU124	70-D19-00-3J	Storm	VCP	10	4.00	5.00	3.17	4.17
TU124	70-D19-00-4A	Sanitary	CIP	4	4.00	4.00	3.67	3.67
TU124	70-D27-00-2X	Storm	PVC	15	4.00	4.00	2.75	2.75
TU124	70-D27-00-8C	Storm	VCP	12	11.00	11.00	10.00	10.00
TU124	70-D27-00-8D	Sanitary	VCP	6	11.00	11.00	10.50	10.50
TU129	70-D19-00-3X	Sanitary	VCP	10	4.00	5.00	3.17	4.17
TU129	70-D19-00-5B	Storm	VCP	4	6.00	7.00	5.67	6.67
TU129	70-D19-37-2I	Storm	VCP	4	6.00	7.00	5.67	6.67
TU129	70-D19-37-2J	Storm	CIP	8	4.00	7.00	3.33	6.33
TU129	70-D19-37-2M	Storm	VCP	10	4.00	5.00	3.17	4.17
TU129	70-D19-37-3X	Sanitary	VCP	10	4.00	5.00	3.17	4.17
TU129	70-D19-37-5C	Storm	VCP	8	7.00	7.00	6.33	6.33
TU129	70-D19-37-8A	Storm	CIP	3	4.00	5.00	3.75	4.75
TU151	70-D18-09-3P	Storm	Concrete	12	5.00	6.00	4.00	5.00
TU153	70-D18-00-1D	Storm	VCP	10	8.00	9.00	7.17	8.17
TU153	70-D18-00-1F	Storm	VCP	10	5.00	6.00	4.17	5.17
TU153	70-D18-00-8G	Storm	VCP	10	3.00	5.00	2.17	4.17
TU153	70-D18-00-8H	Storm	VCP	6	5.00	6.00	4.50	5.50
TU153	70-D18-00-8I	Storm	VCP	6	3.00	4.00	2.50	3.50
TU153	70-D18-00-8J	Storm	VCP	6	4.00	5.00	3.50	4.50
TU153	70-D18-33-1D	Storm	VCP	10	8.00	9.00	7.17	8.17
TU153	70-D18-33-1E	Storm	CIP	6	3.00	5.00	2.50	4.50
TU204	70-D17-00-1G	Storm	Concrete	15	8.00	8.50	6.75	7.25
TU204	70-D17-00-2F	Sanitary	Concrete	15	9.00	10.00	7.75	8.75
TU204	70-D17-00-2G	Sanitary	Concrete	15	8.00	9.00	6.75	7.75

TABLE 3-2

PARCEL G TRENCH SURVEY UNITS AND ASSOCIATED SEGMENTS SUMMARY

Trench Survey Unit	Trench Segment Identification No.	Type of Segment	Pipe Material	Pipe Diameter (inches)	Minimum Depth of Trench (feet)	Maximum Depth of Trench (feet)	Minimum Depth of Pipe (feet)	Maximum Depth of Pipe (feet)
TU204	70-D17-00-8K	Storm	VCP	6	4.00	6.00	3.50	5.50
TU204	70-D17-00-8L	Storm	CMP	8	4.50	6.00	3.83	5.33
TU204	70-D17-32-1G	Storm	Concrete	15	8.50	8.50	7.25	7.25
TU204	70-D18-00-1J	Storm	Concrete	24	9.00	9.00	7.00	7.00
TU204	70-D19-00-3P	Sanitary	Concrete	10	6.50	7.00	5.67	6.17
TU204	70-D19-44-1L	Storm	Concrete	24	8.00	8.00	6.00	6.00
TU204	70-D19-44-8A	Storm	VCP	8	8.00	8.00	7.33	7.33
TU204	70-E27-00-2A	Storm	VCP	24	12.00	12.00	10.00	10.00
TU204	70-E27-00-2B	Storm	VCP	8	12.00	12.00	11.33	11.33
TU204	70-E27-00-2H	Storm	Concrete	24	12.00	12.00	10.00	10.00

Abbreviations and Acronyms:

CIP – cast iron pipe

CMP – corrugated metal pipe

NA – not applicable

PVC – polyvinyl chloride

TU – Trench Survey Unit

VCP – vitreous clay pipe

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TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17	TU66	70-D17-00-3C	1	C01	ES-0001	19-Jul-07
17	TU66	70-D17-00-3C	2	C01	ES-0001	19-Jul-07
17	TU66	70-D17-00-3C	3	C01	ES-0001	19-Jul-07
17	TU66	70-D17-00-3C	4	C01	ES-0001	19-Jul-07
17	TU66	70-D17-00-3C	5	C01	ES-0001	19-Jul-07
17	TU66	70-D17-00-3C	6	C01	ES-0001	19-Jul-07
17	TU66	70-D17-00-3C	7	C01	ES-0001	19-Jul-07
17	TU66	70-D17-00-3C	8	C01	ES-0001	19-Jul-07
17	TU66	70-D17-00-3C	9	C01	ES-0001	19-Jul-07
17	TU66	70-D17-00-3D	1	C02	ES-0002	20-Jul-07
17	TU66	70-D17-00-3D	2	C02	ES-0002	20-Jul-07
17	TU66	70-D17-00-3D	3	C02	ES-0002	20-Jul-07
17	TU66	70-D17-00-3D	4	C02	ES-0002	20-Jul-07
17	TU66	70-D17-00-3D	5	C02	ES-0002	20-Jul-07
17	TU66	70-D17-00-3D	6	C02	ES-0002	20-Jul-07
17	TU66	70-D17-00-3D	7	C02	ES-0002	20-Jul-07
17	TU66	70-D17-00-3D	8	C02	ES-0002	20-Jul-07
17	TU66	70-D17-00-3D	9	C02	ES-0002	20-Jul-07
17	TU66	70-D17-00-3D	10	C02	ES-0002	20-Jul-07
17	TU66	70-D17-00-3D	11	C02	ES-0002	20-Jul-07
17	TU66	70-D17-00-3D	12	C03	ES-0003	20-Jul-07
17	TU66	70-D17-00-3D	13	C03	ES-0003	20-Jul-07
17	TU66	70-D17-00-3D	14	C03	ES-0003	20-Jul-07
17	TU66	70-D17-00-3D	15	C03	ES-0003	20-Jul-07
17	TU66	70-D17-00-3D	16	C03	ES-0003	20-Jul-07
17	TU66	70-D17-00-3D	18	C03	ES-0003	23-Jul-07
17	TU66	70-D17-00-3D	19	C03	ES-0003	23-Jul-07
17	TU66	70-D17-00-3D	20	C03	ES-0003	23-Jul-07
17	TU66	70-D17-00-3G	1	C07	ES-0007	25-Jul-07
17	TU66	70-D17-00-3G	2	C07	ES-0007	25-Jul-07
17	TU66	70-D17-00-3H	1	C06	ES-0006	24-Jul-07
17	TU66	70-D17-00-3H	2	C06	ES-0006	24-Jul-07
17	TU66	70-D17-00-3H	3	C06	ES-0006	24-Jul-07
17	TU66	70-D17-00-3H	4	C06	ES-0006	24-Jul-07
17	TU66	70-D17-00-3H	5	C06	ES-0006	24-Jul-07
17	TU66	70-D17-00-3H	6	C06	ES-0006	24-Jul-07
17	TU66	70-D17-00-3H	7	C06	ES-0006	24-Jul-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17	TU66	70-D17-00-3H	8	C06	ES-0006	24-Jul-07
17	TU66	70-D17-00-3H	9	C06	ES-0006	24-Jul-07
17	TU66	70-D17-00-3H	10	C06	ES-0006	25-Jul-07
17	TU66	70-D17-00-3H	11	C07	ES-0007	25-Jul-07
17	TU66	70-D17-00-3H	12	C07	ES-0007	25-Jul-07
17	TU66	70-D17-00-3H	13	C07	ES-0007	25-Jul-07
17	TU66	70-D17-00-3H	14	C07	ES-0007	25-Jul-07
17	TU66	70-D17-00-3I	1	C03	ES-0003	23-Jul-07
17	TU66	70-D17-00-3I	2	C03	ES-0003	23-Jul-07
17	TU66	70-D17-00-3I	3	C04	ES-0004	23-Jul-07
17	TU66	70-D17-00-3I	4	C04	ES-0004	23-Jul-07
17	TU66	70-D17-00-3I	5	C04	ES-0004	23-Jul-07
17	TU66	70-D17-00-3I	6	C04	ES-0004	23-Jul-07
17	TU66	70-D17-00-3I	7	C04	ES-0004	23-Jul-07
17	TU66	70-D17-00-3I	8	C04	ES-0004	23-Jul-07
17	TU66	70-D17-00-3I	9	C04	ES-0004	23-Jul-07
17	TU66	70-D17-00-3I	10	C04	ES-0004	23-Jul-07
17	TU66	70-D17-00-3I	11	C05	ES-0005	24-Jul-07
17	TU66	70-D17-00-3I	12	C05	ES-0005	24-Jul-07
17	TU66	70-D17-00-3I	13	C05	ES-0005	24-Jul-07
17	TU66	70-D17-00-3I	14	C05	ES-0005	24-Jul-07
17	TU66	70-D17-00-3I	15	C05	ES-0005	24-Jul-07
17	TU66	70-D17-00-3I	16	C05	ES-0005	24-Jul-07
17	TU66	70-D17-00-3I	17	C06	ES-0006	24-Jul-07
17	TU66	70-D17-00-3I	18	C06	ES-0006	24-Jul-07
17	TU66	70-D17-00-3I	19	C06	ES-0006	24-Jul-07
17	TU66	70-D17-00-3I	20	C06	ES-0006	24-Jul-07
17	TU66	70-D17-00-3I	21	C06	ES-0006	24-Jul-07
17	TU66	70-D17-00-3I	22	C06	ES-0006	24-Jul-07
17	TU66	70-D17-00-3I	23	C06	ES-0006	24-Jul-07
17	TU66	70-D17-00-3I	24	C06	ES-0006	24-Jul-07
17	TU66	70-D17-00-3I	25	C07	ES-0007	25-Jul-07
17	TU66	70-D17-00-3I	26	C07	ES-0007	25-Jul-07
17	TU66	70-D17-00-3I	27	C07	ES-0007	25-Jul-07
17	TU66	70-D17-00-3I	28	C07	ES-0007	25-Jul-07
17	TU66	70-D17-00-3I	29	C07	ES-0007	25-Jul-07
17	TU66	70-D17-00-3I	30	C07	ES-0007	25-Jul-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17	TU66	70-D17-00-3I	31	C07	ES-0007	25-Jul-07
17	TU66	70-D17-00-3I	32	C07	ES-0007	25-Jul-07
17	TU67	70-C17-00-2C	1	C03	ES-0003	23-Jul-07
17	TU67	70-C17-00-2C	2	C03	ES-0003	23-Jul-07
17	TU67	70-C17-00-2C	3	C03	ES-0003	23-Jul-07
17	TU67	70-C17-00-3E	1	C04	ES-0004	23-Jul-07
17	TU67	70-C17-00-3E	2	C04	ES-0004	23-Jul-07
17	TU67	70-C17-00-3E	3	C04	ES-0004	23-Jul-07
17	TU67	70-D17-00-1Z	1	C09	ES-0008	25-Jul-07
17	TU67	70-D17-00-1Z	2	C09	ES-0008	25-Jul-07
17	TU67	70-D17-00-1Z	3	C09	ES-0008	25-Jul-07
17	TU67	70-D17-00-2C	1	C03	ES-0003	23-Jul-07
17	TU67	70-D17-00-2C	2	C04	ES-0004	23-Jul-07
17	TU67	70-D17-00-2C	3	C04	ES-0004	23-Jul-07
17	TU67	70-D17-00-2L	2	C01	ES-0001	20-Jul-07
17	TU67	70-D17-00-2L	3	C01	ES-0001	20-Jul-07
17	TU67	70-D17-00-2L	4	C01	ES-0001	20-Jul-07
17	TU67	70-D17-00-2L	5	C02	ES-0002	20-Jul-07
17	TU67	70-D17-00-2L	6	C02	ES-0002	20-Jul-07
17	TU67	70-D17-00-2L	7	C02	ES-0002	20-Jul-07
17	TU67	70-D17-00-2L	8	C02	ES-0002	20-Jul-07
17	TU67	70-D17-00-2L	9	C02	ES-0002	20-Jul-07
17	TU67	70-D17-00-2L	10	C02	ES-0002	20-Jul-07
17	TU67	70-D17-00-2L	11	C03	ES-0003	20-Jul-07
17	TU67	70-D17-00-2L	12	C02	ES-0002	20-Jul-07
17	TU67	70-D17-00-2L	13	C03	ES-0003	20-Jul-07
17	TU67	70-D17-00-2L	14	C03	ES-0003	20-Jul-07
17	TU67	70-D17-00-2L	15	C04	ES-0004	23-Jul-07
17	TU67	70-D17-00-3E	1	C04	ES-0004	23-Jul-07
17	TU67	70-D17-00-3F	1	C04	ES-0004	23-Jul-07
17	TU67	70-D17-00-3F	2	C04	ES-0004	23-Jul-07
17	TU67	70-D17-00-3F	3	C04	ES-0004	23-Jul-07
17	TU67	70-D17-00-3F	4	C05	ES-0005	24-Jul-07
17	TU67	70-D17-00-3F	5	C05	ES-0005	24-Jul-07
17	TU67	70-D17-00-3F	6	C05	ES-0005	24-Jul-07
17	TU67	70-D17-00-3F	7	C05	ES-0005	24-Jul-07
17	TU67	70-D17-00-3F	8	C05	ES-0005	24-Jul-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17	TU67	70-D17-00-3F	9	C05	ES-0005	24-Jul-07
17	TU67	70-D17-00-3F	10	C05	ES-0005	24-Jul-07
17	TU67	70-D17-00-3F	11	C05	ES-0005	24-Jul-07
17	TU67	70-D17-00-3F	12	C05	ES-0005	24-Jul-07
17	TU67	70-D17-00-3F	13	C05	ES-0005	24-Jul-07
17	TU67	70-D17-00-3F	14	C07	ES-0007	25-Jul-07
17	TU67	70-D17-00-3F	15	C07	ES-0007	25-Jul-07
17	TU67	70-D17-00-3F	16	C07	ES-0007	25-Jul-07
17	TU67	70-D17-00-3F	17	C09	ES-0008	25-Jul-07
17	TU67	70-D17-00-3F	18	C09	ES-0008	25-Jul-07
17	TU67	70-D17-00-3F	19	C09	ES-0008	25-Jul-07
17	TU68	70-C17-00-2P	1	C36	ES-0028	09-Aug-07
17	TU68	70-D17-00-1L	1	C10	ES-0009	26-Jul-07
17	TU68	70-D17-00-1L	2	C10	ES-0009	26-Jul-07
17	TU68	70-D17-00-1L	3	C10	ES-0009	26-Jul-07
17	TU68	70-D17-00-1L	4	C10	ES-0009	26-Jul-07
17	TU68	70-D17-00-1L	5	C10	ES-0009	26-Jul-07
17	TU68	70-D17-00-1L	6	C10	ES-0009	26-Jul-07
17	TU68	70-D17-00-1L	7	C10	ES-0009	26-Jul-07
17	TU68	70-D17-00-1L	8	C10	ES-0009	26-Jul-07
17	TU68	70-D17-00-1L	9	C10	ES-0009	26-Jul-07
17	TU68	70-D17-00-1L	10	C10	ES-0009	26-Jul-07
17	TU68	70-D17-00-1L	11	C10	ES-0009	26-Jul-07
17	TU68	70-D17-00-1L	12	C10	ES-0009	26-Jul-07
17	TU68	70-D17-00-1L	13	C10	ES-0009	26-Jul-07
17	TU68	70-D17-00-1L	14	C12	ES-0010	26-Jul-07
17	TU68	70-D17-00-1L	15	C12	ES-0010	26-Jul-07
17	TU68	70-D17-00-1L	16	C12	ES-0010	26-Jul-07
17	TU68	70-D17-00-1L	17	C12	ES-0010	26-Jul-07
17	TU68	70-D17-00-1L	18	C12	ES-0010	26-Jul-07
17	TU68	70-D17-00-1L	19	C12	ES-0010	26-Jul-07
17	TU68	70-D17-00-1L	20	C12	ES-0010	26-Jul-07
17	TU68	70-D17-00-1L	21	C12	ES-0010	26-Jul-07
17	TU68	70-D17-00-1L	22	C13	ES-0011	26-Jul-07
17	TU68	70-D17-00-1L	23	C13	ES-0011	26-Jul-07
17	TU68	70-D17-00-1L	24	C13	ES-0011	26-Jul-07
17	TU68	70-D17-00-1L	25	C13	ES-0011	27-Jul-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17	TU68	70-D17-00-1L	26	C13	ES-0011	27-Jul-07
17	TU68	70-D17-00-1L	27	C13	ES-0011	27-Jul-07
17	TU68	70-D17-00-1L	28	C13	ES-0011	27-Jul-07
17	TU68	70-D17-00-1L	29	C13	ES-0011	27-Jul-07
17	TU68	70-D17-00-1L	30	C13	ES-0011	27-Jul-07
17	TU68	70-D17-00-1L	31	C13	ES-0011	27-Jul-07
17	TU68	70-D17-00-1L	32	C13	ES-0011	27-Jul-07
17	TU68	70-D17-00-1L	33	C13	ES-0011	27-Jul-07
17	TU68	70-D17-00-1L	34	C13	ES-0011	27-Jul-07
17	TU68	70-D17-00-1L	35	C13	ES-0011	27-Jul-07
17	TU68	70-D17-00-1L	36	C13	ES-0011	27-Jul-07
17	TU68	70-D17-00-1L	37	C15	ES-0012	27-Jul-07
17	TU68	70-D17-00-1L	38	C15	ES-0012	27-Jul-07
17	TU68	70-D17-00-1L	39	C15	ES-0012	27-Jul-07
17	TU68	70-D17-00-1L	40	C15	ES-0012	27-Jul-07
17	TU68	70-D17-00-1L	41	C15	ES-0012	27-Jul-07
17	TU68	70-D17-00-1L	42	C15	ES-0012	27-Jul-07
17	TU68	70-D17-00-1L	43	C15	ES-0012	27-Jul-07
17	TU68	70-D17-00-1L	44	C15	ES-0012	27-Jul-07
17	TU68	70-D17-00-1L	45	C15	ES-0012	27-Jul-07
17	TU68	70-D17-00-1L	46	C15	ES-0012	27-Jul-07
17	TU68	70-D17-00-1L	47	C18	ES-0018	27-Jul-07
17	TU68	70-D17-00-1L	48	C17	ES-0017	27-Jul-07
17	TU68	70-D17-00-1L	49	C16	ES-0013	27-Jul-07
17	TU68	70-D17-00-1L	50	C16	ES-0013	27-Jul-07
17	TU68	70-D17-00-1L	51	C19	ES-0014	27-Jul-07
17	TU68	70-D17-00-1L	52	C19	ES-0014	27-Jul-07
17	TU68	70-D17-00-1L	53	C18	ES-0018	27-Jul-07
17	TU68	70-D17-00-1L	54	C19	ES-0014	27-Jul-07
17	TU68	70-D17-00-1L	55	C19	ES-0014	27-Jul-07
17	TU68	70-D17-00-1L	56	C19	ES-0014	27-Jul-07
17	TU68	70-D17-00-1L	57	C19	ES-0014	27-Jul-07
17	TU68	70-D17-00-1L	58	C19	ES-0014	27-Jul-07
17	TU68	70-D17-00-1L	59	C19	ES-0014	27-Jul-07
17	TU68	70-D17-00-1L	60	C19	ES-0014	30-Jul-07
17	TU68	70-D17-00-1L	61	C20	ES-0015	30-Jul-07
17	TU68	70-D17-00-1L	62	C19	ES-0014	30-Jul-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17	TU68	70-D17-00-1L	63	C20	ES-0015	30-Jul-07
17	TU68	70-D17-00-2N	1	C33	ES-0031	13-Aug-07
17	TU68	70-D17-00-2N	2	C33	ES-0031	13-Aug-07
17	TU68	70-D17-00-2N	3	C34	ES-0030	13-Aug-07
17	TU68	70-D17-00-2N	4	C34	ES-0030	14-Aug-07
17	TU68	70-D17-00-2N	5	C34	ES-0030	14-Aug-07
17	TU68	70-D17-00-2N	6	C33	ES-0031	14-Aug-07
17	TU68	70-D17-00-2N	7	C34	ES-0030	14-Aug-07
17	TU68	70-D17-00-2N	8	C33	ES-0031	14-Aug-07
17	TU68	70-D17-00-2N	9	C34	ES-0030	14-Aug-07
17	TU68	70-D17-00-2N	10	C33	ES-0031	14-Aug-07
17	TU68	70-D17-00-2N	11	C34	ES-0030	14-Aug-07
17	TU68	70-D17-00-2N	12	C33	ES-0031	14-Aug-07
17	TU68	70-D17-00-2N	13	C34	ES-0030	14-Aug-07
17	TU68	70-D17-00-2N	14	C33	ES-0031	14-Aug-07
17	TU68	70-D17-00-2N	15	C33	ES-0031	14-Aug-07
17	TU68	70-D17-00-2N	16	C34	ES-0030	14-Aug-07
17	TU68	70-D17-00-2N	17	C33	ES-0031	14-Aug-07
17	TU68	70-D17-00-2N	18	C34	ES-0030	14-Aug-07
17	TU68	70-D17-00-2N	19	C33	ES-0031	14-Aug-07
17	TU68	70-D17-00-2N	20	C34	ES-0030	14-Aug-07
17	TU68	70-D17-00-2N	21	C33	ES-0031	14-Aug-07
17	TU68	70-D17-00-2N	22	C34	ES-0030	14-Aug-07
17	TU68	70-D17-00-2N	23	C34	ES-0030	14-Aug-07
17	TU68	70-D17-00-2N	24	C34	ES-0030	14-Aug-07
17	TU68	70-D17-00-2N	25	C33	ES-0031	14-Aug-07
17	TU68	70-D17-00-2O	1	C33	ES-0031	14-Aug-07
17	TU68	70-D17-00-2O	2	C33	ES-0031	14-Aug-07
17	TU68	70-D17-00-2O	3	C34	ES-0030	14-Aug-07
17	TU68	70-D17-00-2O	4	C32	ES-0032	14-Aug-07
17	TU68	70-D17-00-2O	5	C32	ES-0032	14-Aug-07
17	TU68	70-D17-00-2O	6	C34	ES-0030	14-Aug-07
17	TU68	70-D17-00-2O	7	C34	ES-0030	16-Aug-07
17	TU68	70-D17-00-2P	1	C36	ES-0028	09-Aug-07
17	TU68	70-D17-00-3I	33	C07	ES-0007	25-Jul-07
17	TU68	70-D17-00-3I	34	C07	ES-0007	25-Jul-07
17	TU68	70-D17-00-3I	35	C09	ES-0008	25-Jul-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17	TU68	70-D17-00-3I	36	C09	ES-0008	25-Jul-07
17	TU68	70-D17-00-3I	37	C09	ES-0008	25-Jul-07
17	TU68	70-D17-00-3I	38	C09	ES-0008	26-Jul-07
17	TU68	70-D17-00-3I	39	C09	ES-0008	26-Jul-07
17	TU68	70-D17-00-3I	40	C09	ES-0008	26-Jul-07
17	TU68	70-D17-00-3I	41	C09	ES-0008	26-Jul-07
17	TU68	70-D17-00-3I	42	C35	ES-0029	10-Aug-07
17	TU68	70-D17-00-3I	43	C35	ES-0029	10-Aug-07
17	TU68	70-D17-00-3I	44	C35	ES-0029	10-Aug-07
17	TU68	70-D17-00-3I	45	C35	ES-0029	10-Aug-07
17	TU68	70-D17-00-3I	46	C35	ES-0029	10-Aug-07
17	TU68	70-D17-00-3I	47	C35	ES-0029	10-Aug-07
17	TU68	70-D17-00-3I	48	C36	ES-0028	10-Aug-07
17	TU68	70-D17-00-3I	49	C36	ES-0028	10-Aug-07
17	TU68	70-D17-00-3I	50	C36	ES-0028	10-Aug-07
17	TU68	70-D17-00-3I	51	C36	ES-0028	10-Aug-07
17	TU68	70-D17-00-3I	52	C36	ES-0028	13-Aug-07
17	TU68	70-D17-00-3I	53	C34	ES-0030	13-Aug-07
17	TU68	70-D17-00-3I	54	C34	ES-0030	13-Aug-07
17	TU68	70-D17-00-3I	55	C33	ES-0031	13-Aug-07
17	TU68	70-D17-00-3I	56	C33	ES-0031	13-Aug-07
17	TU68	70-D17-00-3I	57	C33	ES-0031	13-Aug-07
17	TU68	70-D17-00-3I	58	C34	ES-0030	13-Aug-07
17	TU68	70-D17-00-3I	59	C33	ES-0031	13-Aug-07
17	TU68	70-D17-00-3I	60	C34	ES-0030	13-Aug-07
17	TU68	70-D17-00-3I	61	C34	ES-0030	13-Aug-07
17	TU68	70-D17-00-3I	62	C34	ES-0030	13-Aug-07
17	TU68	70-D17-00-3I	63	C34	ES-0030	13-Aug-07
17	TU68	70-D17-00-3I	64	C34	ES-0030	13-Aug-07
17	TU68	70-D17-00-3I	65	C35	ES-0029	13-Aug-07
17	TU68	70-D17-00-3I	66	C35	ES-0029	13-Aug-07
17	TU68	70-D17-00-3I	67	C33	ES-0031	13-Aug-07
17	TU68	70-D17-00-3I	68	C33	ES-0031	13-Aug-07
17	TU68	70-D17-00-3I	69	C33	ES-0031	13-Aug-07
17	TU68	70-D17-00-3I	70	C33	ES-0031	13-Aug-07
17	TU68	70-D17-00-3I	71	C33	ES-0031	13-Aug-07
17	TU68	70-D17-00-3I	72	C33	ES-0031	13-Aug-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17	TU69	70-C17-00-1W	1	C36	ES-0028	13-Aug-07
17	TU69	70-C17-00-1W	2	C36	ES-0028	13-Aug-07
17	TU69	70-C17-00-1W	3	C35	ES-0029	13-Aug-07
17	TU69	70-C17-00-1W	4	C35	ES-0153	01-Oct-08
17	TU69	70-C17-00-2P	2	C36	ES-0028	09-Aug-07
17	TU69	70-C17-00-2P	3	C28	ES-0026	09-Aug-07
17	TU69	70-D17-00-1R	1	C06	ES-0006	30-Jul-07
17	TU69	70-D17-00-1R	2	C04	ES-0004	30-Jul-07
17	TU69	70-D17-00-1R	3	C06	ES-0006	30-Jul-07
17	TU69	70-D17-00-1R	4	C07	ES-0007	30-Jul-07
17	TU69	70-D17-00-1R	5	C07	ES-0007	30-Jul-07
17	TU69	70-D17-00-1R	6	C07	ES-0007	30-Jul-07
17	TU69	70-D17-00-1R	7	C07	ES-0007	31-Jul-07
17	TU69	70-D17-00-1R	8	C09	ES-0008	31-Jul-07
17	TU69	70-D17-00-1R	9	C09	ES-0008	31-Jul-07
17	TU69	70-D17-00-1R	10	C10	ES-0009	31-Jul-07
17	TU69	70-D17-00-1R	11	C10	ES-0009	31-Jul-07
17	TU69	70-D17-00-1R	12	C10	ES-0009	31-Jul-07
17	TU69	70-D17-00-1R	13	C10	ES-0009	31-Jul-07
17	TU69	70-D17-00-1R	14	C10	ES-0009	31-Jul-07
17	TU69	70-D17-00-1R	15	C16	ES-0013	31-Jul-07
17	TU69	70-D17-00-1R	16	C16	ES-0013	31-Jul-07
17	TU69	70-D17-00-1R	17	C16	ES-0013	31-Jul-07
17	TU69	70-D17-00-1R	18	C16	ES-0013	31-Jul-07
17	TU69	70-D17-00-1R	19	C16	ES-0013	31-Jul-07
17	TU69	70-D17-00-1R	20	C16	ES-0013	31-Jul-07
17	TU69	70-D17-00-1R	21	C16	ES-0013	31-Jul-07
17	TU69	70-D17-00-1R	22	C16	ES-0013	31-Jul-07
17	TU69	70-D17-00-1R	23	C16	ES-0013	31-Jul-07
17	TU69	70-D17-00-1R	24	C16	ES-0013	31-Jul-07
17	TU69	70-D17-00-1U	1	C09	ES-0008	26-Jul-07
17	TU69	70-D17-00-1U	2	C10	ES-0009	26-Jul-07
17	TU69	70-D17-00-1U	3	C10	ES-0009	26-Jul-07
17	TU69	70-D17-00-1U	4	C10	ES-0009	26-Jul-07
17	TU69	70-D17-00-1U	5	C10	ES-0009	26-Jul-07
17	TU69	70-D17-00-1U	6	C10	ES-0009	26-Jul-07
17	TU69	70-D17-00-1U	7	C10	ES-0009	26-Jul-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17	TU69	70-D17-00-1U	8	C10	ES-0009	26-Jul-07
17	TU69	70-D17-00-1U	9	C12	ES-0010	26-Jul-07
17	TU69	70-D17-00-1U	10	C12	ES-0010	26-Jul-07
17	TU69	70-D17-00-1U	11	C12	ES-0010	26-Jul-07
17	TU69	70-D17-00-1U	12	C12	ES-0010	26-Jul-07
17	TU69	70-D17-00-1U	13	C12	ES-0010	26-Jul-07
17	TU69	70-D17-00-1U	14	C12	ES-0010	26-Jul-07
17	TU69	70-D17-00-1U	15	C12	ES-0010	26-Jul-07
17	TU69	70-D17-00-1U	16	C12	ES-0010	26-Jul-07
17	TU69	70-D17-00-1U	17	C12	ES-0010	26-Jul-07
17	TU69	70-D17-00-1U	18	C13	ES-0011	26-Jul-07
17	TU69	70-D17-00-1U	19	C13	ES-0011	26-Jul-07
17	TU69	70-D17-00-1U	20	C13	ES-0011	27-Jul-07
17	TU69	70-D17-00-1U	21	C13	ES-0011	27-Jul-07
17	TU69	70-D17-00-1U	22	C13	ES-0011	27-Jul-07
17	TU69	70-D17-00-1U	23	C13	ES-0011	27-Jul-07
17	TU69	70-D17-00-1U	24	C13	ES-0011	27-Jul-07
17	TU69	70-D17-00-1U	25	C13	ES-0011	27-Jul-07
17	TU69	70-D17-00-1U	26	C15	ES-0012	27-Jul-07
17	TU69	70-D17-00-1U	27	C15	ES-0012	27-Jul-07
17	TU69	70-D17-00-1U	28	C15	ES-0012	27-Jul-07
17	TU69	70-D17-00-1U	29	C15	ES-0012	27-Jul-07
17	TU69	70-D17-00-1U	30	C15	ES-0012	27-Jul-07
17	TU69	70-D17-00-1U	31	C15	ES-0012	27-Jul-07
17	TU69	70-D17-00-1U	32	C19	ES-0014	27-Jul-07
17	TU69	70-D17-00-1U	33	C19	ES-0014	27-Jul-07
17	TU69	70-D17-00-1U	34	C19	ES-0014	27-Jul-07
17	TU69	70-D17-00-1U	35	C19	ES-0014	27-Jul-07
17	TU69	70-D17-00-1U	36	C19	ES-0014	27-Jul-07
17	TU69	70-D17-00-1U	37	C19	ES-0014	27-Jul-07
17	TU69	70-D17-00-1U	38	C19	ES-0014	27-Jul-07
17	TU69	70-D17-00-1U	39	C19	ES-0014	27-Jul-07
17	TU69	70-D17-00-1U	40	C19	ES-0014	27-Jul-07
17	TU69	70-D17-00-1U	41	C20	ES-0015	30-Jul-07
17	TU69	70-D17-00-1U	42	C20	ES-0015	30-Jul-07
17	TU69	70-D17-00-1U	43	C20	ES-0015	30-Jul-07
17	TU69	70-D17-00-1U	44	C20	ES-0015	30-Jul-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17	TU69	70-D17-00-1U	45	C20	ES-0015	30-Jul-07
17	TU69	70-D17-00-1U	46	C20	ES-0015	30-Jul-07
17	TU69	70-D17-00-1U	47	C20	ES-0015	30-Jul-07
17	TU69	70-D17-00-1U	48	C19	ES-0014	30-Jul-07
17	TU69	70-D17-00-1U	49	C22	ES-0016	30-Jul-07
17	TU69	70-D17-00-1U	50	C01	ES-0001	30-Jul-07
17	TU69	70-D17-00-1U	51	C01	ES-0001	30-Jul-07
17	TU69	70-D17-00-1U	52	C02	ES-0002	30-Jul-07
17	TU69	70-D17-00-1U	53	C02	ES-0002	30-Jul-07
17	TU69	70-D17-00-1U	54	C06	ES-0006	30-Jul-07
17	TU69	70-D17-00-1W	1	C36	ES-0028	13-Aug-07
17	TU69	70-D17-00-1W	2	C34	ES-0030	13-Aug-07
17	TU69	70-D17-00-1W	3	C33	ES-0031	13-Aug-07
17	TU69	70-D17-00-2P	2	C36	ES-0028	09-Aug-07
17	TU69	70-D17-00-2P	3	C36	ES-0028	09-Aug-07
17	TU69	70-D17-00-2P	4	C35	ES-0029	09-Aug-07
17	TU69	70-D17-00-3F	20	C09	ES-0008	25-Jul-07
17	TU69	70-D17-00-3F	21	C09	ES-0008	25-Jul-07
17	TU69	70-D17-00-3F	22	C09	ES-0008	25-Jul-07
17	TU69	70-D17-00-3F	23	C36	ES-0028	09-Aug-07
17	TU69	70-D17-00-3F	24	C36	ES-0028	09-Aug-07
17	TU69	70-D17-00-3F	25	C35	ES-0029	10-Aug-07
17	TU69	70-D17-00-3F	26	C35	ES-0029	10-Aug-07
17	TU69	70-D17-00-3F	27	C35	ES-0029	10-Aug-07
17	TU69	70-D17-00-3F	28	C35	ES-0029	10-Aug-07
17	TU69	70-D17-00-3F	29	C35	ES-0029	10-Aug-07
17	TU69	70-D17-00-3F	30	C35	ES-0029	10-Aug-07
17	TU69	70-D17-00-3F	31	C35	ES-0029	10-Aug-07
17	TU69	70-D17-00-3F	32	C35	ES-0029	10-Aug-07
17	TU69	70-D17-00-3F	33	C35	ES-0029	10-Aug-07
17	TU69	70-D17-00-3F	34	C36	ES-0028	13-Aug-07
17	TU69	70-D17-00-3F	35	C35	ES-0029	13-Aug-07
17	TU69	70-D17-00-3F	36	C36	ES-0028	13-Aug-07
17	TU69	70-D17-00-3F	37	C35	ES-0029	13-Aug-07
17	TU69	70-D17-00-3F	38	C36	ES-0028	13-Aug-07
17	TU69	70-D17-00-3F	39	C35	ES-0029	13-Aug-07
17	TU69	70-D17-00-3F	40	C34	ES-0030	13-Aug-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17	TU69	70-D17-00-3F	41	C33	ES-0031	13-Aug-07
17	TU69	70-D17-00-3F	42	C33	ES-0031	13-Aug-07
17	TU69	70-D17-00-3F	43	C33	ES-0031	13-Aug-07
17	TU70	70-D17-00-1L	64	C20	ES-0015	30-Jul-07
17	TU70	70-D17-00-1L	65	C20	ES-0015	30-Jul-07
17	TU70	70-D17-00-1L	66	C20	ES-0015	30-Jul-07
17	TU70	70-D17-00-1L	67	C20	ES-0015	30-Jul-07
17	TU70	70-D17-00-1L	68	C20	ES-0015	30-Jul-07
17	TU70	70-D17-00-1L	69	C20	ES-0015	30-Jul-07
17	TU70	70-D17-00-1L	70	C20	ES-0015	30-Jul-07
17	TU70	70-D17-00-1L	71	C20	ES-0015	30-Jul-07
17	TU70	70-D17-00-1L	72	C20	ES-0015	30-Jul-07
17	TU70	70-D17-00-1L	73	C20	ES-0015	30-Jul-07
17	TU70	70-D17-00-1L	74	C20	ES-0015	30-Jul-07
17	TU70	70-D17-00-1L	75	C03	ES-0003	30-Jul-07
17	TU70	70-D17-00-1L	76	C05	ES-0005	30-Jul-07
17	TU70	70-D17-00-1L	77	C05	ES-0005	30-Jul-07
17	TU70	70-D17-00-1L	78	C05	ES-0005	30-Jul-07
17	TU70	70-D17-00-1L	79	C05	ES-0005	30-Jul-07
17	TU70	70-D17-00-1L	80	C05	ES-0005	30-Jul-07
17	TU70	70-D17-00-1L	81	C05	ES-0005	30-Jul-07
17	TU70	70-D17-00-1L	82	C05	ES-0005	30-Jul-07
17	TU70	70-D17-00-1L	83	C04	ES-0004	30-Jul-07
17	TU70	70-D17-00-1L	84	C06	ES-0006	30-Jul-07
17	TU70	70-D17-00-1L	85	C06	ES-0006	30-Jul-07
17	TU70	70-D17-00-1L	86	C06	ES-0006	30-Jul-07
17	TU70	70-D17-00-1L	87	C04	ES-0004	30-Jul-07
17	TU70	70-D17-00-1L	88	C07	ES-0007	30-Jul-07
17	TU70	70-D17-00-1L	89	C07	ES-0007	30-Jul-07
17	TU70	70-D17-00-1L	90	C07	ES-0007	30-Jul-07
17	TU70	70-D17-00-1L	91	C09	ES-0008	31-Jul-07
17	TU70	70-D17-00-1L	92	C09	ES-0008	31-Jul-07
17	TU70	70-D17-00-1L	93	C09	ES-0008	31-Jul-07
17	TU70	70-D17-00-1L	94	C09	ES-0008	31-Jul-07
17	TU70	70-D17-00-1L	95	C09	ES-0008	31-Jul-07
17	TU70	70-D17-00-1L	96	C09	ES-0008	31-Jul-07
17	TU70	70-D17-00-1L	97	C10	ES-0009	31-Jul-07

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17	TU70	70-D17-00-1L	98	C10	ES-0009	31-Jul-07
17	TU70	70-D17-00-1L	99	C16	ES-0013	31-Jul-07
17	TU70	70-D17-00-1L	100	C16	ES-0013	31-Jul-07
17	TU70	70-D17-00-1L	101	C16	ES-0013	31-Jul-07
17	TU70	70-D17-00-1L	102	C16	ES-0013	31-Jul-07
17	TU70	70-D17-00-1L	103	C16	ES-0013	31-Jul-07
17	TU70	70-D17-00-1L	104	C16	ES-0013	31-Jul-07
17	TU70	70-D17-00-1L	105	C16	ES-0013	31-Jul-07
17	TU70	70-D17-00-1L	106	C16	ES-0013	31-Jul-07
17	TU70	70-D17-00-1L	107	C16	ES-0013	31-Jul-07
17	TU70	70-D17-00-1L	108	C16	ES-0013	31-Jul-07
17	TU70	70-D17-00-1L	109	C16	ES-0013	31-Jul-07
17	TU70	70-D17-00-1L	110	C18	ES-0018	31-Jul-07
17	TU70	70-D17-00-1L	111	C17	ES-0017	31-Jul-07
17	TU70	70-D17-00-1L	112	C18	ES-0018	31-Jul-07
17	TU70	70-D17-00-1L	113	C17	ES-0017	31-Jul-07
17	TU70	70-D17-34-1S	1	C31	ES-0033	14-Aug-07
17	TU70	70-D17-34-1S	2	C31	ES-0033	14-Aug-07
17	TU70	70-D17-34-1S	3	C30	ES-0034	15-Aug-07
17	TU70	70-D17-34-1S	4	C31	ES-0033	15-Aug-07
17	TU70	70-D17-34-1S	5	C30	ES-0034	15-Aug-07
17	TU70	70-D17-34-1S	6	C31	ES-0033	15-Aug-07
17	TU70	70-D17-34-1S	7	C30	ES-0034	15-Aug-07
17	TU70	70-D17-34-1S	8	C31	ES-0033	15-Aug-07
17	TU70	70-D17-34-1S	9	C30	ES-0034	15-Aug-07
17	TU70	70-D17-34-1S	10	C31	ES-0033	15-Aug-07
17	TU70	70-D17-34-1S	11	C31	ES-0033	15-Aug-07
17	TU70	70-D17-34-1S	12	C30	ES-0034	15-Aug-07
17	TU70	70-D17-34-1S	13	C31	ES-0033	15-Aug-07
17	TU70	70-D17-34-1S	14	C30	ES-0034	15-Aug-07
17	TU70	70-D17-34-1S	15	C31	ES-0033	15-Aug-07
17	TU70	70-D17-34-1S	16	C30	ES-0034	15-Aug-07
17	TU70	70-D17-34-1S	17	C31	ES-0033	15-Aug-07
17	TU70	70-D17-34-1S	18	C30	ES-0034	15-Aug-07
17	TU70	70-D17-34-1S	19	C31	ES-0033	16-Aug-07
17	TU70	70-D17-34-1S	20	C30	ES-0034	16-Aug-07
17	TU70	70-D17-34-1S	21	C31	ES-0033	16-Aug-07

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17	TU70	70-D17-34-1S	22	C30	ES-0034	16-Aug-07
17	TU70	70-D17-34-1S	23	C31	ES-0033	16-Aug-07
17	TU70	70-D17-34-1S	24	C30	ES-0034	16-Aug-07
17	TU70	70-D17-34-1S	25	C30	ES-0034	16-Aug-07
17	TU70	70-D17-34-1S	26	C31	ES-0033	16-Aug-07
17	TU70	70-D17-34-1S	27	C31	ES-0033	16-Aug-07
17	TU70	70-D17-34-1S	28	C30	ES-0034	16-Aug-07
17	TU70	70-D17-34-1S	29	C30	ES-0034	16-Aug-07
17	TU70	70-D17-34-1S	30	C30	ES-0034	16-Aug-07
17	TU70	70-D17-34-1S	31	C30	ES-0034	16-Aug-07
17	TU70	70-D17-34-1S	32	C31	ES-0033	16-Aug-07
17	TU70	70-D17-34-1S	33	C30	ES-0034	16-Aug-07
17	TU70	70-D17-34-1S	34	C30	ES-0034	16-Aug-07
17	TU70	70-D17-34-1S	35	C31	ES-0033	16-Aug-07
17	TU70	70-D17-34-1S	36	C31	ES-0033	16-Aug-07
17	TU70	70-D17-34-1S	37	C30	ES-0034	16-Aug-07
17	TU70	70-D17-34-1S	38	C31	ES-0033	16-Aug-07
17	TU70	70-D17-34-1S	39	C31	ES-0033	16-Aug-07
17	TU70	70-D17-34-1S	40	C30	ES-0034	16-Aug-07
17	TU70	70-D17-34-1S	41	C31	ES-0033	16-Aug-07
17	TU70	70-D17-34-1S	42	C31	ES-0033	16-Aug-07
17	TU70	70-D17-34-1S	43	C31	ES-0033	16-Aug-07
17	TU70	70-D17-34-1S	44	C29	ES-0035	22-Aug-07
17	TU70	70-D17-34-1S	45	C29	ES-0035	22-Aug-07
17	TU70	70-D17-34-1S	46	C29	ES-0035	22-Aug-07
17	TU70	70-D17-34-1S	47	C21	ES-0036	22-Aug-07
17	TU70	70-D17-34-1S	48	C21	ES-0036	22-Aug-07
17	TU70	70-D17-34-1S	49	C21	ES-0036	22-Aug-07
17	TU70	70-D17-34-1S	50	C21	ES-0036	22-Aug-07
17	TU70	70-D17-34-1S	51	C29	ES-0035	22-Aug-07
17	TU70	70-D17-34-1S	52	C21	ES-0036	22-Aug-07
17	TU70	70-D17-34-1S	53	C29	ES-0035	22-Aug-07
17	TU70	70-D17-34-1S	54	C21	ES-0036	22-Aug-07
17	TU70	70-D17-34-1S	55	C29	ES-0035	22-Aug-07
17	TU70	70-D17-34-1S	56	C29	ES-0035	22-Aug-07
17	TU70	70-D17-34-1S	57	C29	ES-0035	22-Aug-07
17	TU70	70-D17-34-1S	58	C21	ES-0036	22-Aug-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17	TU70	70-D17-34-1S	59	C29	ES-0035	22-Aug-07
17	TU70	70-D17-34-1S	60	C29	ES-0035	22-Aug-07
17	TU70	70-D17-34-1S	61	C29	ES-0035	22-Aug-07
17	TU70	70-D17-34-1S	62	C29	ES-0035	22-Aug-07
17	TU70	70-D17-34-1S	63	C21	ES-0036	22-Aug-07
17	TU70	70-D17-34-1S	64	C21	ES-0036	22-Aug-07
17	TU70	70-D17-34-1S	65	C21	ES-0036	22-Aug-07
17	TU70	70-D17-34-1S	66	C21	ES-0036	22-Aug-07
17	TU70	70-D17-34-1S	67	C21	ES-0036	22-Aug-07
17	TU70	70-D17-34-1S	68	C21	ES-0036	22-Aug-07
17	TU70	70-D17-34-2M	1	C21	ES-0036	22-Aug-07
17	TU70	70-D17-34-2M	2	C21	ES-0036	22-Aug-07
17	TU70	70-D17-34-2M	3	C21	ES-0036	22-Aug-07
17	TU70	70-D17-34-2M	4	C21	ES-0036	22-Aug-07
17	TU70	70-D17-34-2M	5	C21	ES-0036	22-Aug-07
17	TU71	70-D17-00-1L	114	C17	ES-0017	01-Aug-07
17	TU71	70-D17-00-1L	115	C17	ES-0017	01-Aug-07
17	TU71	70-D17-00-1L	116	C17	ES-0017	01-Aug-07
17	TU71	70-D17-00-1L	117	C17	ES-0017	01-Aug-07
17	TU71	70-D17-00-1L	118	C17	ES-0017	01-Aug-07
17	TU71	70-D17-00-1L	119	C17	ES-0017	01-Aug-07
17	TU71	70-D17-00-2H	1	C17	ES-0017	01-Aug-07
17	TU71	70-D17-00-2H	2	C17	ES-0017	01-Aug-07
17	TU71	70-D17-00-2H	3	C17	ES-0017	01-Aug-07
17	TU71	70-D17-00-2H	4	C17	ES-0017	01-Aug-07
17	TU71	70-D17-00-2H	5	C17	ES-0017	01-Aug-07
17	TU71	70-D17-00-2H	6	C17	ES-0017	01-Aug-07
17	TU71	70-D17-00-2H	7	C17	ES-0017	01-Aug-07
17	TU71	70-D17-00-2H	8	C17	ES-0017	01-Aug-07
17	TU71	70-D17-34-1P	1	C29	ES-0035	21-Aug-07
17	TU71	70-D17-34-1P	2	C03	ES-0037	23-Aug-07
17	TU71	70-D17-34-1P	3	C03	ES-0037	23-Aug-07
17	TU71	70-D17-34-1P	4	C03	ES-0037	23-Aug-07
17	TU71	70-D17-34-1P	5	C03	ES-0037	23-Aug-07
17	TU71	70-D17-34-1P	6	C03	ES-0037	23-Aug-07
17	TU71	70-D17-34-1P	7	C03	ES-0037	24-Aug-07
17	TU71	70-D17-34-1P	8	C03	ES-0037	24-Aug-07

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17	TU71	70-D17-34-1P	9	C03	ES-0037	24-Aug-07
17	TU71	70-D17-34-1P	10	C03	ES-0037	24-Aug-07
17	TU71	70-D17-34-1P	11	C03	ES-0037	24-Aug-07
17	TU71	70-D17-34-1P	12	C03	ES-0037	24-Aug-07
17	TU71	70-D17-34-1P	13	C03	ES-0037	24-Aug-07
17	TU71	70-D17-34-1P	14	C03	ES-0037	27-Aug-07
17	TU71	70-D17-34-1P	15	C03	ES-0037	27-Aug-07
17	TU71	70-D17-34-1P	16	C03	ES-0037	27-Aug-07
17	TU71	70-D17-34-1P	17	C03	ES-0037	27-Aug-07
17	TU71	70-D17-34-1Q	1	C30	ES-0034	20-Aug-07
17	TU71	70-D17-34-1Q	2	C32	ES-0032	20-Aug-07
17	TU71	70-D17-34-1Q	3	C32	ES-0032	20-Aug-07
17	TU71	70-D17-34-1Q	4	C32	ES-0032	20-Aug-07
17	TU71	70-D17-34-1Q	5	C30	ES-0034	20-Aug-07
17	TU71	70-D17-34-1Q	6	C32	ES-0032	20-Aug-07
17	TU71	70-D17-34-1Q	7	C32	ES-0032	20-Aug-07
17	TU71	70-D17-34-1Q	8	C32	ES-0032	20-Aug-07
17	TU71	70-D17-34-1Q	9	C30	ES-0034	20-Aug-07
17	TU71	70-D17-34-1Q	10	C32	ES-0032	20-Aug-07
17	TU71	70-D17-34-1Q	11	C30	ES-0034	20-Aug-07
17	TU71	70-D17-34-1Q	12	C32	ES-0032	20-Aug-07
17	TU71	70-D17-34-1Q	13	C32	ES-0032	21-Aug-07
17	TU71	70-D17-34-1Q	14	C30	ES-0034	21-Aug-07
17	TU71	70-D17-34-1Q	15	C32	ES-0032	21-Aug-07
17	TU71	70-D17-34-1Q	16	C32	ES-0032	21-Aug-07
17	TU71	70-D17-34-1Q	17	C30	ES-0034	21-Aug-07
17	TU71	70-D17-34-1Q	18	C32	ES-0032	21-Aug-07
17	TU71	70-D17-34-1Q	19	C29	ES-0035	21-Aug-07
17	TU71	70-D17-34-1Q	20	C32	ES-0032	21-Aug-07
17	TU71	70-D17-34-1Q	21	C32	ES-0032	21-Aug-07
17	TU71	70-D17-34-1Q	22	C29	ES-0035	21-Aug-07
17	TU71	70-D17-34-1Q	23	C32	ES-0032	21-Aug-07
17	TU71	70-D17-34-1Q	24	C29	ES-0035	21-Aug-07
17	TU71	70-D17-34-1Q	25	C32	ES-0032	21-Aug-07
17	TU71	70-D17-34-1Q	26	C29	ES-0035	21-Aug-07
17	TU71	70-D17-34-1Q	27	C32	ES-0032	21-Aug-07
17	TU71	70-D17-34-1Q	28	C29	ES-0035	21-Aug-07

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17	TU71	70-D17-34-1Q	29	C32	ES-0032	21-Aug-07
17	TU71	70-D17-34-1Q	30	C29	ES-0035	21-Aug-07
17	TU71	70-D17-34-1Q	31	C32	ES-0032	21-Aug-07
17	TU71	70-D17-34-1Q	32	C29	ES-0035	21-Aug-07
17	TU71	70-D17-34-1Q	33	C21	ES-0036	21-Aug-07
17	TU71	70-D17-34-1Q	34	C03	ES-0037	23-Aug-07
17	TU71	70-D17-34-1Q	35	C03	ES-0037	23-Aug-07
17	TU71	70-D17-34-1Q	36	C03	ES-0037	23-Aug-07
17	TU71	70-D17-34-1Q	37	C03	ES-0037	24-Aug-07
17	TU71	70-D17-34-1Q	38	C03	ES-0037	24-Aug-07
17	TU71	70-D17-34-1Q	39	C03	ES-0037	24-Aug-07
17	TU71	70-D17-34-1Q	40	C03	ES-0037	24-Aug-07
17	TU71	70-D17-34-1Q	41	C03	ES-0037	24-Aug-07
17	TU71	70-D17-34-1Q	42	C03	ES-0037	24-Aug-07
17	TU71	70-D17-34-1Q	43	C03	ES-0037	24-Aug-07
17	TU71	70-D17-34-2J	1	C03	ES-0037	23-Aug-07
17	TU71	70-D17-34-2J	2	C21	ES-0036	23-Aug-07
17	TU71	70-D17-34-2J	3	C21	ES-0036	23-Aug-07
17	TU71	70-D17-34-2J	4	C03	ES-0037	24-Aug-07
17	TU71	70-D17-34-2J	5	C03	ES-0037	24-Aug-07
17	TU71	70-D17-34-2J	6	C03	ES-0037	24-Aug-07
17	TU71	70-D17-34-2J	7	C03	ES-0037	24-Aug-07
17	TU71	70-D17-34-2K	1	C32	ES-0032	20-Aug-07
17	TU71	70-D17-34-2K	2	C30	ES-0034	20-Aug-07
17	TU71	70-D17-34-2K	3	C32	ES-0032	20-Aug-07
17	TU71	70-D17-34-2K	4	C32	ES-0032	20-Aug-07
17	TU71	70-D17-34-2K	5	C30	ES-0034	21-Aug-07
17	TU71	70-D17-34-2K	6	C32	ES-0032	21-Aug-07
17	TU71	70-D17-34-2K	7	C30	ES-0034	21-Aug-07
17	TU71	70-D17-34-2K	8	C32	ES-0032	21-Aug-07
17	TU71	70-D17-34-2K	9	C29	ES-0035	21-Aug-07
17	TU71	70-D17-34-2K	10	C32	ES-0032	21-Aug-07
17	TU71	70-D17-34-2K	11	C29	ES-0035	21-Aug-07
17	TU71	70-D17-34-2K	12	C32	ES-0032	21-Aug-07
17	TU71	70-D17-34-2K	13	C29	ES-0035	21-Aug-07
17	TU71	70-D17-34-2K	14	C21	ES-0036	21-Aug-07
17	TU71	70-D17-34-2K	15	C29	ES-0035	21-Aug-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17	TU71	70-D17-34-2K	16	C21	ES-0036	21-Aug-07
17	TU71	70-D17-34-2K	17	C29	ES-0035	21-Aug-07
17	TU71	70-D17-34-2K	18	C21	ES-0036	21-Aug-07
17	TU71	70-D17-34-2K	19	C29	ES-0035	21-Aug-07
17	TU71	70-D17-34-2K	20	C21	ES-0036	21-Aug-07
17	TU71	70-D17-34-2K	21	C29	ES-0035	21-Aug-07
17	TU71	70-D17-34-2K	22	C21	ES-0036	21-Aug-07
17	TU72	70-D17-00-1M	1	C25	ES-0022	03-Aug-07
17	TU72	70-D17-00-1M	2	C25	ES-0022	03-Aug-07
17	TU72	70-D17-00-1M	3	C24	ES-0021	03-Aug-07
17	TU72	70-D17-00-1M	4	C24	ES-0021	03-Aug-07
17	TU72	70-D17-00-1M	5	C24	ES-0021	03-Aug-07
17	TU72	70-D17-00-1M	6	C24	ES-0021	03-Aug-07
17	TU72	70-D17-00-1M	7	C25	ES-0022	03-Aug-07
17	TU72	70-D17-00-1O	1	C17	ES-0017	01-Aug-07
17	TU72	70-D17-00-1O	2	C17	ES-0017	01-Aug-07
17	TU72	70-D17-00-1O	3	C17	ES-0017	01-Aug-07
17	TU72	70-D17-00-1O	4	C17	ES-0017	01-Aug-07
17	TU72	70-D17-00-1O	5	C17	ES-0017	01-Aug-07
17	TU72	70-D17-00-1O	6	C17	ES-0017	01-Aug-07
17	TU72	70-D17-00-1O	7	C09	ES-0008	01-Aug-07
17	TU72	70-D17-00-1O	8	C09	ES-0008	01-Aug-07
17	TU72	70-D17-00-1O	9	C17	ES-0017	01-Aug-07
17	TU72	70-D17-00-1O	10	C17	ES-0017	01-Aug-07
17	TU72	70-D17-00-1O	11	C17	ES-0017	01-Aug-07
17	TU72	70-D17-00-1O	12	C18	ES-0018	01-Aug-07
17	TU72	70-D17-00-1O	13	C18	ES-0018	01-Aug-07
17	TU72	70-D17-00-1O	14	C17	ES-0017	01-Aug-07
17	TU72	70-D17-00-1O	15	C18	ES-0018	01-Aug-07
17	TU72	70-D17-00-1O	16	C18	ES-0018	01-Aug-07
17	TU72	70-D17-00-1O	17	C18	ES-0018	01-Aug-07
17	TU72	70-D17-00-1O	18	C18	ES-0018	01-Aug-07
17	TU72	70-D17-00-1O	19	C18	ES-0018	01-Aug-07
17	TU72	70-D17-00-1O	20	C18	ES-0018	01-Aug-07
17	TU72	70-D17-00-1O	21	C18	ES-0018	01-Aug-07
17	TU72	70-D17-00-1O	22	C18	ES-0018	01-Aug-07
17	TU72	70-D17-00-1O	23	C18	ES-0018	01-Aug-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17	TU72	70-D17-00-1O	24	C18	ES-0018	01-Aug-07
17	TU72	70-D17-00-1O	25	C18	ES-0018	01-Aug-07
17	TU72	70-D17-00-1O	26	C18	ES-0018	01-Aug-07
17	TU72	70-D17-00-1O	27	C22	ES-0016	01-Aug-07
17	TU72	70-D17-00-1O	28	C22	ES-0016	01-Aug-07
17	TU72	70-D17-00-1O	29	C23	ES-0019	02-Aug-07
17	TU72	70-D17-00-1O	30	C23	ES-0019	02-Aug-07
17	TU72	70-D17-00-1O	31	C23	ES-0019	02-Aug-07
17	TU72	70-D17-00-1O	32	C23	ES-0019	02-Aug-07
17	TU72	70-D17-00-1O	33	C23	ES-0019	02-Aug-07
17	TU72	70-D17-00-1O	34	C23	ES-0019	02-Aug-07
17	TU72	70-D17-00-1O	35	C23	ES-0019	02-Aug-07
17	TU72	70-D17-00-1O	36	C23	ES-0019	02-Aug-07
17	TU72	70-D17-00-1O	37	C23	ES-0019	02-Aug-07
17	TU72	70-D17-00-1O	38	C23	ES-0019	02-Aug-07
17	TU72	70-D17-00-1O	39	C23	ES-0019	02-Aug-07
17	TU72	70-D17-00-1O	40	C23	ES-0019	02-Aug-07
17	TU72	70-D17-00-1O	41	C23	ES-0019	02-Aug-07
17	TU72	70-D17-00-1O	42	C14	ES-0020	02-Aug-07
17	TU72	70-D17-00-1O	43	C14	ES-0020	02-Aug-07
17	TU72	70-D17-00-1O	44	C14	ES-0020	02-Aug-07
17	TU72	70-D17-00-1O	45	C14	ES-0020	02-Aug-07
17	TU72	70-D17-00-1O	46	C14	ES-0020	02-Aug-07
17	TU72	70-D17-00-1O	47	C14	ES-0020	02-Aug-07
17	TU72	70-D17-00-1X	1	C14	ES-0020	02-Aug-07
17	TU72	70-D17-00-1X	2	C14	ES-0020	02-Aug-07
17	TU72	70-D17-00-1X	3	C14	ES-0020	02-Aug-07
17	TU72	70-D17-00-1X	4	C14	ES-0020	02-Aug-07
17	TU72	70-D17-00-1X	5	C14	ES-0020	02-Aug-07
17	TU72	70-D17-00-1X	6	C14	ES-0020	02-Aug-07
17	TU72	70-D17-00-1X	7	C14	ES-0020	02-Aug-07
17	TU72	70-D17-00-1X	8	C14	ES-0020	02-Aug-07
17	TU72	70-D17-00-1X	9	C14	ES-0020	02-Aug-07
17	TU72	70-D17-00-1X	10	C24	ES-0021	02-Aug-07
17	TU72	70-D17-00-1X	11	C24	ES-0021	02-Aug-07
17	TU72	70-D17-00-1X	12	C25	ES-0022	03-Aug-07
17	TU72	70-D17-00-1X	13	C25	ES-0022	03-Aug-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17	TU72	70-D17-00-1X	14	C25	ES-0022	03-Aug-07
17	TU72	70-D17-00-2H	9	C17	ES-0017	01-Aug-07
17	TU72	70-D17-00-2H	10	C18	ES-0018	01-Aug-07
17	TU72	70-D17-00-2H	11	C18	ES-0018	01-Aug-07
17	TU72	70-D17-00-2H	12	C18	ES-0018	01-Aug-07
17	TU72	70-D17-00-2H	13	C18	ES-0018	01-Aug-07
17	TU72	70-D17-00-2H	14	C18	ES-0018	01-Aug-07
17	TU72	70-D17-00-2H	15	C18	ES-0018	01-Aug-07
17	TU72	70-D17-00-2H	16	C18	ES-0018	01-Aug-07
17	TU72	70-D17-00-2H	17	C18	ES-0018	01-Aug-07
17	TU72	70-D17-00-2H	18	C18	ES-0018	01-Aug-07
17	TU72	70-D17-00-2H	19	C22	ES-0016	01-Aug-07
17	TU72	70-D17-00-2H	20	C22	ES-0016	01-Aug-07
17	TU72	70-D17-00-2H	21	C22	ES-0016	01-Aug-07
17	TU72	70-D17-00-2H	22	C22	ES-0016	01-Aug-07
17	TU72	70-D17-00-2H	23	C22	ES-0016	01-Aug-07
17	TU72	70-D17-00-2H	24	C22	ES-0016	01-Aug-07
17	TU72	70-D17-00-2H	25	C22	ES-0016	01-Aug-07
17	TU72	70-D17-00-2H	26	C22	ES-0016	01-Aug-07
17	TU72	70-D17-00-2H	27	C22	ES-0016	01-Aug-07
17	TU72	70-D17-00-2H	28	C22	ES-0016	01-Aug-07
17	TU72	70-D17-00-2H	29	C22	ES-0016	01-Aug-07
17	TU72	70-D17-00-2H	30	C22	ES-0016	01-Aug-07
17	TU72	70-D17-00-2H	31	C22	ES-0016	01-Aug-07
17	TU72	70-D17-00-2H	32	C22	ES-0016	01-Aug-07
17	TU72	70-D17-00-2H	33	C22	ES-0016	01-Aug-07
17	TU72	70-D17-00-2H	34	C22	ES-0016	02-Aug-07
17	TU72	70-D17-00-2H	35	C23	ES-0019	02-Aug-07
17	TU72	70-D17-00-2H	36	C23	ES-0019	02-Aug-07
17	TU72	70-D17-00-2H	37	C23	ES-0019	02-Aug-07
17	TU72	70-D17-00-2H	38	C23	ES-0019	02-Aug-07
17	TU72	70-D17-00-2H	39	C23	ES-0019	02-Aug-07
17	TU72	70-D17-00-2H	40	C23	ES-0019	02-Aug-07
17	TU72	70-D17-00-2H	41	C23	ES-0019	02-Aug-07
17	TU72	70-D17-00-2H	42	C23	ES-0019	02-Aug-07
17	TU72	70-D17-00-2H	43	C23	ES-0019	02-Aug-07
17	TU72	70-D17-00-2H	44	C14	ES-0020	02-Aug-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17	TU72	70-D17-00-2H	45	C14	ES-0020	02-Aug-07
17	TU72	70-D17-00-2H	46	C14	ES-0020	02-Aug-07
17	TU72	70-D17-00-2H	47	C14	ES-0020	02-Aug-07
17	TU72	70-D17-00-2H	48	C24	ES-0021	03-Aug-07
17	TU72	70-D17-00-2H	49	C24	ES-0021	03-Aug-07
17	TU72	70-D17-00-2H	50	C24	ES-0021	03-Aug-07
17	TU72	70-D17-00-2H	51	C24	ES-0021	03-Aug-07
17	TU72	70-D17-00-2H	52	C24	ES-0021	03-Aug-07
17	TU72	70-D17-00-2H	53	C24	ES-0021	03-Aug-07
17	TU72	70-D17-00-2H	54	C24	ES-0021	03-Aug-07
17	TU72	70-D17-00-2H	55	C25	ES-0022	03-Aug-07
17	TU72	70-D17-00-2H	56	C25	ES-0022	03-Aug-07
17	TU72	70-D17-00-2H	57	C24	ES-0021	03-Aug-07
17	TU72	70-D17-00-2H	58	C24	ES-0021	03-Aug-07
17	TU72	70-D17-00-2H	59	C25	ES-0022	03-Aug-07
17	TU72	70-D17-00-2H	60	C24	ES-0021	03-Aug-07
17	TU72	70-D17-00-2H	61	C25	ES-0022	03-Aug-07
17	TU72	70-D17-00-2H	62	C24	ES-0021	03-Aug-07
17	TU72	70-D17-00-2H	63	C24	ES-0021	03-Aug-07
17	TU72	70-D17-00-2H	64	C24	ES-0021	03-Aug-07
17	TU72	70-D17-00-2H	65	C24	ES-0021	03-Aug-07
17	TU72	70-D17-00-2H	66	C24	ES-0021	03-Aug-07
17	TU72	70-D17-00-2H	67	C25	ES-0022	03-Aug-07
17	TU72	70-D17-00-2H	68	C25	ES-0022	03-Aug-07
17	TU72	70-D17-00-2H	69	C24	ES-0021	03-Aug-07
17	TU72	70-D17-00-2H	70	C14	ES-0020	03-Aug-07
17	TU72	70-D17-00-2H	71	C14	ES-0020	03-Aug-07
17	TU72	70-D17-00-2H	72	C12	ES-0010	03-Aug-07
17	TU72	70-D17-00-2H	73	C25	ES-0022	03-Aug-07
17	TU72	70-D17-00-2H	74	C25	ES-0022	03-Aug-07
17	TU72	70-D17-00-2H	75	C18	ES-0018	03-Aug-07
17	TU72	70-D17-00-2H	76	C24	ES-0021	03-Aug-07
17	TU72	70-D17-00-2H	77	C24	ES-0021	03-Aug-07
17	TU72	70-D17-00-2H	78	C25	ES-0022	03-Aug-07
17	TU72	70-D17-00-2H	79	C26	ES-0023	03-Aug-07
17	TU72	70-D17-00-2H	80	C26	ES-0023	03-Aug-07
17	TU72	70-D17-00-2H	81	C24	ES-0021	03-Aug-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17	TU72	70-D17-00-2H	82	C26	ES-0023	03-Aug-07
17	TU72	70-D17-00-2H	83	C25	ES-0022	03-Aug-07
17	TU72	70-D17-00-2H	84	C25	ES-0022	03-Aug-07
17	TU72	70-D17-00-2H	85	C25	ES-0022	03-Aug-07
17	TU72	70-D17-00-2H	86	C26	ES-0023	06-Aug-07
17	TU72	70-D17-00-2H	87	C26	ES-0023	06-Aug-07
17	TU72	70-D17-00-2H	88	C25	ES-0022	06-Aug-07
17	TU72	70-D17-00-2H	89	C24	ES-0021	06-Aug-07
17	TU72	70-D17-00-8B	1	C22	ES-0016	01-Aug-07
17	TU72	70-D17-00-8B	2	C22	ES-0016	01-Aug-07
17	TU72	70-D17-00-8B	3	C22	ES-0016	01-Aug-07
17	TU72	70-D17-00-8C	1	C07	ES-0038	27-Aug-07
17	TU72	70-D17-00-8C	2	C07	ES-0038	27-Aug-07
17	TU72	70-D17-00-8C	3	C07	ES-0038	27-Aug-07
17	TU72	70-D17-00-8C	4	C27	ES-0039	27-Aug-07
17	TU72	70-D17-00-8C	5	C07	ES-0038	27-Aug-07
17	TU72	70-D17-00-8C	6	C27	ES-0039	28-Aug-07
17	TU72	70-D17-00-8C	7	C27	ES-0039	28-Aug-07
17	TU72	70-D17-00-8C	8	C07	ES-0038	28-Aug-07
17	TU72	70-D17-00-8C	9	C07	ES-0038	28-Aug-07
17	TU72	70-D17-00-8C	10	C07	ES-0038	28-Aug-07
17	TU72	70-D17-00-8C	11	C07	ES-0038	28-Aug-07
17	TU72	70-D17-00-8D	1	C14	ES-0020	02-Aug-07
17	TU72	70-D17-00-8D	2	C14	ES-0020	02-Aug-07
17	TU72	70-D17-00-8D	3	C14	ES-0020	02-Aug-07
17	TU73	70-D17-00-1G	1	C27	ES-0025	07-Aug-07
17	TU73	70-D17-00-1G	2	C27	ES-0025	07-Aug-07
17	TU73	70-D17-00-1G	3	C28	ES-0026	07-Aug-07
17	TU73	70-D17-00-1G	4	C28	ES-0026	07-Aug-07
17	TU73	70-D17-00-1G	5	C28	ES-0026	07-Aug-07
17	TU73	70-D17-00-1G	6	C27	ES-0025	07-Aug-07
17	TU73	70-D17-00-1G	7	C27	ES-0025	07-Aug-07
17	TU73	70-D17-00-1G	8	C27	ES-0025	07-Aug-07
17	TU73	70-D17-00-1G	9	C27	ES-0025	07-Aug-07
17	TU73	70-D17-00-1G	10	C28	ES-0026	07-Aug-07
17	TU73	70-D17-00-1G	11	C28	ES-0026	07-Aug-07
17	TU73	70-D17-00-1G	12	C28	ES-0026	07-Aug-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17	TU73	70-D17-00-1G	13	C27	ES-0025	07-Aug-07
17	TU73	70-D17-00-1G	14	C28	ES-0026	07-Aug-07
17	TU73	70-D17-00-1G	15	C28	ES-0026	07-Aug-07
17	TU73	70-D17-00-1G	16	C27	ES-0025	07-Aug-07
17	TU73	70-D17-00-1G	17	C28	ES-0026	07-Aug-07
17	TU73	70-D17-00-1G	18	C28	ES-0026	07-Aug-07
17	TU73	70-D17-00-1G	19	C37	ES-0027	07-Aug-07
17	TU73	70-D17-00-1G	20	C37	ES-0027	07-Aug-07
17	TU73	70-D17-00-1G	21	C37	ES-0027	07-Aug-07
17	TU73	70-D17-00-1G	22	C28	ES-0026	07-Aug-07
17	TU73	70-D17-00-1G	23	C37	ES-0027	07-Aug-07
17	TU73	70-D17-00-1G	24	C37	ES-0027	07-Aug-07
17	TU73	70-D17-00-1G	25	C37	ES-0027	07-Aug-07
17	TU73	70-D17-00-1G	26	C37	ES-0027	07-Aug-07
17	TU73	70-D17-00-1G	27	C37	ES-0027	07-Aug-07
17	TU73	70-D17-00-1G	28	C37	ES-0027	08-Aug-07
17	TU73	70-D17-00-1G	29	C28	ES-0026	08-Aug-07
17	TU73	70-D17-00-1G	30	C28	ES-0026	08-Aug-07
17	TU73	70-D17-00-1G	31	C28	ES-0026	08-Aug-07
17	TU73	70-D17-00-1G	32	C28	ES-0026	08-Aug-07
17	TU73	70-D17-00-1G	33	C28	ES-0026	08-Aug-07
17	TU73	70-D17-00-1G	34	C28	ES-0026	08-Aug-07
17	TU73	70-D17-00-1G	35	C37	ES-0027	08-Aug-07
17	TU73	70-D17-00-1G	36	C37	ES-0027	08-Aug-07
17	TU73	70-D17-00-1G	37	C37	ES-0027	08-Aug-07
17	TU73	70-D17-00-1G	38	C37	ES-0027	08-Aug-07
17	TU73	70-D17-00-2E	1	C26	ES-0023	06-Aug-07
17	TU73	70-D17-00-2E	2	C26	ES-0023	06-Aug-07
17	TU73	70-D17-00-2E	3	C26	ES-0023	06-Aug-07
17	TU73	70-D17-00-2E	4	C26	ES-0023	06-Aug-07
17	TU73	70-D17-00-2E	5	C26	ES-0023	06-Aug-07
17	TU73	70-D17-00-2E	6	C26	ES-0023	06-Aug-07
17	TU73	70-D17-00-2E	7	C11	ES-0024	06-Aug-07
17	TU73	70-D17-00-2E	8	C11	ES-0024	06-Aug-07
17	TU73	70-D17-00-2E	9	C11	ES-0024	06-Aug-07
17	TU73	70-D17-00-2E	10	C27	ES-0025	06-Aug-07
17	TU73	70-D17-00-2E	11	C27	ES-0025	06-Aug-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17	TU73	70-D17-00-2E	12	C11	ES-0024	06-Aug-07
17	TU73	70-D17-00-2G	1	C26	ES-0023	06-Aug-07
17	TU73	70-D17-00-2G	2	C11	ES-0024	06-Aug-07
17	TU73	70-D17-00-2G	3	C27	ES-0025	06-Aug-07
17	TU73	70-D17-00-2G	4	C27	ES-0025	06-Aug-07
17	TU73	70-D17-00-2G	5	C11	ES-0024	06-Aug-07
17	TU73	70-D17-00-2G	6	C11	ES-0024	06-Aug-07
17	TU73	70-D17-00-2G	7	C27	ES-0025	07-Aug-07
17	TU73	70-D17-00-2G	8	C27	ES-0025	07-Aug-07
17	TU73	70-D17-00-2G	9	C11	ES-0024	07-Aug-07
17	TU73	70-D17-00-2G	10	C11	ES-0024	07-Aug-07
17	TU73	70-D17-00-2G	11	C27	ES-0025	07-Aug-07
17	TU73	70-D17-00-2G	12	C11	ES-0024	07-Aug-07
17	TU73	70-D17-00-2G	13	C27	ES-0025	07-Aug-07
17	TU73	70-D17-00-2G	14	C27	ES-0025	07-Aug-07
17	TU73	70-D17-00-2G	15	C28	ES-0026	07-Aug-07
17	TU73	70-D17-00-2G	16	C20	ES-0015	07-Aug-07
17	TU73	70-D17-00-2G	17	C27	ES-0025	07-Aug-07
17	TU73	70-D17-00-2G	18	C27	ES-0025	07-Aug-07
17	TU73	70-D17-00-2G	19	C27	ES-0025	07-Aug-07
17	TU73	70-D17-00-2G	20	C27	ES-0025	07-Aug-07
17	TU73	70-D17-00-2G	21	C11	ES-0024	07-Aug-07
17	TU73	70-D17-00-2G	22	C11	ES-0024	07-Aug-07
17	TU73	70-D17-00-2G	23	C37	ES-0027	07-Aug-07
17	TU73	70-D17-00-2G	24	C37	ES-0027	07-Aug-07
17	TU73	70-D17-00-2G	25	C37	ES-0027	07-Aug-07
17	TU73	70-D17-00-2G	26	C28	ES-0026	07-Aug-07
17	TU73	70-D17-00-2G	27	C37	ES-0027	07-Aug-07
17	TU73	70-D17-00-2G	28	C37	ES-0027	07-Aug-07
17	TU73	70-D17-00-2G	29	C28	ES-0026	07-Aug-07
17	TU73	70-D17-00-2G	30	C28	ES-0026	07-Aug-07
17	TU73	70-D17-00-2G	31	C37	ES-0027	07-Aug-07
17	TU73	70-D17-00-2G	32	C37	ES-0027	07-Aug-07
17	TU73	70-D17-00-2G	33	C37	ES-0027	07-Aug-07
17	TU73	70-D17-00-2G	34	C37	ES-0027	07-Aug-07
17	TU73	70-D17-00-2G	35	C11	ES-0024	07-Aug-07
17	TU73	70-D17-00-2G	36	C11	ES-0024	07-Aug-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17	TU73	70-D17-00-2G	37	C28	ES-0026	07-Aug-07
17	TU73	70-D17-00-2G	38	C37	ES-0027	07-Aug-07
17	TU73	70-D17-00-2G	39	C37	ES-0027	07-Aug-07
17	TU73	70-D17-00-2G	40	C37	ES-0027	07-Aug-07
17	TU73	70-D17-00-2G	41	C28	ES-0026	08-Aug-07
17	TU73	70-D17-00-2G	42	C37	ES-0027	08-Aug-07
17	TU73	70-D17-00-2G	43	C37	ES-0027	08-Aug-07
17	TU73	70-D17-00-2G	44	C28	ES-0026	08-Aug-07
17	TU73	70-D17-00-2G	45	C36	ES-0028	08-Aug-07
17	TU73	70-D17-00-2G	46	C36	ES-0028	08-Aug-07
17	TU73	70-D17-00-2G	47	C36	ES-0028	08-Aug-07
17	TU73	70-D17-00-2G	48	C28	ES-0026	08-Aug-07
17	TU73	70-D17-00-2G	49	C36	ES-0028	08-Aug-07
17	TU73	70-D17-00-2G	50	C28	ES-0026	08-Aug-07
17	TU73	70-D17-00-2G	51	C28	ES-0026	08-Aug-07
17	TU73	70-D17-00-2G	52	C36	ES-0028	08-Aug-07
17	TU73	70-D17-00-2G	53	C36	ES-0028	08-Aug-07
17	TU73	70-D17-00-2G	54	C36	ES-0028	08-Aug-07
17	TU73	70-D17-00-2G	55	C36	ES-0028	08-Aug-07
17	TU73	70-D17-00-2G	56	C36	ES-0028	08-Aug-07
17	TU73	70-D17-00-2G	57	C35	ES-0029	08-Aug-07
17	TU73	70-D17-00-2H	90	C26	ES-0023	06-Aug-07
17	TU73	70-D17-00-2H	91	C25	ES-0022	06-Aug-07
17	TU73	70-D17-00-2H	92	C26	ES-0023	06-Aug-07
17	TU73	70-D17-00-2H	93	C25	ES-0022	06-Aug-07
17	TU73	70-D17-00-2H	94	C26	ES-0023	06-Aug-07
17	TU73	70-D17-00-2H	95	C26	ES-0023	06-Aug-07
17	TU73	70-D17-00-2H	96	C26	ES-0023	06-Aug-07
17	TU73	70-D17-00-2H	97	C26	ES-0023	06-Aug-07
17	TU73	70-D17-00-2H	98	C26	ES-0023	06-Aug-07
17	TU73	70-D17-00-2H	99	C26	ES-0023	06-Aug-07
17	TU73	70-D17-00-2H	100	C26	ES-0023	06-Aug-07
17	TU73	70-D17-00-2H	101	C25	ES-0022	06-Aug-07
17	TU73	70-D17-00-2H	102	C25	ES-0022	06-Aug-07
17	TU73	70-D17-00-2H	103	C25	ES-0022	06-Aug-07
17	TU73	70-D17-00-2H	104	C25	ES-0022	06-Aug-07
17	TU73	70-D17-00-2H	105	C25	ES-0022	06-Aug-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17	TU73	70-D17-00-2H	106	C11	ES-0024	06-Aug-07
17	TU73	70-D17-00-2H	107	C11	ES-0024	06-Aug-07
17	TU73	70-D17-00-2H	108	C11	ES-0024	06-Aug-07
17	TU73	70-D17-00-2H	109	C11	ES-0024	06-Aug-07
17	TU73	70-D17-00-2H	110	C11	ES-0024	06-Aug-07
17	TU73	70-D17-00-2H	111	C11	ES-0024	06-Aug-07
17	TU73	70-D17-00-2H	112	C11	ES-0024	06-Aug-07
17	TU73	70-D17-00-2H	113	C11	ES-0024	06-Aug-07
17	TU73	70-D17-00-2H	114	C26	ES-0023	06-Aug-07
17	TU73	70-D17-00-2H	115	C26	ES-0023	06-Aug-07
17	TU73	70-D17-00-2H	116	C26	ES-0023	06-Aug-07
17	TU73	70-D17-00-2H	117	C26	ES-0023	06-Aug-07
17	TU73	70-D17-00-2H	118	C11	ES-0024	06-Aug-07
17	TU73	70-D17-00-2H	119	C26	ES-0023	06-Aug-07
17	TU73	70-D17-00-2H	120	C11	ES-0024	06-Aug-07
17	TU73	70-D17-00-2H	121	C11	ES-0024	06-Aug-07
17	TU73	70-D17-00-2H	122	C11	ES-0024	06-Aug-07
17	TU73	70-D17-00-2L	1	C01	ES-0001	20-Jul-07
17	TU73	70-D17-00-8F	1	C27	ES-0025	06-Aug-07
17	TU73	70-D17-00-8F	2	C27	ES-0025	06-Aug-07
17	TU73	70-D17-00-8F	3	C27	ES-0025	06-Aug-07
17	TU73	70-D17-00-8F	4	C11	ES-0024	07-Aug-07
17	TU73	70-D17-00-8F	5	C11	ES-0024	07-Aug-07
17	TU73	70-D17-00-8F	6	C27	ES-0025	07-Aug-07
17	TU73	70-D17-00-8F	7	C11	ES-0024	07-Aug-07
17	TU73	70-D17-00-8F	8	C11	ES-0024	07-Aug-07
19	TU74	70-D19-00-3Y	15	C04	ES-0043	06-Oct-07
19	TU74	70-D19-00-3Y	16	C04	ES-0043	06-Oct-07
19	TU74	70-D19-00-3Y	17	C04	ES-0043	06-Oct-07
19	TU74	70-D19-00-3Y	18	C05	ES-0044	06-Oct-07
19	TU74	70-D19-00-3Y	19	C05	ES-0044	06-Oct-07
19	TU74	70-D19-00-3Y	20	C04	ES-0043	06-Oct-07
19	TU74	70-D19-00-3Y	21	C04	ES-0043	06-Oct-07
19	TU74	70-D19-00-3Y	22	C04	ES-0043	06-Oct-07
19	TU74	70-D19-00-3Y	23	C04	ES-0043	06-Oct-07
19	TU74	70-D19-00-3Y	24	C05	ES-0044	06-Oct-07
19	TU74	70-D19-00-3Y	25	C04	ES-0043	06-Oct-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU74	70-D19-00-3Y	26	C04	ES-0043	06-Oct-07
19	TU74	70-D19-00-3Y	27	C04	ES-0043	06-Oct-07
19	TU74	70-D19-00-3Y	28	C04	ES-0043	06-Oct-07
19	TU74	70-D19-00-3Y	29	C05	ES-0044	06-Oct-07
19	TU74	70-D19-00-3Y	30	C05	ES-0044	06-Oct-07
19	TU74	70-D19-00-3Y	31	C05	ES-0044	06-Oct-07
19	TU74	70-D19-00-3Y	32	C04	ES-0043	06-Oct-07
19	TU74	70-D19-00-3Y	33	C10	ES-0046	09-Oct-07
19	TU74	70-D19-00-3Y	34	C10	ES-0046	09-Oct-07
19	TU74	70-D19-00-3Y	35	C09	ES-0045	09-Oct-07
19	TU74	70-D19-00-3Y	36	C10	ES-0046	09-Oct-07
19	TU74	70-D19-00-3Y	37	C10	ES-0046	09-Oct-07
19	TU74	70-D19-00-3Y	38	C10	ES-0046	09-Oct-07
19	TU74	70-D19-00-3Y	39	C09	ES-0045	10-Oct-07
19	TU74	70-D19-00-3Y	40	C09	ES-0045	10-Oct-07
19	TU74	70-D19-00-3Y	41	C09	ES-0045	10-Oct-07
19	TU74	70-D19-00-3Y	42	C02	ES-0066	16-Nov-07
19	TU74	70-D19-00-3Y	43	C02	ES-0066	16-Nov-07
19	TU74	70-D19-00-3Y	44	C02	ES-0066	16-Nov-07
19	TU74	70-D19-00-3Y	45	C02	ES-0066	16-Nov-07
19	TU74	70-D19-00-3Y	46	C03	ES-0067	16-Nov-07
19	TU74	70-D19-00-3Y	47	C03	ES-0067	16-Nov-07
19	TU74	70-D19-00-3Y	48	C03	ES-0067	16-Nov-07
19	TU74	70-D19-00-3Y	49	C03	ES-0067	16-Nov-07
19	TU74	70-D19-00-3Y	50	C03	ES-0067	16-Nov-07
19	TU74	70-D19-00-3Y	51	C03	ES-0067	19-Nov-07
19	TU74	70-D19-00-3Y	52	C03	ES-0067	19-Nov-07
19	TU74	70-D19-00-8A	1	C04	ES-0043	08-Oct-07
19	TU74	70-D19-00-8A	2	C04	ES-0043	08-Oct-07
19	TU74	70-D19-00-8A	3	C05	ES-0044	08-Oct-07
19	TU74	70-D19-00-8A	4	C05	ES-0044	08-Oct-07
19	TU75	70-D19-00-1K	1	C04	ES-0043	08-Oct-07
19	TU75	70-D19-00-1K	2	C05	ES-0044	08-Oct-07
19	TU75	70-D19-00-1K	3	C05	ES-0044	08-Oct-07
19	TU75	70-D19-00-1K	4	C04	ES-0043	08-Oct-07
19	TU75	70-D19-00-1K	5	C04	ES-0043	08-Oct-07
19	TU75	70-D19-00-1K	6	C05	ES-0044	08-Oct-07

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU75	70-D19-00-1K	7	C09	ES-0045	08-Oct-07
19	TU75	70-D19-00-1K	8	C09	ES-0045	08-Oct-07
19	TU75	70-D19-00-1K	9	C05	ES-0044	08-Oct-07
19	TU75	70-D19-00-1K	10	C10	ES-0046	08-Oct-07
19	TU75	70-D19-00-1K	11	C10	ES-0046	08-Oct-07
19	TU75	70-D19-00-1K	12	C10	ES-0046	08-Oct-07
19	TU75	70-D19-00-2N	1	C04	ES-0043	08-Oct-07
19	TU75	70-D19-00-2N	2	C04	ES-0043	08-Oct-07
19	TU75	70-D19-00-2N	3	C05	ES-0044	08-Oct-07
19	TU75	70-D19-00-2N	4	C05	ES-0044	08-Oct-07
19	TU75	70-D19-00-2N	5	C05	ES-0044	08-Oct-07
19	TU75	70-D19-00-2N	6	C09	ES-0045	09-Oct-07
19	TU75	70-D19-00-2N	7	C10	ES-0046	09-Oct-07
19	TU75	70-D19-00-2N	8	C10	ES-0046	09-Oct-07
19	TU75	70-D19-00-2O	1	C09	ES-0045	09-Oct-07
19	TU75	70-D19-00-2O	2	C10	ES-0046	09-Oct-07
19	TU75	70-D19-00-2O	3	C10	ES-0046	09-Oct-07
19	TU75	70-D19-00-2O	4	C09	ES-0045	09-Oct-07
19	TU75	70-D19-00-2P	1	C04	ES-0043	08-Oct-07
19	TU75	70-D19-00-2P	2	C04	ES-0043	08-Oct-07
19	TU75	70-D19-00-2P	3	C09	ES-0045	08-Oct-07
19	TU75	70-D19-00-2P	4	C09	ES-0045	08-Oct-07
19	TU75	70-D19-00-2P	5	C05	ES-0044	08-Oct-07
19	TU75	70-D19-00-2P	6	C09	ES-0045	08-Oct-07
19	TU75	70-D19-00-2P	7	C05	ES-0044	08-Oct-07
19	TU75	70-D19-00-2P	8	C10	ES-0046	08-Oct-07
19	TU75	70-D19-00-2P	9	C10	ES-0046	08-Oct-07
19	TU75	70-D19-00-2P	10	C10	ES-0046	08-Oct-07
19	TU75	70-D19-00-2P	11	C10	ES-0046	08-Oct-07
19	TU75	70-D19-00-2Q	1	C04	ES-0043	08-Oct-07
19	TU75	70-D19-00-2Q	2	C04	ES-0043	08-Oct-07
19	TU75	70-D19-00-2Q	3	C04	ES-0043	08-Oct-07
19	TU75	70-D19-00-2Q	4	C05	ES-0044	08-Oct-07
19	TU75	70-D19-00-2Q	5	C05	ES-0044	08-Oct-07
19	TU75	70-D19-00-2Q	6	C05	ES-0044	08-Oct-07
19	TU75	70-D19-00-2Q	7	C10	ES-0046	08-Oct-07
19	TU75	70-D19-00-2R	1	C10	ES-0046	08-Oct-07

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU75	70-D19-00-2R	2	C10	ES-0046	08-Oct-07
19	TU75	70-D19-00-2R	3	C09	ES-0045	08-Oct-07
19	TU75	70-D19-00-2R	4	C10	ES-0046	08-Oct-07
19	TU75	70-D19-00-2R	5	C09	ES-0045	08-Oct-07
19	TU75	70-D19-00-2R	6	C09	ES-0045	09-Oct-07
19	TU75	70-D19-00-2R	7	C09	ES-0045	09-Oct-07
19	TU75	70-D19-00-2R	8	C10	ES-0046	09-Oct-07
19	TU75	70-D19-00-2R	9	C10	ES-0046	09-Oct-07
19	TU75	70-D19-00-2R	10	C09	ES-0045	09-Oct-07
19	TU75	70-D19-00-2R	11	C10	ES-0046	09-Oct-07
19	TU75	70-D19-00-2R	12	C10	ES-0046	09-Oct-07
19	TU75	70-D19-00-2R	13	C09	ES-0045	09-Oct-07
19	TU75	70-D19-00-2R	14	C10	ES-0046	09-Oct-07
19	TU75	70-D19-00-2R	15	C10	ES-0046	09-Oct-07
19	TU75	70-D19-00-2R	16	C10	ES-0046	09-Oct-07
19	TU75	70-D19-00-2R	17	C10	ES-0046	09-Oct-07
19	TU76	70-D19-00-1U	1	C22	ES-0053	18-Oct-07
19	TU76	70-D19-00-1X	1	C35	ES-0057	20-Oct-07
19	TU76	70-D19-00-1X	2	C14	ES-0056	20-Oct-07
19	TU76	70-D19-00-1Y	1	C17	ES-0064	26-Oct-07
19	TU76	70-D19-00-1Y	2	C25	ES-0065	26-Oct-07
19	TU76	70-D19-00-1Y	3	C25	ES-0065	26-Oct-07
19	TU76	70-D19-00-2A	1	C06	ES-0055	19-Oct-07
19	TU76	70-D19-00-2A	2	C14	ES-0056	19-Oct-07
19	TU76	70-D19-00-2A	3	C06	ES-0055	19-Oct-07
19	TU76	70-D19-00-2B	1	C31	ES-0050	17-Oct-07
19	TU76	70-D19-00-2B	2	C32	ES-0051	17-Oct-07
19	TU76	70-D19-00-2B	3	C31	ES-0050	17-Oct-07
19	TU76	70-D19-00-2B	4	C33	ES-0052	17-Oct-07
19	TU76	70-D19-00-2B	5	C33	ES-0052	18-Oct-07
19	TU76	70-D19-00-2B	6	C33	ES-0052	18-Oct-07
19	TU76	70-D19-00-2B	7	C32	ES-0051	18-Oct-07
19	TU76	70-D19-00-2B	8	C22	ES-0053	18-Oct-07
19	TU76	70-D19-00-2B	9	C32	ES-0051	18-Oct-07
19	TU76	70-D19-00-2B	10	C33	ES-0052	18-Oct-07
19	TU76	70-D19-00-2B	11	C33	ES-0052	18-Oct-07
19	TU76	70-D19-00-2B	12	C22	ES-0053	18-Oct-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU76	70-D19-00-2B	13	C22	ES-0053	18-Oct-07
19	TU76	70-D19-00-2B	14	C22	ES-0053	18-Oct-07
19	TU76	70-D19-00-2B	15	C22	ES-0053	18-Oct-07
19	TU76	70-D19-00-2B	16	C22	ES-0053	18-Oct-07
19	TU76	70-D19-00-2B	17	C33	ES-0052	18-Oct-07
19	TU76	70-D19-00-2B	18	C33	ES-0052	18-Oct-07
19	TU76	70-D19-00-2B	19	C22	ES-0053	18-Oct-07
19	TU76	70-D19-00-2B	20	C22	ES-0053	18-Oct-07
19	TU76	70-D19-00-2B	21	C22	ES-0053	18-Oct-07
19	TU76	70-D19-00-2B	22	C22	ES-0053	18-Oct-07
19	TU76	70-D19-00-2B	23	C22	ES-0053	18-Oct-07
19	TU76	70-D19-00-2B	24	C33	ES-0052	18-Oct-07
19	TU76	70-D19-00-2B	25	C22	ES-0053	18-Oct-07
19	TU76	70-D19-00-2B	26	C22	ES-0053	18-Oct-07
19	TU76	70-D19-00-2B	27	C33	ES-0052	18-Oct-07
19	TU76	70-D19-00-2B	28	C06	ES-0055	19-Oct-07
19	TU76	70-D19-00-2B	29	C06	ES-0055	19-Oct-07
19	TU76	70-D19-00-2B	30	C14	ES-0056	19-Oct-07
19	TU76	70-D19-00-2B	31	C14	ES-0056	19-Oct-07
19	TU76	70-D19-00-2B	32	C14	ES-0056	19-Oct-07
19	TU76	70-D19-00-2G	1	C31	ES-0050	17-Oct-07
19	TU76	70-D19-00-2G	2	C31	ES-0050	17-Oct-07
19	TU76	70-D19-00-2G	3	C13	ES-0047	17-Oct-07
19	TU76	70-D19-00-2G	4	C13	ES-0047	17-Oct-07
19	TU76	70-D19-00-2G	5	C13	ES-0047	17-Oct-07
19	TU76	70-D19-00-2G	6	C31	ES-0050	17-Oct-07
19	TU76	70-D19-00-2G	7	C31	ES-0050	17-Oct-07
19	TU76	70-D19-00-2G	8	C13	ES-0047	17-Oct-07
19	TU76	70-D19-00-2G	9	C13	ES-0047	17-Oct-07
19	TU76	70-D19-00-2G	10	C13	ES-0047	17-Oct-07
19	TU76	70-D19-00-2G	11	C31	ES-0050	17-Oct-07
19	TU76	70-D19-00-2G	12	C13	ES-0047	17-Oct-07
19	TU76	70-D19-00-2G	13	C31	ES-0050	17-Oct-07
19	TU76	70-D19-00-2G	14	C13	ES-0047	17-Oct-07
19	TU76	70-D19-00-2G	15	C31	ES-0050	17-Oct-07
19	TU76	70-D19-00-2G	16	C31	ES-0050	17-Oct-07
19	TU76	70-D19-00-2G	17	C31	ES-0050	17-Oct-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU76	70-D19-00-4B	1	C06	ES-0055	19-Oct-07
19	TU76	70-D19-00-4B	2	C06	ES-0055	19-Oct-07
19	TU76	70-D19-00-4B	3	C06	ES-0055	19-Oct-07
19	TU76	70-D19-00-4B	4	C14	ES-0056	19-Oct-07
19	TU76	70-D19-00-4B	5	C14	ES-0056	19-Oct-07
19	TU76	70-D19-00-4B	6	C06	ES-0055	19-Oct-07
19	TU76	70-D19-00-4B	7	C06	ES-0055	19-Oct-07
19	TU76	70-D19-00-4B	8	C14	ES-0056	19-Oct-07
19	TU76	70-D19-00-4B	9	C06	ES-0055	19-Oct-07
19	TU76	70-D19-00-4B	10	C14	ES-0056	19-Oct-07
19	TU76	70-D19-00-4B	11	C06	ES-0055	19-Oct-07
19	TU76	70-D19-00-4B	12	C06	ES-0055	19-Oct-07
19	TU76	70-D19-00-4B	13	C14	ES-0056	19-Oct-07
19	TU76	70-D19-00-4B	14	C06	ES-0055	20-Oct-07
19	TU76	70-D19-00-4B	15	C14	ES-0056	20-Oct-07
19	TU76	70-D19-00-4B	16	C35	ES-0057	20-Oct-07
19	TU76	70-D19-00-4B	17	C14	ES-0056	20-Oct-07
19	TU76	70-D19-00-4B	18	C35	ES-0057	20-Oct-07
19	TU76	70-D19-00-4B	19	C14	ES-0056	20-Oct-07
19	TU76	70-D19-00-4B	20	C14	ES-0056	20-Oct-07
19	TU76	70-D19-00-4B	21	C35	ES-0057	20-Oct-07
19	TU76	70-D19-00-4B	22	C14	ES-0056	20-Oct-07
19	TU76	70-D19-00-4B	23	C35	ES-0057	20-Oct-07
19	TU76	70-D19-00-4B	24	C35	ES-0057	20-Oct-07
19	TU76	70-D19-00-4B	25	C35	ES-0057	20-Oct-07
19	TU76	70-D19-00-4B	26	C35	ES-0057	20-Oct-07
19	TU76	70-D19-00-4B	27	C14	ES-0056	20-Oct-07
19	TU76	70-D19-00-4B	28	C14	ES-0056	20-Oct-07
19	TU76	70-D19-00-4B	29	C35	ES-0057	20-Oct-07
19	TU76	70-D19-00-4B	30	C35	ES-0057	20-Oct-07
19	TU76	70-D19-00-4B	31	C35	ES-0057	20-Oct-07
19	TU76	70-D19-00-4B	32	C28	ES-0058	20-Oct-07
19	TU76	70-D19-00-4B	33	C28	ES-0058	20-Oct-07
19	TU76	70-D19-00-4B	34	C35	ES-0057	20-Oct-07
19	TU76	70-D19-00-4B	35	C35	ES-0057	20-Oct-07
19	TU76	70-D19-00-4B	36	C35	ES-0057	20-Oct-07
19	TU76	70-D19-00-4B	37	C28	ES-0058	22-Oct-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU76	70-D19-00-4B	38	C28	ES-0058	22-Oct-07
19	TU76	70-D19-00-4B	39	C01	ES-0054	22-Oct-07
19	TU76	70-D19-00-4B	40	C01	ES-0054	22-Oct-07
19	TU76	70-D19-00-4B	41	C01	ES-0054	22-Oct-07
19	TU76	70-D19-00-4B	42	C28	ES-0058	22-Oct-07
19	TU76	70-D19-00-4B	43	C28	ES-0058	22-Oct-07
19	TU76	70-D19-00-4B	44	C01	ES-0054	22-Oct-07
19	TU76	70-D19-00-4B	45	C28	ES-0058	22-Oct-07
19	TU76	70-D19-00-4B	46	C01	ES-0054	23-Oct-07
19	TU76	70-D19-00-4B	47	C01	ES-0054	23-Oct-07
19	TU76	70-D19-00-4B	48	C28	ES-0058	23-Oct-07
19	TU76	70-D19-00-4B	49	C01	ES-0054	23-Oct-07
19	TU76	70-D19-00-4B	50	C28	ES-0058	23-Oct-07
19	TU76	70-D19-00-4B	51	C01	ES-0054	23-Oct-07
19	TU76	70-D19-00-4B	52	C01	ES-0054	23-Oct-07
19	TU76	70-D19-00-4B	53	C20	ES-0059	23-Oct-07
19	TU77	70-D19-00-2A	4	C14	ES-0056	19-Oct-07
19	TU77	70-D19-00-2A	5	C06	ES-0055	19-Oct-07
19	TU77	70-D19-00-2A	6	C14	ES-0056	19-Oct-07
19	TU77	70-D19-00-3S	34	C14	ES-0056	19-Oct-07
19	TU77	70-D19-00-3S	35	C06	ES-0055	19-Oct-07
19	TU77	70-D19-00-3S	36	C14	ES-0056	19-Oct-07
19	TU77	70-D19-00-3S	37	C14	ES-0056	19-Oct-07
19	TU77	70-D19-00-3S	38	C14	ES-0056	19-Oct-07
19	TU77	70-D19-00-3S	39	C06	ES-0055	19-Oct-07
19	TU77	70-D19-00-3S	40	C06	ES-0055	19-Oct-07
19	TU77	70-D19-00-3S	41	C06	ES-0055	19-Oct-07
19	TU77	70-D19-00-3S	42	C06	ES-0055	19-Oct-07
19	TU77	70-D19-00-3S	43	C06	ES-0055	19-Oct-07
19	TU77	70-D19-00-3S	44	C14	ES-0056	19-Oct-07
19	TU77	70-D19-00-3S	45	C14	ES-0056	19-Oct-07
19	TU77	70-D19-00-3S	46	C06	ES-0055	19-Oct-07
19	TU77	70-D19-00-3S	47	C06	ES-0055	19-Oct-07
19	TU77	70-D19-00-3S	48	C06	ES-0055	19-Oct-07
19	TU77	70-D19-00-3S	49	C14	ES-0056	19-Oct-07
19	TU77	70-D19-00-3S	50	C14	ES-0056	19-Oct-07
19	TU77	70-D19-00-3S	51	C06	ES-0055	19-Oct-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU77	70-D19-00-3S	52	C06	ES-0055	19-Oct-07
19	TU77	70-D19-00-3S	53	C06	ES-0055	19-Oct-07
19	TU77	70-D19-00-3S	54	C35	ES-0057	20-Oct-07
19	TU77	70-D19-00-3S	55	C35	ES-0057	20-Oct-07
19	TU77	70-D19-00-3S	56	C14	ES-0056	20-Oct-07
19	TU77	70-D19-00-3S	57	C35	ES-0057	20-Oct-07
19	TU77	70-D19-00-3S	58	C35	ES-0057	20-Oct-07
19	TU77	70-D19-00-3S	59	C14	ES-0056	20-Oct-07
19	TU77	70-D19-00-3S	60	C14	ES-0056	20-Oct-07
19	TU77	70-D19-00-3S	61	C35	ES-0057	20-Oct-07
19	TU77	70-D19-00-3S	62	C35	ES-0057	20-Oct-07
19	TU77	70-D19-00-3S	63	C14	ES-0056	20-Oct-07
19	TU77	70-D19-00-3S	64	C14	ES-0056	20-Oct-07
19	TU77	70-D19-00-3S	65	C14	ES-0056	20-Oct-07
19	TU77	70-D19-00-3S	66	C35	ES-0057	20-Oct-07
19	TU77	70-D19-00-3S	67	C35	ES-0057	20-Oct-07
19	TU77	70-D19-00-3S	68	C35	ES-0057	20-Oct-07
19	TU77	70-D19-00-3S	69	C35	ES-0057	20-Oct-07
19	TU77	70-D19-00-3S	70	C35	ES-0057	20-Oct-07
19	TU77	70-D19-00-3S	71	C35	ES-0057	20-Oct-07
19	TU77	70-D19-00-3S	72	C35	ES-0057	20-Oct-07
19	TU77	70-D19-00-3S	73	C35	ES-0057	20-Oct-07
19	TU77	70-D19-00-3S	74	C14	ES-0056	20-Oct-07
19	TU77	70-D19-00-3S	75	C14	ES-0056	20-Oct-07
19	TU77	70-D19-00-3S	76	C14	ES-0056	20-Oct-07
19	TU77	70-D19-00-3S	77	C14	ES-0056	20-Oct-07
19	TU77	70-D19-00-3S	78	C14	ES-0056	20-Oct-07
19	TU77	70-D19-00-3S	79	C35	ES-0057	22-Oct-07
19	TU77	70-D19-00-3S	80	C35	ES-0057	22-Oct-07
19	TU77	70-D19-00-3S	81	C35	ES-0057	22-Oct-07
19	TU77	70-D19-00-3S	82	C35	ES-0057	22-Oct-07
19	TU77	70-D19-00-3S	83	C28	ES-0058	22-Oct-07
19	TU77	70-D19-00-3S	84	C28	ES-0058	22-Oct-07
19	TU77	70-D19-00-3S	85	C28	ES-0058	22-Oct-07
19	TU77	70-D19-00-3S	86	C01	ES-0054	22-Oct-07
19	TU77	70-D19-00-3S	87	C01	ES-0054	22-Oct-07
19	TU77	70-D19-00-3S	88	C01	ES-0054	22-Oct-07

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU77	70-D19-00-3S	89	C01	ES-0054	22-Oct-07
19	TU77	70-D19-00-3S	90	C28	ES-0058	22-Oct-07
19	TU77	70-D19-00-3S	91	C28	ES-0058	22-Oct-07
19	TU77	70-D19-00-3S	92	C28	ES-0058	22-Oct-07
19	TU77	70-D19-00-3S	93	C28	ES-0058	22-Oct-07
19	TU77	70-D19-00-3S	94	C17	ES-0064	26-Oct-07
19	TU77	70-D19-00-3S	95	C17	ES-0064	26-Oct-07
19	TU77	70-D19-00-3S	96	C17	ES-0064	26-Oct-07
19	TU77	70-D19-00-3S	97	C25	ES-0065	26-Oct-07
19	TU77	70-D19-00-3S	98	C25	ES-0065	26-Oct-07
19	TU77	70-D19-00-3S	99	C17	ES-0064	26-Oct-07
19	TU77	70-D19-00-3S	100	C17	ES-0064	26-Oct-07
19	TU77	70-D19-66-2A	1	C26	ES-0042	05-Sep-07
19	TU77	70-D19-66-2A	2	C19	ES-0041	05-Sep-07
19	TU77	70-D19-66-2A	3	C26	ES-0042	05-Sep-07
19	TU77	70-D19-66-2A	4	C26	ES-0042	05-Sep-07
19	TU77	70-D19-66-2A	5	C19	ES-0041	05-Sep-07
19	TU77	70-D19-66-2A	6	C26	ES-0042	05-Sep-07
19	TU77	70-D19-66-2A	7	C19	ES-0041	05-Sep-07
19	TU77	70-D19-66-2A	8	C19	ES-0041	05-Sep-07
19	TU77	70-D19-66-2A	9	C26	ES-0042	05-Sep-07
19	TU77	70-D19-66-2A	10	C26	ES-0042	05-Sep-07
19	TU77	70-D19-66-2A	11	C26	ES-0042	05-Sep-07
19	TU77	70-D19-66-2A	12	C26	ES-0042	05-Sep-07
19	TU77	70-D19-66-2A	13	C26	ES-0042	05-Sep-07
19	TU77	70-D19-66-2A	14	C26	ES-0042	05-Sep-07
19	TU77	70-D19-66-2A	15	C26	ES-0042	05-Sep-07
19	TU78	70-D19-00-1O	1	C15	ES-0062	25-Oct-07
19	TU78	70-D19-00-1O	2	C16	ES-0063	25-Oct-07
19	TU78	70-D19-00-1O	3	C17	ES-0064	25-Oct-07
19	TU78	70-D19-00-1P	1	C12	ES-0061	24-Oct-07
19	TU78	70-D19-00-1P	2	C12	ES-0061	24-Oct-07
19	TU78	70-D19-00-1P	3	C12	ES-0061	24-Oct-07
19	TU78	70-D19-00-1P	4	C12	ES-0061	24-Oct-07
19	TU78	70-D19-00-1P	5	C12	ES-0061	24-Oct-07
19	TU78	70-D19-00-1P	6	C12	ES-0061	24-Oct-07
19	TU78	70-D19-00-1P	7	C21	ES-0060	24-Oct-07

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU78	70-D19-00-1P	8	C21	ES-0060	24-Oct-07
19	TU78	70-D19-00-1P	9	C21	ES-0060	24-Oct-07
19	TU78	70-D19-00-1P	10	C21	ES-0060	24-Oct-07
19	TU78	70-D19-00-1P	11	C16	ES-0063	25-Oct-07
19	TU78	70-D19-00-1P	12	C16	ES-0063	25-Oct-07
19	TU78	70-D19-00-1P	13	C16	ES-0063	25-Oct-07
19	TU78	70-D19-00-1P	14	C16	ES-0063	25-Oct-07
19	TU78	70-D19-00-1P	15	C16	ES-0063	25-Oct-07
19	TU78	70-D19-00-1P	16	C16	ES-0063	25-Oct-07
19	TU78	70-D19-00-1P	17	C16	ES-0063	25-Oct-07
19	TU78	70-D19-00-1P	18	C15	ES-0062	25-Oct-07
19	TU78	70-D19-00-1P	19	C15	ES-0062	25-Oct-07
19	TU78	70-D19-00-1P	20	C15	ES-0062	25-Oct-07
19	TU78	70-D19-00-1P	21	C15	ES-0062	25-Oct-07
19	TU78	70-D19-00-1P	22	C15	ES-0062	25-Oct-07
19	TU78	70-D19-00-1P	23	C15	ES-0062	25-Oct-07
19	TU78	70-D19-00-1P	24	C15	ES-0062	25-Oct-07
19	TU78	70-D19-00-1P	25	C15	ES-0062	25-Oct-07
19	TU78	70-D19-00-1P	26	C16	ES-0063	25-Oct-07
19	TU78	70-D19-00-1P	27	C16	ES-0063	25-Oct-07
19	TU78	70-D19-00-1P	28	C15	ES-0062	25-Oct-07
19	TU78	70-D19-00-1P	29	C15	ES-0062	25-Oct-07
19	TU78	70-D19-00-1P	30	C15	ES-0062	25-Oct-07
19	TU78	70-D19-00-1P	31	C16	ES-0063	25-Oct-07
19	TU78	70-D19-00-1P	32	C16	ES-0063	25-Oct-07
19	TU78	70-D19-00-1P	33	C16	ES-0063	25-Oct-07
19	TU78	70-D19-00-1P	34	C15	ES-0062	25-Oct-07
19	TU78	70-D19-00-1P	35	C15	ES-0062	25-Oct-07
19	TU78	70-D19-00-1P	36	C16	ES-0063	25-Oct-07
19	TU78	70-D19-00-1P	37	C16	ES-0063	25-Oct-07
19	TU78	70-D19-00-1P	38	C15	ES-0062	25-Oct-07
19	TU78	70-D19-00-1P	39	C15	ES-0062	25-Oct-07
19	TU78	70-D19-00-1P	40	C15	ES-0062	25-Oct-07
19	TU78	70-D19-00-1P	41	C15	ES-0062	25-Oct-07
19	TU78	70-D19-00-1P	42	C17	ES-0064	25-Oct-07
19	TU78	70-D19-00-1P	43	C17	ES-0064	25-Oct-07
19	TU78	70-D19-00-1P	44	C15	ES-0062	25-Oct-07

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU78	70-D19-00-1P	45	C15	ES-0062	25-Oct-07
19	TU78	70-D19-00-1P	46	C15	ES-0062	26-Oct-07
19	TU78	70-D19-00-1P	47	C17	ES-0064	26-Oct-07
19	TU78	70-D19-00-1P	48	C25	ES-0065	26-Oct-07
19	TU78	70-D19-00-1P	49	C25	ES-0065	26-Oct-07
19	TU78	70-D19-00-1Q	1	C16	ES-0063	25-Oct-07
19	TU78	70-D19-00-1Q	2	C16	ES-0063	25-Oct-07
19	TU78	70-D19-00-1Q	3	C16	ES-0063	25-Oct-07
19	TU78	70-D19-00-1Q	4	C16	ES-0063	25-Oct-07
19	TU78	70-D19-00-1Q	5	C15	ES-0062	25-Oct-07
19	TU78	70-D19-00-1R	1	C12	ES-0061	24-Oct-07
19	TU78	70-D19-00-1R	2	C21	ES-0060	24-Oct-07
19	TU78	70-D19-00-1T	1	C21	ES-0060	24-Oct-07
19	TU78	70-D19-00-1T	2	C21	ES-0060	24-Oct-07
19	TU78	70-D19-00-1T	3	C21	ES-0060	24-Oct-07
19	TU78	70-D19-00-1W	1	C35	ES-0057	20-Oct-07
19	TU78	70-D19-00-1W	2	C28	ES-0058	20-Oct-07
19	TU78	70-D19-00-1W	3	C01	ES-0054	22-Oct-07
19	TU78	70-D19-00-1W	4	C28	ES-0058	22-Oct-07
19	TU78	70-D19-00-4B	54	C20	ES-0059	23-Oct-07
19	TU78	70-D19-00-4B	55	C28	ES-0058	23-Oct-07
19	TU78	70-D19-00-4B	56	C20	ES-0059	23-Oct-07
19	TU78	70-D19-00-4B	57	C20	ES-0059	23-Oct-07
19	TU78	70-D19-00-4B	58	C20	ES-0059	23-Oct-07
19	TU78	70-D19-00-4B	59	C20	ES-0059	23-Oct-07
19	TU78	70-D19-00-4B	60	C21	ES-0060	23-Oct-07
19	TU78	70-D19-00-4B	61	C21	ES-0060	23-Oct-07
19	TU78	70-D19-00-4B	62	C20	ES-0059	23-Oct-07
19	TU78	70-D19-00-4B	63	C20	ES-0059	23-Oct-07
19	TU78	70-D19-00-4B	64	C20	ES-0059	23-Oct-07
19	TU78	70-D19-00-4B	65	C21	ES-0060	23-Oct-07
19	TU78	70-D19-00-4B	66	C20	ES-0059	23-Oct-07
19	TU78	70-D19-00-4B	67	C20	ES-0059	23-Oct-07
19	TU78	70-D19-00-4B	68	C20	ES-0059	23-Oct-07
19	TU78	70-D19-00-4B	69	C20	ES-0059	23-Oct-07
19	TU78	70-D19-00-4B	70	C21	ES-0060	23-Oct-07
19	TU78	70-D19-00-4B	71	C21	ES-0060	23-Oct-07

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU78	70-D19-00-4B	72	C12	ES-0061	23-Oct-07
19	TU78	70-D19-00-4B	73	C12	ES-0061	23-Oct-07
19	TU78	70-D19-00-4B	74	C12	ES-0061	23-Oct-07
19	TU78	70-D19-00-4B	75	C12	ES-0061	23-Oct-07
19	TU78	70-D19-00-4B	76	C12	ES-0061	23-Oct-07
19	TU78	70-D19-00-4B	77	C12	ES-0061	23-Oct-07
19	TU78	70-D19-00-4B	78	C12	ES-0061	24-Oct-07
19	TU78	70-D19-00-4B	79	C12	ES-0061	24-Oct-07
19	TU78	70-D19-00-4B	80	C21	ES-0060	24-Oct-07
19	TU78	70-D19-00-4B	81	C21	ES-0060	24-Oct-07
19	TU78	70-D19-00-4B	82	C21	ES-0060	24-Oct-07
19	TU78	70-D19-00-4B	83	C21	ES-0060	24-Oct-07
19	TU78	70-D19-00-4B	84	C17	ES-0064	26-Oct-07
19	TU78	70-D19-00-4B	85	C25	ES-0065	26-Oct-07
19	TU78	70-D19-00-4B	86	C17	ES-0064	26-Oct-07
19	TU78	70-D19-00-4B	87	C25	ES-0065	26-Oct-07
19	TU78	70-D19-00-4B	88	C25	ES-0065	26-Oct-07
19	TU78	70-D19-00-4B	89	C17	ES-0064	26-Oct-07
19	TU78	70-D19-00-4B	90	C25	ES-0065	26-Oct-07
19	TU78	70-D19-00-4B	91	C25	ES-0065	26-Oct-07
19	TU78	70-D19-00-4D	1	C28	ES-0058	23-Oct-07
19	TU78	70-D19-00-4D	2	C01	ES-0054	23-Oct-07
19	TU78	70-D19-00-8D	1	C21	ES-0060	23-Oct-07
19	TU78	70-D19-00-8D	2	C20	ES-0059	23-Oct-07
19	TU78	70-D19-00-8E	1	C16	ES-0063	25-Oct-07
19	TU78	70-D19-00-8E	2	C16	ES-0063	25-Oct-07
19	TU78	70-D19-00-8E	3	C16	ES-0063	25-Oct-07
19	TU78	70-D19-00-8E	4	C16	ES-0063	25-Oct-07
19	TU78	70-D19-00-8E	5	C16	ES-0063	25-Oct-07
19	TU78	70-D19-00-8E	6	C16	ES-0063	25-Oct-07
19	TU78	70-D19-00-8E	7	C16	ES-0063	25-Oct-07
19	TU78	70-D19-00-8E	8	C15	ES-0062	25-Oct-07
19	TU78	70-D19-00-8E	9	C15	ES-0062	25-Oct-07
19	TU78	70-D19-00-8E	10	C15	ES-0062	25-Oct-07
19	TU79	70-D19-00-1S	1	C21	ES-0060	24-Oct-07
19	TU79	70-D19-00-1S	2	C12	ES-0061	24-Oct-07
19	TU79	70-D19-00-3Q	1	C20	ES-0059	23-Oct-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU79	70-D19-00-3Q	2	C21	ES-0060	24-Oct-07
19	TU79	70-D19-00-3Q	3	C12	ES-0061	24-Oct-07
19	TU79	70-D19-00-3Q	4	C12	ES-0061	24-Oct-07
19	TU79	70-D19-00-3Q	5	C12	ES-0061	24-Oct-07
19	TU79	70-D19-00-3Q	6	C12	ES-0061	24-Oct-07
19	TU79	70-D19-00-3Q	7	C21	ES-0060	24-Oct-07
19	TU79	70-D19-00-3Q	8	C21	ES-0060	24-Oct-07
19	TU79	70-D19-00-3Q	9	C12	ES-0061	24-Oct-07
19	TU79	70-D19-00-3Q	10	C12	ES-0061	24-Oct-07
19	TU79	70-D19-00-3Q	11	C12	ES-0061	24-Oct-07
19	TU79	70-D19-00-3Q	12	C12	ES-0061	24-Oct-07
19	TU79	70-D19-00-3Q	13	C12	ES-0061	24-Oct-07
19	TU79	70-D19-00-3Q	14	C12	ES-0061	24-Oct-07
19	TU79	70-D19-00-3Q	15	C12	ES-0061	24-Oct-07
19	TU79	70-D19-00-3Q	16	C21	ES-0060	24-Oct-07
19	TU79	70-D19-00-3Q	17	C21	ES-0060	24-Oct-07
19	TU79	70-D19-00-3Q	18	C21	ES-0060	24-Oct-07
19	TU79	70-D19-00-3Q	19	C12	ES-0061	24-Oct-07
19	TU79	70-D19-00-3Q	20	C12	ES-0061	24-Oct-07
19	TU79	70-D19-00-3Q	21	C12	ES-0061	24-Oct-07
19	TU79	70-D19-00-3Q	22	C21	ES-0060	24-Oct-07
19	TU79	70-D19-00-3Q	23	C12	ES-0061	24-Oct-07
19	TU79	70-D19-00-3Q	24	C12	ES-0061	24-Oct-07
19	TU79	70-D19-00-3Q	25	C12	ES-0061	24-Oct-07
19	TU79	70-D19-00-3Q	26	C12	ES-0061	24-Oct-07
19	TU79	70-D19-00-3Q	27	C21	ES-0060	24-Oct-07
19	TU79	70-D19-00-3Q	28	C12	ES-0061	24-Oct-07
19	TU79	70-D19-00-3Q	29	C12	ES-0061	24-Oct-07
19	TU79	70-D19-00-3Q	30	C12	ES-0061	24-Oct-07
19	TU79	70-D19-00-3Q	31	C12	ES-0061	24-Oct-07
19	TU79	70-D19-00-3Q	32	C15	ES-0062	24-Oct-07
19	TU79	70-D19-00-3Q	33	C12	ES-0061	24-Oct-07
19	TU79	70-D19-00-3Q	34	C12	ES-0061	24-Oct-07
19	TU79	70-D19-00-3Q	35	C12	ES-0061	24-Oct-07
19	TU79	70-D19-00-3Q	36	C12	ES-0061	24-Oct-07
19	TU79	70-D19-00-3Q	37	C12	ES-0061	24-Oct-07
19	TU79	70-D19-00-3Q	38	C15	ES-0062	24-Oct-07

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU79	70-D19-00-3Q	39	C16	ES-0063	24-Oct-07
19	TU79	70-D19-00-3Q	40	C16	ES-0063	24-Oct-07
19	TU79	70-D19-00-3Q	41	C16	ES-0063	24-Oct-07
19	TU79	70-D19-00-3Q	42	C15	ES-0062	25-Oct-07
19	TU79	70-D19-00-3Q	43	C15	ES-0062	25-Oct-07
19	TU79	70-D19-00-3Q	44	C15	ES-0062	25-Oct-07
19	TU79	70-D19-00-3Q	45	C15	ES-0062	25-Oct-07
19	TU79	70-D19-00-3Q	46	C16	ES-0063	25-Oct-07
19	TU79	70-D19-00-3Q	47	C16	ES-0063	25-Oct-07
19	TU79	70-D19-00-3Q	48	C16	ES-0063	25-Oct-07
19	TU79	70-D19-00-3Q	49	C16	ES-0063	25-Oct-07
19	TU79	70-D19-00-3Q	50	C16	ES-0063	25-Oct-07
19	TU79	70-D19-00-3Q	51	C15	ES-0062	25-Oct-07
19	TU79	70-D19-00-3Q	52	C16	ES-0063	25-Oct-07
19	TU79	70-D19-00-3Q	53	C16	ES-0063	25-Oct-07
19	TU79	70-D19-00-3Q	54	C16	ES-0063	25-Oct-07
19	TU79	70-D19-00-3Q	55	C15	ES-0062	25-Oct-07
19	TU79	70-D19-00-3Q	56	C15	ES-0062	25-Oct-07
19	TU79	70-D19-00-3Q	57	C16	ES-0063	25-Oct-07
19	TU79	70-D19-00-3Q	58	C16	ES-0063	25-Oct-07
19	TU79	70-D19-00-3Q	59	C16	ES-0063	25-Oct-07
19	TU79	70-D19-00-3Q	60	C16	ES-0063	25-Oct-07
19	TU79	70-D19-00-3Q	61	C15	ES-0062	25-Oct-07
19	TU79	70-D19-00-3R	1	C01	ES-0054	22-Oct-07
19	TU79	70-D19-00-3R	2	C01	ES-0054	22-Oct-07
19	TU79	70-D19-00-3R	3	C01	ES-0054	22-Oct-07
19	TU79	70-D19-00-3R	4	C28	ES-0058	22-Oct-07
19	TU79	70-D19-00-3R	5	C28	ES-0058	22-Oct-07
19	TU79	70-D19-00-3R	6	C01	ES-0054	22-Oct-07
19	TU79	70-D19-00-3R	7	C01	ES-0054	22-Oct-07
19	TU79	70-D19-00-3R	8	C01	ES-0054	22-Oct-07
19	TU79	70-D19-00-3R	9	C28	ES-0058	22-Oct-07
19	TU79	70-D19-00-3R	10	C28	ES-0058	22-Oct-07
19	TU79	70-D19-00-3R	11	C28	ES-0058	22-Oct-07
19	TU79	70-D19-00-3R	12	C01	ES-0054	22-Oct-07
19	TU79	70-D19-00-3R	13	C01	ES-0054	22-Oct-07
19	TU79	70-D19-00-3R	14	C28	ES-0058	22-Oct-07

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU79	70-D19-00-3R	15	C28	ES-0058	22-Oct-07
19	TU79	70-D19-00-3R	16	C01	ES-0054	22-Oct-07
19	TU79	70-D19-00-3R	17	C01	ES-0054	22-Oct-07
19	TU79	70-D19-00-3R	18	C01	ES-0054	22-Oct-07
19	TU79	70-D19-00-3R	19	C01	ES-0054	22-Oct-07
19	TU79	70-D19-00-3R	20	C01	ES-0054	22-Oct-07
19	TU79	70-D19-00-3R	21	C28	ES-0058	22-Oct-07
19	TU79	70-D19-00-3R	22	C28	ES-0058	22-Oct-07
19	TU79	70-D19-00-3R	23	C01	ES-0054	22-Oct-07
19	TU79	70-D19-00-3R	24	C01	ES-0054	22-Oct-07
19	TU79	70-D19-00-3R	25	C01	ES-0054	22-Oct-07
19	TU79	70-D19-00-3R	26	C28	ES-0058	22-Oct-07
19	TU79	70-D19-00-3R	27	C20	ES-0059	23-Oct-07
19	TU79	70-D19-00-3R	28	C20	ES-0059	23-Oct-07
19	TU79	70-D19-00-3R	29	C20	ES-0059	23-Oct-07
19	TU79	70-D19-00-3R	30	C20	ES-0059	23-Oct-07
19	TU79	70-D19-00-3R	31	C20	ES-0059	23-Oct-07
19	TU79	70-D19-00-3R	32	C20	ES-0059	23-Oct-07
19	TU79	70-D19-00-3R	33	C20	ES-0059	23-Oct-07
19	TU79	70-D19-00-3R	34	C21	ES-0060	23-Oct-07
19	TU79	70-D19-00-3R	35	C21	ES-0060	23-Oct-07
19	TU79	70-D19-00-3R	36	C20	ES-0059	23-Oct-07
19	TU79	70-D19-00-3R	37	C20	ES-0059	23-Oct-07
19	TU79	70-D19-00-3R	38	C20	ES-0059	23-Oct-07
19	TU79	70-D19-00-3R	39	C20	ES-0059	23-Oct-07
19	TU79	70-D19-00-3R	40	C21	ES-0060	23-Oct-07
19	TU79	70-D19-00-3R	41	C21	ES-0060	23-Oct-07
19	TU79	70-D19-00-3R	42	C20	ES-0059	23-Oct-07
19	TU79	70-D19-00-3R	43	C20	ES-0059	23-Oct-07
19	TU79	70-D19-00-3R	44	C20	ES-0059	23-Oct-07
19	TU79	70-D19-00-3R	45	C20	ES-0059	23-Oct-07
19	TU79	70-D19-00-3R	46	C21	ES-0060	23-Oct-07
19	TU79	70-D19-00-3R	47	C21	ES-0060	23-Oct-07
19	TU79	70-D19-00-3R	48	C20	ES-0059	23-Oct-07
19	TU79	70-D19-00-3R	49	C20	ES-0059	23-Oct-07
19	TU79	70-D19-00-3R	50	C20	ES-0059	23-Oct-07
19	TU79	70-D19-00-3R	51	C20	ES-0059	23-Oct-07

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU79	70-D19-00-3R	52	C21	ES-0060	23-Oct-07
19	TU79	70-D19-00-3R	53	C21	ES-0060	23-Oct-07
19	TU79	70-D19-00-3R	54	C20	ES-0059	23-Oct-07
19	TU79	70-D19-00-3R	55	C21	ES-0060	23-Oct-07
19	TU79	70-D19-00-3R	56	C21	ES-0060	23-Oct-07
19	TU79	70-D19-00-3R	57	C21	ES-0060	23-Oct-07
19	TU79	70-D19-00-3R	58	C20	ES-0059	23-Oct-07
19	TU79	70-D19-00-3R	59	C21	ES-0060	23-Oct-07
19	TU79	70-D19-00-3R	60	C21	ES-0060	23-Oct-07
19	TU79	70-D19-00-3S	101	C17	ES-0064	26-Oct-07
19	TU79	70-D19-00-3S	102	C25	ES-0065	26-Oct-07
19	TU79	70-D19-00-3S	103	C17	ES-0064	26-Oct-07
19	TU79	70-D19-00-3S	104	C17	ES-0064	26-Oct-07
19	TU79	70-D19-00-3S	105	C17	ES-0064	26-Oct-07
19	TU79	70-D19-00-3S	106	C17	ES-0064	26-Oct-07
19	TU79	70-D19-00-3S	107	C17	ES-0064	26-Oct-07
19	TU79	70-D19-00-3S	108	C17	ES-0064	26-Oct-07
19	TU79	70-D19-00-3S	109	C25	ES-0065	26-Oct-07
19	TU79	70-D19-00-3S	110	C25	ES-0065	26-Oct-07
19	TU79	70-D19-00-3S	111	C25	ES-0065	26-Oct-07
19	TU79	70-D19-00-3S	112	C25	ES-0065	26-Oct-07
19	TU79	70-D19-00-8E	11	C15	ES-0062	25-Oct-07
19	TU80	70-D19-00-1Z	1	C22	ES-0053	19-Oct-07
19	TU80	70-D19-00-1Z	2	C22	ES-0053	19-Oct-07
19	TU80	70-D19-00-1Z	3	C22	ES-0053	19-Oct-07
19	TU80	70-D19-09-1U	1	C19	ES-0041	30-Aug-07
19	TU80	70-D19-09-1Z	1	C26	ES-0042	05-Sep-07
19	TU80	70-D19-09-1Z	2	C26	ES-0042	05-Sep-07
19	TU80	70-D19-09-1Z	3	C19	ES-0041	05-Sep-07
19	TU80	70-D19-09-1Z	4	C19	ES-0041	05-Sep-07
19	TU80	70-D19-09-1Z	5	C19	ES-0041	05-Sep-07
19	TU80	70-D19-09-1Z	6	C19	ES-0041	05-Sep-07
19	TU80	70-D19-09-1Z	7	C19	ES-0041	05-Sep-07
19	TU80	70-D19-09-1Z	8	C19	ES-0041	05-Sep-07
19	TU80	70-D19-09-1Z	9	C19	ES-0041	05-Sep-07
19	TU80	70-D19-09-5E	1	C37	ES-0040	30-Aug-07
19	TU80	70-D19-09-5E	2	C37	ES-0040	30-Aug-07

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU80	70-D19-09-5E	3	C37	ES-0040	30-Aug-07
19	TU80	70-D19-09-5E	4	C37	ES-0040	30-Aug-07
19	TU80	70-D19-09-5E	5	C37	ES-0040	30-Aug-07
19	TU80	70-D19-09-5E	6	C37	ES-0040	30-Aug-07
19	TU80	70-D19-09-5E	7	C37	ES-0040	30-Aug-07
19	TU80	70-D19-09-5E	8	C19	ES-0041	30-Aug-07
19	TU80	70-D19-09-5E	9	C19	ES-0041	30-Aug-07
19	TU80	70-D19-09-5E	10	C19	ES-0041	30-Aug-07
19	TU80	70-D19-09-5E	11	C19	ES-0041	30-Aug-07
19	TU80	70-D19-09-5E	12	C19	ES-0041	30-Aug-07
19	TU80	70-D19-09-5E	13	C19	ES-0041	30-Aug-07
19	TU80	70-D19-09-5E	14	C37	ES-0040	30-Aug-07
19	TU80	70-D19-09-5E	15	C37	ES-0040	30-Aug-07
19	TU80	70-D19-09-5E	16	C37	ES-0040	30-Aug-07
19	TU80	70-D19-09-5E	17	C19	ES-0041	30-Aug-07
19	TU80	70-D19-09-5E	18	C37	ES-0040	30-Aug-07
19	TU80	70-D19-09-5E	19	C19	ES-0041	30-Aug-07
19	TU80	70-D19-09-5E	20	C37	ES-0040	04-Sep-07
19	TU80	70-D19-09-5E	21	C37	ES-0040	04-Sep-07
19	TU80	70-D19-09-5E	22	C37	ES-0040	04-Sep-07
19	TU80	70-D19-09-5E	23	C19	ES-0041	04-Sep-07
19	TU80	70-D19-09-5E	24	C19	ES-0041	04-Sep-07
19	TU80	70-D19-09-5E	25	C19	ES-0041	04-Sep-07
19	TU80	70-D19-09-5E	26	C19	ES-0041	04-Sep-07
19	TU80	70-D19-09-5E	27	C37	ES-0040	04-Sep-07
19	TU80	70-D19-09-5E	28	C37	ES-0040	04-Sep-07
19	TU80	70-D19-09-5E	29	C37	ES-0040	04-Sep-07
19	TU80	70-D19-09-5E	30	C37	ES-0040	04-Sep-07
19	TU80	70-D19-09-5E	31	C19	ES-0041	04-Sep-07
19	TU80	70-D19-09-5E	32	C19	ES-0041	04-Sep-07
19	TU80	70-D19-09-5E	33	C19	ES-0041	04-Sep-07
19	TU80	70-D19-09-5E	34	C37	ES-0040	04-Sep-07
19	TU80	70-D19-09-5E	35	C37	ES-0040	04-Sep-07
19	TU80	70-D19-09-5E	36	C37	ES-0040	04-Sep-07
19	TU80	70-D19-09-5E	37	C37	ES-0040	04-Sep-07
19	TU81	70-D19-00-2F	1	C32	ES-0051	17-Oct-07
19	TU81	70-D19-00-2F	2	C32	ES-0051	17-Oct-07

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU81	70-D19-00-2F	3	C32	ES-0051	17-Oct-07
19	TU81	70-D19-00-2F	4	C31	ES-0050	17-Oct-07
19	TU81	70-D19-00-2F	5	C31	ES-0050	17-Oct-07
19	TU81	70-D19-00-2G	18	C31	ES-0050	17-Oct-07
19	TU81	70-D19-00-2G	19	C32	ES-0051	17-Oct-07
19	TU81	70-D19-00-2G	20	C32	ES-0051	17-Oct-07
19	TU81	70-D19-00-2G	21	C32	ES-0051	17-Oct-07
19	TU81	70-D19-00-2G	22	C32	ES-0051	17-Oct-07
19	TU81	70-D19-00-2H	1	C13	ES-0047	15-Oct-07
19	TU81	70-D19-00-2H	2	C13	ES-0047	15-Oct-07
19	TU81	70-D19-00-2H	3	C09	ES-0045	15-Oct-07
19	TU81	70-D19-00-2H	4	C13	ES-0047	15-Oct-07
19	TU81	70-D19-00-2H	5	C09	ES-0045	15-Oct-07
19	TU81	70-D19-00-2H	6	C13	ES-0047	15-Oct-07
19	TU81	70-D19-00-2H	7	C09	ES-0045	15-Oct-07
19	TU81	70-D19-00-2H	8	C13	ES-0047	15-Oct-07
19	TU81	70-D19-00-2H	9	C13	ES-0047	15-Oct-07
19	TU81	70-D19-00-2H	10	C13	ES-0047	16-Oct-07
19	TU81	70-D19-00-2H	11	C09	ES-0045	16-Oct-07
19	TU81	70-D19-00-2H	12	C13	ES-0047	16-Oct-07
19	TU81	70-D19-00-2H	13	C09	ES-0045	16-Oct-07
19	TU81	70-D19-00-2H	14	C09	ES-0045	16-Oct-07
19	TU81	70-D19-00-2H	15	C13	ES-0047	16-Oct-07
19	TU81	70-D19-00-2H	16	C24	ES-0092	07-May-08
19	TU81	70-D19-00-2H	17	C24	ES-0092	07-May-08
19	TU81	70-D19-00-2H	18	C24	ES-0092	07-May-08
19	TU81	70-D19-00-2H	19	C24	ES-0092	07-May-08
19	TU81	70-D19-00-2H	20	C24	ES-0092	07-May-08
19	TU81	70-D19-00-2H	21	C24	ES-0092	07-May-08
19	TU81	70-D19-00-2H	22	C24	ES-0092	07-May-08
19	TU81	70-D19-00-2H	23	C24	ES-0092	07-May-08
19	TU81	70-D19-00-2H	24	C24	ES-0092	08-May-08
19	TU81	70-D19-00-2H	25	C04	ES-0151	27-Aug-08
19	TU81	70-D19-00-2J	1	C13	ES-0047	16-Oct-07
19	TU81	70-D19-00-2K	1	C35	ES-0057	22-Oct-07
19	TU81	70-D19-00-2K	2	C35	ES-0057	22-Oct-07
19	TU81	70-D19-00-2K	3	C01	ES-0054	22-Oct-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU81	70-D19-00-2K	4	C28	ES-0058	22-Oct-07
19	TU81	70-D19-00-2O	5	C10	ES-0046	09-Oct-07
19	TU81	70-D19-00-2O	6	C10	ES-0046	09-Oct-07
19	TU81	70-D19-00-2O	7	C13	ES-0047	15-Oct-07
19	TU81	70-D19-00-2O	8	C13	ES-0047	15-Oct-07
19	TU81	70-D19-00-2O	9	C09	ES-0045	15-Oct-07
19	TU81	70-D19-00-2O	10	C09	ES-0045	15-Oct-07
19	TU81	70-D19-00-2O	11	C13	ES-0047	15-Oct-07
19	TU81	70-D19-00-2O	12	C13	ES-0047	15-Oct-07
19	TU81	70-D19-00-2S	1	C13	ES-0047	15-Oct-07
19	TU81	70-D19-00-3Y	53	C07	ES-0162	06-Oct-08
19	TU81	70-D19-00-3Y	54	C07	ES-0162	06-Oct-08
19	TU81	70-D19-00-3Y	55	C07	ES-0162	06-Oct-08
19	TU81	70-D19-00-3Y	56	C07	ES-0162	06-Oct-08
19	TU81	70-D19-00-3Y	57	C07	ES-0162	07-Oct-08
19	TU81	70-D19-00-3Y	58	C07	ES-0162	07-Oct-08
19	TU81	70-D19-00-3Y	59	C07	ES-0162	07-Oct-08
19	TU81	70-D19-00-3Y	60	C07	ES-0162	07-Oct-08
19	TU81	70-D19-00-3Y	61	C07	ES-0162	07-Oct-08
19	TU81	70-D19-00-3Y	62	C07	ES-0162	07-Oct-08
19	TU81	70-D19-00-5D	1	C09	ES-0045	10-Oct-07
19	TU81	70-D19-00-5D	2	C09	ES-0045	10-Oct-07
19	TU81	70-D19-00-5D	3	C09	ES-0045	15-Oct-07
19	TU81	70-D19-00-5D	4	C09	ES-0045	15-Oct-07
19	TU81	70-D19-00-5D	5	C09	ES-0045	15-Oct-07
19	TU81	70-D19-00-5D	6	C09	ES-0045	15-Oct-07
19	TU81	70-D19-00-5D	7	C13	ES-0047	15-Oct-07
19	TU81	70-D19-00-5D	8	C13	ES-0047	15-Oct-07
19	TU81	70-D19-00-5D	9	C13	ES-0047	15-Oct-07
19	TU81	70-D19-00-5D	10	C09	ES-0045	15-Oct-07
19	TU81	70-D19-00-5D	11	C13	ES-0047	15-Oct-07
19	TU81	70-D19-00-5D	12	C13	ES-0047	15-Oct-07
19	TU81	70-D19-00-5D	13	C13	ES-0047	15-Oct-07
19	TU81	70-D19-00-5D	14	C13	ES-0047	15-Oct-07
19	TU81	70-D19-00-5D	15	C13	ES-0047	15-Oct-07
19	TU81	70-D19-37-1F	1	C30	ES-0048	16-Oct-07
19	TU81	70-D19-37-1F	2	C30	ES-0048	16-Oct-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU81	70-D19-37-1F	3	C30	ES-0048	16-Oct-07
19	TU81	70-D19-37-1F	4	C29	ES-0049	16-Oct-07
19	TU81	70-D19-37-1F	5	C30	ES-0048	16-Oct-07
19	TU81	70-D19-37-1F	6	C30	ES-0048	16-Oct-07
19	TU81	70-D19-37-2F	1	C30	ES-0048	17-Oct-07
19	TU81	70-D19-37-2F	2	C29	ES-0049	17-Oct-07
19	TU81	70-D19-37-2G	1	C30	ES-0048	16-Oct-07
19	TU81	70-D19-37-2G	2	C29	ES-0049	16-Oct-07
19	TU81	70-D19-37-2G	3	C29	ES-0049	16-Oct-07
19	TU81	70-D19-37-2G	4	C30	ES-0048	16-Oct-07
19	TU81	70-D19-37-2G	5	C30	ES-0048	16-Oct-07
19	TU81	70-D19-37-2G	6	C30	ES-0048	16-Oct-07
19	TU81	70-D19-37-2G	7	C30	ES-0048	16-Oct-07
19	TU81	70-D19-37-2G	8	C29	ES-0049	16-Oct-07
19	TU81	70-D19-37-2G	9	C29	ES-0049	16-Oct-07
19	TU81	70-D19-37-2G	10	C30	ES-0048	16-Oct-07
19	TU81	70-D19-37-2G	11	C29	ES-0049	16-Oct-07
19	TU81	70-D19-37-5C	1	C30	ES-0048	16-Oct-07
19	TU81	70-D19-37-5C	2	C30	ES-0048	16-Oct-07
19	TU81	70-D19-37-5C	3	C29	ES-0049	16-Oct-07
19	TU81	70-D19-37-5C	4	C29	ES-0049	16-Oct-07
19	TU81	70-D19-37-5C	5	C29	ES-0049	16-Oct-07
19	TU81	70-D19-37-5C	6	C30	ES-0048	16-Oct-07
19	TU81	70-D19-37-5C	7	C29	ES-0049	16-Oct-07
19	TU82	70-D19-00-1J	1	C31	ES-0050	16-Oct-07
19	TU82	70-D19-00-1J	2	C13	ES-0047	16-Oct-07
19	TU82	70-D19-00-1J	3	C31	ES-0050	16-Oct-07
19	TU82	70-D19-00-1J	4	C31	ES-0050	16-Oct-07
19	TU82	70-D19-00-1J	5	C31	ES-0050	16-Oct-07
19	TU82	70-D19-00-1J	6	C31	ES-0050	16-Oct-07
19	TU82	70-D19-00-1J	7	C13	ES-0047	16-Oct-07
19	TU82	70-D19-00-1J	8	C13	ES-0047	16-Oct-07
19	TU82	70-D19-00-1J	9	C31	ES-0050	16-Oct-07
19	TU82	70-D19-00-1J	10	C31	ES-0050	16-Oct-07
19	TU82	70-D19-00-1J	11	C31	ES-0050	16-Oct-07
19	TU82	70-D19-00-1J	12	C31	ES-0050	16-Oct-07
19	TU82	70-D19-00-1J	13	C31	ES-0050	16-Oct-07

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU82	70-D19-00-1J	14	C32	ES-0051	17-Oct-07
19	TU82	70-D19-00-1J	15	C32	ES-0051	17-Oct-07
19	TU82	70-D19-00-1J	16	C32	ES-0051	17-Oct-07
19	TU82	70-D19-00-1J	17	C31	ES-0050	17-Oct-07
19	TU82	70-D19-00-1J	18	C31	ES-0050	17-Oct-07
19	TU82	70-D19-00-1J	19	C31	ES-0050	17-Oct-07
19	TU82	70-D19-00-1J	20	C31	ES-0050	17-Oct-07
19	TU82	70-D19-00-1J	21	C32	ES-0051	17-Oct-07
19	TU82	70-D19-00-1J	22	C32	ES-0051	17-Oct-07
19	TU82	70-D19-00-1J	23	C32	ES-0051	17-Oct-07
19	TU82	70-D19-00-1J	24	C32	ES-0051	17-Oct-07
19	TU82	70-D19-00-1J	25	C33	ES-0052	18-Oct-07
19	TU82	70-D19-00-1J	26	C33	ES-0052	18-Oct-07
19	TU82	70-D19-00-1J	27	C33	ES-0052	18-Oct-07
19	TU82	70-D19-00-1J	28	C33	ES-0052	18-Oct-07
19	TU82	70-D19-00-1J	29	C33	ES-0052	18-Oct-07
19	TU82	70-D19-00-1J	30	C33	ES-0052	18-Oct-07
19	TU82	70-D19-00-1J	31	C32	ES-0051	18-Oct-07
19	TU82	70-D19-00-1J	32	C32	ES-0051	18-Oct-07
19	TU82	70-D19-00-1J	33	C33	ES-0052	18-Oct-07
19	TU82	70-D19-00-1J	34	C33	ES-0052	18-Oct-07
19	TU82	70-D19-00-1J	35	C33	ES-0052	18-Oct-07
19	TU82	70-D19-00-1J	36	C33	ES-0052	18-Oct-07
19	TU82	70-D19-00-1J	37	C33	ES-0052	18-Oct-07
19	TU82	70-D19-00-1J	38	C32	ES-0051	18-Oct-07
19	TU82	70-D19-00-1J	39	C33	ES-0052	18-Oct-07
19	TU82	70-D19-00-1J	40	C33	ES-0052	18-Oct-07
19	TU82	70-D19-00-1J	41	C33	ES-0052	18-Oct-07
19	TU82	70-D19-00-1J	42	C32	ES-0051	18-Oct-07
19	TU82	70-D19-00-1J	43	C33	ES-0052	18-Oct-07
19	TU82	70-D19-00-1J	44	C32	ES-0051	18-Oct-07
19	TU82	70-D19-00-1J	45	C32	ES-0051	18-Oct-07
19	TU82	70-D19-00-1J	46	C33	ES-0052	18-Oct-07
19	TU82	70-D19-00-1J	47	C32	ES-0051	18-Oct-07
19	TU82	70-D19-00-1J	48	C32	ES-0051	18-Oct-07
19	TU82	70-D19-00-1U	2	C22	ES-0053	18-Oct-07
19	TU82	70-D19-00-1U	3	C22	ES-0053	18-Oct-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU82	70-D19-00-1U	4	C22	ES-0053	18-Oct-07
19	TU82	70-D19-00-1V	1	C32	ES-0051	18-Oct-07
19	TU82	70-D19-00-2D	1	C33	ES-0052	18-Oct-07
19	TU82	70-D19-00-2D	2	C33	ES-0052	18-Oct-07
19	TU82	70-D19-00-2D	3	C32	ES-0051	18-Oct-07
19	TU82	70-D19-00-2D	4	C33	ES-0052	18-Oct-07
19	TU82	70-D19-00-2D	5	C32	ES-0051	18-Oct-07
19	TU82	70-D19-00-2D	6	C32	ES-0051	18-Oct-07
19	TU82	70-D19-00-2D	7	C32	ES-0051	18-Oct-07
19	TU82	70-D19-00-2D	8	C32	ES-0051	18-Oct-07
19	TU82	70-D19-00-2F	6	C32	ES-0051	17-Oct-07
19	TU82	70-D19-00-2F	7	C31	ES-0050	17-Oct-07
19	TU82	70-D19-00-2F	8	C32	ES-0051	17-Oct-07
19	TU82	70-D19-00-2F	9	C31	ES-0050	17-Oct-07
19	TU82	70-D19-00-2F	10	C32	ES-0051	17-Oct-07
19	TU82	70-D19-00-2F	11	C32	ES-0051	17-Oct-07
19	TU82	70-D19-00-2F	12	C32	ES-0051	17-Oct-07
19	TU82	70-D19-00-3S	1	C33	ES-0052	18-Oct-07
19	TU82	70-D19-00-3S	2	C33	ES-0052	18-Oct-07
19	TU82	70-D19-00-3S	3	C33	ES-0052	18-Oct-07
19	TU82	70-D19-00-3S	4	C33	ES-0052	18-Oct-07
19	TU82	70-D19-00-3S	5	C22	ES-0053	18-Oct-07
19	TU82	70-D19-00-3S	6	C33	ES-0052	18-Oct-07
19	TU82	70-D19-00-3S	7	C22	ES-0053	18-Oct-07
19	TU82	70-D19-00-3S	8	C22	ES-0053	18-Oct-07
19	TU82	70-D19-00-3S	9	C22	ES-0053	18-Oct-07
19	TU82	70-D19-00-3S	10	C33	ES-0052	18-Oct-07
19	TU82	70-D19-00-3S	11	C33	ES-0052	18-Oct-07
19	TU82	70-D19-00-3S	12	C33	ES-0052	18-Oct-07
19	TU82	70-D19-00-3S	13	C33	ES-0052	18-Oct-07
19	TU82	70-D19-00-3S	14	C22	ES-0053	18-Oct-07
19	TU82	70-D19-00-3S	15	C22	ES-0053	18-Oct-07
19	TU82	70-D19-00-3S	16	C01	ES-0054	18-Oct-07
19	TU82	70-D19-00-3S	17	C01	ES-0054	18-Oct-07
19	TU82	70-D19-00-3S	18	C01	ES-0054	18-Oct-07
19	TU82	70-D19-00-3S	19	C01	ES-0054	18-Oct-07
19	TU82	70-D19-00-3S	20	C22	ES-0053	18-Oct-07

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU82	70-D19-00-3S	21	C22	ES-0053	18-Oct-07
19	TU82	70-D19-00-3S	22	C22	ES-0053	18-Oct-07
19	TU82	70-D19-00-3S	23	C22	ES-0053	18-Oct-07
19	TU82	70-D19-00-3S	24	C22	ES-0053	18-Oct-07
19	TU82	70-D19-00-3S	25	C06	ES-0055	19-Oct-07
19	TU82	70-D19-00-3S	26	C06	ES-0055	19-Oct-07
19	TU82	70-D19-00-3S	27	C06	ES-0055	19-Oct-07
19	TU82	70-D19-00-3S	28	C06	ES-0055	19-Oct-07
19	TU82	70-D19-00-3S	29	C06	ES-0055	19-Oct-07
19	TU82	70-D19-00-3S	30	C14	ES-0056	19-Oct-07
19	TU82	70-D19-00-3S	31	C06	ES-0055	19-Oct-07
19	TU82	70-D19-00-3S	32	C06	ES-0055	19-Oct-07
19	TU82	70-D19-00-3S	33	C06	ES-0055	19-Oct-07
19	TU82	70-D19-00-8C	1	C32	ES-0051	18-Oct-07
19	TU82	70-D19-37-1F	7	C30	ES-0048	16-Oct-07
19	TU82	70-D19-37-1F	8	C30	ES-0048	16-Oct-07
19	TU82	70-D19-37-1F	9	C29	ES-0049	16-Oct-07
19	TU82	70-D19-37-1F	10	C30	ES-0048	16-Oct-07
19	TU82	70-D19-37-1F	11	C29	ES-0049	16-Oct-07
19	TU82	70-D19-37-1F	12	C30	ES-0048	16-Oct-07
19	TU83	70-D19-00-3J	1	C02	ES-0066	15-Nov-07
19	TU83	70-D19-00-3J	2	C03	ES-0067	15-Nov-07
19	TU83	70-D19-00-3J	3	C03	ES-0067	15-Nov-07
19	TU83	70-D19-00-3J	4	C02	ES-0066	15-Nov-07
19	TU83	70-D19-00-3J	5	C02	ES-0066	15-Nov-07
19	TU83	70-D19-00-3J	6	C03	ES-0067	15-Nov-07
19	TU83	70-D19-00-3Y	1	C04	ES-0043	05-Oct-07
19	TU83	70-D19-00-3Y	2	C04	ES-0043	05-Oct-07
19	TU83	70-D19-00-3Y	3	C04	ES-0043	05-Oct-07
19	TU83	70-D19-00-3Y	4	C04	ES-0043	05-Oct-07
19	TU83	70-D19-00-3Y	5	C05	ES-0044	05-Oct-07
19	TU83	70-D19-00-3Y	6	C05	ES-0044	05-Oct-07
19	TU83	70-D19-00-3Y	7	C05	ES-0044	05-Oct-07
19	TU83	70-D19-00-3Y	8	C05	ES-0044	05-Oct-07
19	TU83	70-D19-00-3Y	9	C05	ES-0044	05-Oct-07
19	TU83	70-D19-00-3Y	10	C04	ES-0043	05-Oct-07
19	TU83	70-D19-00-3Y	11	C05	ES-0044	06-Oct-07

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU83	70-D19-00-3Y	12	C05	ES-0044	06-Oct-07
19	TU83	70-D19-00-3Y	13	C04	ES-0043	06-Oct-07
19	TU83	70-D19-00-3Y	14	C04	ES-0043	06-Oct-07
19	TU83	70-D19-00-5A	1	C02	ES-0066	15-Nov-07
19	TU83	70-D19-00-5A	2	C02	ES-0066	15-Nov-07
19	TU83	70-D19-00-5A	3	C03	ES-0067	15-Nov-07
19	TU83	70-D19-00-5A	4	C03	ES-0067	15-Nov-07
19	TU83	70-D19-00-5A	5	C02	ES-0066	15-Nov-07
19	TU83	70-D19-00-5A	6	C02	ES-0066	15-Nov-07
19	TU83	70-D19-00-5A	7	C02	ES-0066	15-Nov-07
19	TU83	70-D19-00-5A	8	C03	ES-0067	15-Nov-07
19	TU83	70-D19-00-5A	9	C03	ES-0067	15-Nov-07
19	TU83	70-D19-00-5A	10	C03	ES-0067	15-Nov-07
19	TU83	70-D19-00-5A	11	C02	ES-0066	15-Nov-07
19	TU83	70-D19-00-5A	12	C02	ES-0066	15-Nov-07
19	TU83	70-D19-00-5A	13	C02	ES-0066	15-Nov-07
19	TU83	70-D19-00-5A	14	C02	ES-0066	15-Nov-07
19	TU83	70-D19-00-5A	15	C03	ES-0067	15-Nov-07
19	TU83	70-D19-00-5A	16	C03	ES-0067	15-Nov-07
19	TU83	70-D19-00-5A	17	C02	ES-0066	15-Nov-07
19	TU83	70-D19-00-5A	18	C03	ES-0067	15-Nov-07
19	TU83	70-D19-00-5A	19	C03	ES-0067	15-Nov-07
19	TU83	70-D19-00-5A	20	C03	ES-0067	15-Nov-07
19	TU83	70-D19-00-5A	21	C03	ES-0067	15-Nov-07
19	TU83	70-D19-00-5A	22	C02	ES-0066	15-Nov-07
19	TU83	70-D19-00-5A	23	C03	ES-0067	16-Nov-07
19	TU83	70-D19-00-5A	24	C03	ES-0067	16-Nov-07
19	TU83	70-D19-00-5A	25	C02	ES-0066	16-Nov-07
19	TU83	70-D19-00-5A	26	C03	ES-0067	16-Nov-07
19	TU83	70-D19-00-5A	27	C03	ES-0067	16-Nov-07
19	TU83	70-D19-00-5A	28	C03	ES-0067	16-Nov-07
19	TU83	70-D19-00-5A	29	C03	ES-0067	16-Nov-07
18	TU84	70-D18-09-3P	23	C19	ES-0091	03-Apr-08
18	TU84	70-D18-09-3P	24	C36	ES-0242	09-Dec-09
18	TU84	70-D18-09-3P	25	C36	ES-0242	14-Dec-09
18	TU84	70-D18-09-3P	26	C36	ES-0242	15-Jan-10
18	TU84	70-D18-09-3Q	1	C19	ES-0070	29-Nov-07

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU84	70-D18-09-3Q	2	C19	ES-0091	03-Apr-08
18	TU84	70-D18-09-3R	1	C19	ES-0070	29-Nov-07
18	TU84	70-D18-09-3S	1	C18	ES-0071	29-Nov-07
18	TU84	70-D18-09-3S	2	C19	ES-0070	29-Nov-07
18	TU84	70-D18-09-3S	3	C19	ES-0070	29-Nov-07
18	TU84	70-D18-09-3S	4	C18	ES-0071	29-Nov-07
18	TU84	70-D18-09-3S	5	C18	ES-0071	29-Nov-07
18	TU84	70-D18-09-3S	6	C19	ES-0070	29-Nov-07
18	TU84	70-D18-09-3S	7	C18	ES-0071	29-Nov-07
18	TU84	70-D18-09-3S	8	C18	ES-0071	29-Nov-07
18	TU84	70-D18-09-3S	9	C18	ES-0071	29-Nov-07
18	TU84	70-D18-09-3S	10	C19	ES-0070	29-Nov-07
18	TU84	70-D18-09-3S	11	C18	ES-0071	29-Nov-07
18	TU84	70-D18-09-3S	12	C18	ES-0071	29-Nov-07
18	TU84	70-D18-09-4R	58	C19	ES-0070	27-Nov-07
18	TU84	70-D18-09-4R	59	C19	ES-0070	27-Nov-07
18	TU84	70-D18-09-4R	60	C19	ES-0070	27-Nov-07
18	TU84	70-D18-09-4R	61	C07	ES-0068	27-Nov-07
18	TU84	70-D18-09-4R	62	C19	ES-0070	27-Nov-07
18	TU84	70-D18-09-4R	63	C07	ES-0068	28-Nov-07
18	TU84	70-D18-09-4R	64	C07	ES-0068	28-Nov-07
18	TU84	70-D18-09-4R	65	C19	ES-0070	28-Nov-07
18	TU84	70-D18-09-4R	66	C07	ES-0068	28-Nov-07
18	TU84	70-D18-09-4R	67	C19	ES-0070	28-Nov-07
18	TU84	70-D18-09-4R	68	C19	ES-0070	28-Nov-07
18	TU85	70-D18-09-4R	1	C07	ES-0068	20-Nov-07
18	TU85	70-D18-09-4R	2	C07	ES-0068	20-Nov-07
18	TU85	70-D18-09-4R	3	C07	ES-0068	20-Nov-07
18	TU85	70-D18-09-4R	4	C07	ES-0068	20-Nov-07
18	TU85	70-D18-09-4R	5	C11	ES-0069	20-Nov-07
18	TU85	70-D18-09-4R	6	C11	ES-0069	20-Nov-07
18	TU85	70-D18-09-4R	7	C07	ES-0068	20-Nov-07
18	TU85	70-D18-09-4R	8	C07	ES-0068	20-Nov-07
18	TU85	70-D18-09-4R	9	C07	ES-0068	20-Nov-07
18	TU85	70-D18-09-4R	10	C11	ES-0069	20-Nov-07
18	TU85	70-D18-09-4R	11	C11	ES-0069	20-Nov-07
18	TU85	70-D18-09-4R	12	C11	ES-0069	20-Nov-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU85	70-D18-09-4R	13	C07	ES-0068	20-Nov-07
18	TU85	70-D18-09-4R	14	C07	ES-0068	20-Nov-07
18	TU85	70-D18-09-4R	15	C07	ES-0068	20-Nov-07
18	TU85	70-D18-09-4R	16	C07	ES-0068	20-Nov-07
18	TU85	70-D18-09-4R	17	C07	ES-0068	20-Nov-07
18	TU85	70-D18-09-4R	18	C11	ES-0069	20-Nov-07
18	TU85	70-D18-09-4R	19	C07	ES-0068	21-Nov-07
18	TU85	70-D18-09-4R	20	C11	ES-0069	21-Nov-07
18	TU85	70-D18-09-4R	21	C07	ES-0068	21-Nov-07
18	TU85	70-D18-09-4R	22	C07	ES-0068	21-Nov-07
18	TU85	70-D18-09-4R	23	C07	ES-0068	21-Nov-07
18	TU85	70-D18-09-4R	24	C11	ES-0069	21-Nov-07
18	TU85	70-D18-09-4R	25	C11	ES-0069	21-Nov-07
18	TU85	70-D18-09-4R	26	C11	ES-0069	21-Nov-07
18	TU85	70-D18-09-4R	27	C07	ES-0068	21-Nov-07
18	TU85	70-D18-09-4R	28	C07	ES-0068	21-Nov-07
18	TU85	70-D18-09-4R	29	C07	ES-0068	21-Nov-07
18	TU85	70-D18-09-4R	30	C07	ES-0068	26-Nov-07
18	TU85	70-D18-09-4R	31	C11	ES-0069	26-Nov-07
18	TU85	70-D18-09-4R	32	C11	ES-0069	26-Nov-07
18	TU85	70-D18-09-4R	33	C11	ES-0069	26-Nov-07
18	TU85	70-D18-09-4R	34	C11	ES-0069	26-Nov-07
18	TU85	70-D18-09-4R	35	C11	ES-0069	26-Nov-07
18	TU85	70-D18-09-4R	36	C11	ES-0069	26-Nov-07
18	TU85	70-D18-09-4R	37	C11	ES-0069	26-Nov-07
18	TU85	70-D18-09-4R	38	C11	ES-0069	26-Nov-07
18	TU85	70-D18-09-4R	39	C07	ES-0068	26-Nov-07
18	TU85	70-D18-09-4R	40	C07	ES-0068	26-Nov-07
18	TU85	70-D18-09-4R	41	C11	ES-0069	26-Nov-07
18	TU85	70-D18-09-4R	42	C11	ES-0069	26-Nov-07
18	TU85	70-D18-09-4R	43	C11	ES-0069	26-Nov-07
18	TU85	70-D18-09-4R	44	C11	ES-0069	26-Nov-07
18	TU85	70-D18-09-4R	45	C11	ES-0069	27-Nov-07
18	TU85	70-D18-09-4R	46	C11	ES-0069	27-Nov-07
18	TU85	70-D18-09-4R	47	C07	ES-0068	27-Nov-07
18	TU85	70-D18-09-4R	48	C07	ES-0068	27-Nov-07
18	TU85	70-D18-09-4R	49	C07	ES-0068	27-Nov-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU85	70-D18-09-4R	50	C11	ES-0069	27-Nov-07
18	TU85	70-D18-09-4R	51	C11	ES-0069	27-Nov-07
18	TU85	70-D18-09-4R	52	C11	ES-0069	27-Nov-07
18	TU85	70-D18-09-4R	53	C11	ES-0069	27-Nov-07
18	TU85	70-D18-09-4R	54	C11	ES-0069	27-Nov-07
18	TU85	70-D18-09-4R	55	C11	ES-0069	27-Nov-07
18	TU85	70-D18-09-4R	56	C11	ES-0069	27-Nov-07
18	TU85	70-D18-09-4R	57	C11	ES-0069	27-Nov-07
18	TU85	70-D18-09-8A	1	C09	ES-0073	05-Dec-07
18	TU85	70-D18-09-8A	2	C09	ES-0073	05-Dec-07
18	TU85	70-D18-09-8A	3	C17	ES-0072	05-Dec-07
18	TU85	70-D18-09-8B	1	C18	ES-0071	30-Nov-07
18	TU85	70-D18-09-8B	2	C18	ES-0071	30-Nov-07
18	TU85	70-D18-09-8B	3	C17	ES-0072	30-Nov-07
18	TU85	70-D18-09-8B	4	C18	ES-0071	30-Nov-07
18	TU85	70-D18-09-8B	5	C18	ES-0071	30-Nov-07
18	TU85	70-D18-09-8B	6	C17	ES-0072	30-Nov-07
18	TU85	70-D18-09-8B	7	C17	ES-0072	30-Nov-07
18	TU85	70-D18-09-8B	8	C17	ES-0072	30-Nov-07
18	TU85	70-D18-09-8B	9	C09	ES-0073	05-Dec-07
18	TU85	70-D18-09-8B	10	C09	ES-0073	05-Dec-07
18	TU85	70-D18-09-8B	11	C17	ES-0072	05-Dec-07
18	TU85	70-D18-09-8B	12	C17	ES-0072	05-Dec-07
18	TU85	70-D18-09-8B	13	C17	ES-0072	06-Dec-07
18	TU85	70-D18-09-8B	14	C09	ES-0073	06-Dec-07
18	TU85	70-D18-09-8B	15	C09	ES-0073	06-Dec-07
18	TU85	70-D18-09-8B	16	C09	ES-0073	06-Dec-07
18	TU85	70-D18-09-8B	17	C17	ES-0072	06-Dec-07
18	TU85	70-D18-09-8B	18	C17	ES-0072	06-Dec-07
18	TU85	70-D18-09-8B	19	C17	ES-0072	06-Dec-07
18	TU85	70-D18-09-8B	20	C09	ES-0073	06-Dec-07
18	TU85	70-D18-09-8B	21	C17	ES-0072	06-Dec-07
18	TU85	70-D18-09-8B	22	C17	ES-0072	06-Dec-07
18	TU85	70-D18-09-8B	23	C17	ES-0072	06-Dec-07
18	TU85	70-D18-09-8C	1	C18	ES-0071	30-Nov-07
18	TU85	70-D18-09-8C	2	C18	ES-0071	30-Nov-07
18	TU85	70-D18-09-8C	3	C18	ES-0071	03-Dec-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU85	70-D18-09-8C	4	C18	ES-0071	03-Dec-07
18	TU85	70-D18-09-8C	5	C17	ES-0072	03-Dec-07
18	TU86	70-D18-09-3I	1	C09	ES-0073	11-Dec-07
18	TU86	70-D18-09-3I	2	C09	ES-0073	11-Dec-07
18	TU86	70-D18-09-3I	3	C05	ES-0075	11-Dec-07
18	TU86	70-D18-09-3I	4	C05	ES-0075	11-Dec-07
18	TU86	70-D18-09-3I	5	C10	ES-0076	12-Dec-07
18	TU86	70-D18-09-3I	6	C05	ES-0075	12-Dec-07
18	TU86	70-D18-09-3I	7	C10	ES-0076	12-Dec-07
18	TU86	70-D18-09-3I	8	C05	ES-0075	12-Dec-07
18	TU86	70-D18-09-3I	9	C10	ES-0076	12-Dec-07
18	TU86	70-D18-09-3I	10	C10	ES-0076	12-Dec-07
18	TU86	70-D18-09-3I	11	C10	ES-0076	12-Dec-07
18	TU86	70-D18-09-3I	12	C10	ES-0076	12-Dec-07
18	TU86	70-D18-09-3I	13	C05	ES-0075	12-Dec-07
18	TU86	70-D18-09-3I	14	C05	ES-0075	12-Dec-07
18	TU86	70-D18-09-3I	15	C05	ES-0075	12-Dec-07
18	TU86	70-D18-09-3I	16	C05	ES-0075	12-Dec-07
18	TU86	70-D18-09-3I	17	C13	ES-0077	12-Dec-07
18	TU86	70-D18-09-3I	18	C13	ES-0077	12-Dec-07
18	TU86	70-D18-09-3I	19	C13	ES-0077	12-Dec-07
18	TU86	70-D18-09-3I	20	C13	ES-0077	12-Dec-07
18	TU86	70-D18-09-3I	21	C13	ES-0077	12-Dec-07
18	TU86	70-D18-09-3I	22	C13	ES-0077	12-Dec-07
18	TU86	70-D18-09-3I	23	C13	ES-0077	12-Dec-07
18	TU86	70-D18-09-3J	1	C05	ES-0075	11-Dec-07
18	TU86	70-D18-09-3J	2	C05	ES-0075	11-Dec-07
18	TU86	70-D18-09-3J	3	C05	ES-0075	12-Dec-07
18	TU86	70-D18-09-3J	4	C05	ES-0075	12-Dec-07
18	TU86	70-D18-09-3L	1	C16	ES-0074	11-Dec-07
18	TU86	70-D18-09-3L	2	C16	ES-0074	11-Dec-07
18	TU86	70-D18-09-3L	3	C16	ES-0074	11-Dec-07
18	TU86	70-D18-09-3N	1	C16	ES-0074	10-Dec-07
18	TU86	70-D18-09-3N	2	C16	ES-0074	10-Dec-07
18	TU86	70-D18-09-3N	3	C16	ES-0074	10-Dec-07
18	TU86	70-D18-09-3N	4	C16	ES-0074	10-Dec-07
18	TU86	70-D18-09-3N	5	C16	ES-0074	10-Dec-07

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU86	70-D18-09-3O	1	C09	ES-0073	10-Dec-07
18	TU86	70-D18-09-3O	2	C09	ES-0073	10-Dec-07
18	TU86	70-D18-09-3O	3	C16	ES-0074	10-Dec-07
18	TU86	70-D18-09-3O	4	C16	ES-0074	10-Dec-07
18	TU86	70-D18-09-3O	5	C16	ES-0074	10-Dec-07
18	TU86	70-D18-09-3O	6	C09	ES-0073	10-Dec-07
18	TU86	70-D18-09-3O	7	C16	ES-0074	10-Dec-07
18	TU86	70-D18-09-3O	8	C16	ES-0074	10-Dec-07
18	TU86	70-D18-09-3O	9	C16	ES-0074	10-Dec-07
18	TU86	70-D18-09-3O	10	C16	ES-0074	10-Dec-07
18	TU86	70-D18-09-3O	11	C09	ES-0073	10-Dec-07
18	TU86	70-D18-09-3O	12	C09	ES-0073	10-Dec-07
18	TU86	70-D18-09-3O	13	C16	ES-0074	10-Dec-07
18	TU86	70-D18-09-3O	14	C16	ES-0074	10-Dec-07
18	TU86	70-D18-09-3O	15	C09	ES-0073	10-Dec-07
18	TU86	70-D18-09-3O	16	C09	ES-0073	10-Dec-07
18	TU86	70-D18-09-3O	17	C16	ES-0074	10-Dec-07
18	TU86	70-D18-09-3O	18	C16	ES-0074	11-Dec-07
18	TU86	70-D18-09-3O	19	C16	ES-0074	11-Dec-07
18	TU87	70-D18-09-3A	1	C25	ES-0093	08-May-08
18	TU87	70-D18-09-3A	2	C25	ES-0093	08-May-08
18	TU87	70-D18-09-3A	3	C25	ES-0093	08-May-08
18	TU87	70-D18-09-3A	4	C27	ES-0094	08-May-08
18	TU87	70-D18-09-3A	5	C27	ES-0094	08-May-08
18	TU87	70-D18-09-3A	6	C25	ES-0093	08-May-08
18	TU87	70-D18-09-3A	7	C25	ES-0093	08-May-08
18	TU87	70-D18-09-3A	8	C27	ES-0094	08-May-08
18	TU87	70-D18-09-3B	1	C10	ES-0076	12-Dec-07
18	TU87	70-D18-09-3B	2	C05	ES-0075	12-Dec-07
18	TU87	70-D18-09-3B	3	C25	ES-0093	08-May-08
18	TU87	70-D18-09-3B	4	C27	ES-0094	08-May-08
18	TU87	70-D18-09-3B	5	C25	ES-0093	08-May-08
18	TU87	70-D18-09-3B	6	C25	ES-0093	08-May-08
18	TU87	70-D18-09-3B	7	C25	ES-0093	08-May-08
18	TU87	70-D18-09-3B	8	C27	ES-0094	08-May-08
18	TU87	70-D18-09-3B	9	C27	ES-0094	08-May-08
18	TU87	70-D18-09-3B	10	C27	ES-0094	09-May-08

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU87	70-D18-09-3B	11	C27	ES-0094	09-May-08
18	TU87	70-D18-09-3B	12	C27	ES-0094	09-May-08
18	TU87	70-D18-09-3C	1	C16	ES-0074	11-Dec-07
18	TU87	70-D18-09-3C	2	C16	ES-0074	11-Dec-07
18	TU87	70-D18-09-3C	3	C16	ES-0074	11-Dec-07
18	TU87	70-D18-09-3D	1	C09	ES-0073	11-Dec-07
18	TU87	70-D18-09-3D	2	C09	ES-0073	11-Dec-07
18	TU87	70-D18-09-3D	3	C05	ES-0075	11-Dec-07
18	TU87	70-D18-09-3D	4	C09	ES-0073	11-Dec-07
18	TU87	70-D18-09-3D	5	C05	ES-0075	11-Dec-07
18	TU87	70-D18-09-3D	6	C05	ES-0075	11-Dec-07
18	TU87	70-D18-09-3D	7	C05	ES-0075	11-Dec-07
18	TU87	70-D18-09-3D	8	C05	ES-0075	11-Dec-07
18	TU87	70-D18-09-3D	9	C05	ES-0075	11-Dec-07
18	TU87	70-D18-09-3D	10	C05	ES-0075	11-Dec-07
18	TU87	70-D18-09-3D	11	C09	ES-0073	11-Dec-07
18	TU87	70-D18-09-3D	12	C09	ES-0073	11-Dec-07
18	TU87	70-D18-09-3D	13	C05	ES-0075	11-Dec-07
18	TU87	70-D18-09-3D	14	C05	ES-0075	11-Dec-07
18	TU87	70-D18-09-3D	15	C05	ES-0075	11-Dec-07
18	TU87	70-D18-09-3D	16	C09	ES-0073	11-Dec-07
18	TU87	70-D18-09-3D	17	C05	ES-0075	11-Dec-07
18	TU87	70-D18-09-3D	18	C05	ES-0075	11-Dec-07
18	TU87	70-D18-09-3D	19	C05	ES-0075	11-Dec-07
18	TU87	70-D18-09-3D	20	C05	ES-0075	11-Dec-07
18	TU87	70-D18-09-3D	21	C05	ES-0075	11-Dec-07
18	TU87	70-D18-09-3D	22	C05	ES-0075	11-Dec-07
18	TU87	70-D18-09-3D	23	C05	ES-0075	11-Dec-07
18	TU87	70-D18-09-3D	24	C10	ES-0076	12-Dec-07
18	TU87	70-D18-09-3E	1	C16	ES-0074	11-Dec-07
18	TU87	70-D18-09-3E	2	C16	ES-0074	11-Dec-07
18	TU87	70-D18-09-3G	1	C05	ES-0075	12-Dec-07
18	TU87	70-D18-09-3H	1	C13	ES-0077	12-Dec-07
18	TU87	70-D18-09-3H	2	C13	ES-0077	12-Dec-07
18	TU87	70-D18-09-3H	3	C13	ES-0077	12-Dec-07
18	TU87	70-D18-09-3I	24	C13	ES-0077	12-Dec-07
18	TU87	70-D18-09-3I	25	C13	ES-0077	12-Dec-07

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU88	70-D18-33-3X	1	C06	ES-0133	14-Jan-08
18	TU88	70-D18-33-3X	2	C11	ES-0135	14-Jan-08
18	TU88	70-D18-33-3X	3	C11	ES-0135	14-Jan-08
18	TU88	70-D18-33-4B	1	C22	ES-0080	16-Jan-08
18	TU88	70-D18-33-4B	2	C23	ES-0081	17-Jan-08
18	TU88	70-D18-33-4B	3	C22	ES-0080	17-Jan-08
18	TU88	70-D18-33-4B	4	C22	ES-0080	17-Jan-08
18	TU88	70-D18-33-4B	5	C22	ES-0080	17-Jan-08
18	TU88	70-D18-33-4B	6	C22	ES-0080	17-Jan-08
18	TU88	70-D18-33-4B	7	C22	ES-0080	17-Jan-08
18	TU88	70-D18-33-4B	8	C22	ES-0080	21-Jan-08
18	TU88	70-D18-33-4B	9	C22	ES-0080	21-Jan-08
18	TU88	70-D18-33-4B	10	C33	ES-0082	21-Jan-08
18	TU88	70-D18-33-4B	11	C33	ES-0082	21-Jan-08
18	TU88	70-D18-33-4B	12	C33	ES-0082	21-Jan-08
18	TU88	70-D18-33-4B	13	C33	ES-0082	21-Jan-08
18	TU88	70-D18-33-4B	14	C33	ES-0082	21-Jan-08
18	TU88	70-D18-33-4C	1	C22	ES-0080	16-Jan-08
18	TU88	70-D18-33-4C	2	C22	ES-0080	16-Jan-08
18	TU88	70-D18-33-4C	3	C22	ES-0080	16-Jan-08
18	TU88	70-D18-33-4C	4	C22	ES-0080	16-Jan-08
18	TU88	70-D18-33-4C	5	C22	ES-0080	16-Jan-08
18	TU88	70-D18-33-4C	6	C22	ES-0080	16-Jan-08
18	TU88	70-D18-33-4C	7	C22	ES-0080	16-Jan-08
18	TU88	70-D18-33-4C	8	C22	ES-0080	16-Jan-08
18	TU88	70-D18-33-4C	9	C22	ES-0080	16-Jan-08
18	TU88	70-D18-33-4C	10	C22	ES-0080	16-Jan-08
18	TU88	70-D18-33-4D	1	C12	ES-0078	14-Jan-08
18	TU88	70-D18-33-4D	2	C21	ES-0079	14-Jan-08
18	TU88	70-D18-33-4D	3	C12	ES-0078	14-Jan-08
18	TU88	70-D18-33-4D	4	C21	ES-0079	14-Jan-08
18	TU88	70-D18-33-4D	5	C21	ES-0079	14-Jan-08
18	TU88	70-D18-33-4D	6	C21	ES-0079	14-Jan-08
18	TU88	70-D18-33-4D	7	C21	ES-0079	14-Jan-08
18	TU88	70-D18-33-4D	8	C21	ES-0079	14-Jan-08
18	TU88	70-D18-33-4D	9	C12	ES-0078	15-Jan-08
18	TU88	70-D18-33-4D	10	C12	ES-0078	15-Jan-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU88	70-D18-33-4D	11	C21	ES-0079	15-Jan-08
18	TU88	70-D18-33-4D	12	C21	ES-0079	15-Jan-08
18	TU88	70-D18-33-4D	13	C21	ES-0079	15-Jan-08
18	TU88	70-D18-33-4D	14	C21	ES-0079	15-Jan-08
18	TU88	70-D18-33-4D	15	C21	ES-0079	15-Jan-08
18	TU88	70-D18-33-4D	16	C12	ES-0078	15-Jan-08
18	TU88	70-D18-33-4D	17	C12	ES-0078	15-Jan-08
18	TU88	70-D18-33-4D	18	C21	ES-0079	15-Jan-08
18	TU88	70-D18-33-4D	19	C21	ES-0079	15-Jan-08
18	TU88	70-D18-33-4D	20	C22	ES-0080	15-Jan-08
18	TU88	70-D18-33-4D	21	C22	ES-0080	15-Jan-08
18	TU88	70-D18-33-4D	22	C22	ES-0080	15-Jan-08
18	TU88	70-D18-33-4D	23	C22	ES-0080	16-Jan-08
18	TU88	70-D18-33-4W	1	C12	ES-0078	14-Jan-08
18	TU88	70-D18-33-4W	2	C12	ES-0078	14-Jan-08
18	TU88	70-D18-33-4W	3	C21	ES-0079	14-Jan-08
18	TU88	70-D18-33-4W	4	C21	ES-0079	14-Jan-08
18	TU88	70-D18-33-4W	5	C21	ES-0079	14-Jan-08
18	TU88	70-D18-33-4W	6	C21	ES-0079	14-Jan-08
18	TU88	70-D18-33-6A	1	C33	ES-0082	21-Jan-08
18	TU88	70-D18-33-6A	2	C33	ES-0082	21-Jan-08
18	TU88	70-D18-33-6A	3	C33	ES-0082	21-Jan-08
18	TU88	70-D18-33-6A	4	C33	ES-0082	21-Jan-08
18	TU88	70-D18-33-6A	5	C23	ES-0081	21-Jan-08
18	TU88	70-D18-33-6A	6	C23	ES-0081	21-Jan-08
18	TU88	70-D18-33-6A	7	C33	ES-0082	21-Jan-08
18	TU88	70-D18-33-6A	8	C33	ES-0082	05-Feb-08
18	TU88	70-D18-33-6A	9	C33	ES-0082	05-Feb-08
18	TU88	70-D18-33-6A	10	C33	ES-0082	05-Feb-08
18	TU88	70-D18-33-6A	11	C33	ES-0082	05-Feb-08
18	TU88	70-D18-33-6A	12	C33	ES-0082	05-Feb-08
18	TU88	70-D18-33-6A	13	C33	ES-0082	05-Feb-08
18	TU88	70-D18-33-6A	14	C33	ES-0082	05-Feb-08
18	TU88	70-D18-33-6A	15	C33	ES-0082	05-Feb-08
18	TU88	70-D18-33-6A	16	C31	ES-0083	05-Feb-08
18	TU88	70-D18-33-6A	17	C31	ES-0083	05-Feb-08
18	TU88	70-D18-33-6A	18	C31	ES-0083	05-Feb-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU89	70-D18-33-4P	1	C33	ES-0082	21-Jan-08
18	TU89	70-D18-33-4P	2	C33	ES-0082	21-Jan-08
18	TU89	70-D18-33-4P	3	C33	ES-0082	21-Jan-08
18	TU89	70-D18-33-4P	4	C33	ES-0082	21-Jan-08
18	TU89	70-D18-33-4P	5	C23	ES-0081	21-Jan-08
18	TU89	70-D18-33-4P	6	C33	ES-0082	21-Jan-08
18	TU89	70-D18-33-4P	7	C23	ES-0081	21-Jan-08
18	TU89	70-D18-33-4P	8	C23	ES-0081	21-Jan-08
18	TU89	70-D18-33-4P	9	C23	ES-0081	05-Feb-08
18	TU89	70-D18-33-4P	10	C23	ES-0081	05-Feb-08
18	TU89	70-D18-33-4P	11	C23	ES-0081	05-Feb-08
18	TU89	70-D18-33-4P	12	C31	ES-0083	05-Feb-08
18	TU89	70-D18-33-4P	13	C23	ES-0081	05-Feb-08
18	TU89	70-D18-33-4P	14	C23	ES-0081	05-Feb-08
18	TU89	70-D18-33-4P	15	C31	ES-0083	05-Feb-08
18	TU89	70-D18-33-4P	16	C31	ES-0083	05-Feb-08
18	TU89	70-D18-33-4P	17	C31	ES-0083	05-Feb-08
18	TU89	70-D18-33-4P	18	C23	ES-0081	05-Feb-08
18	TU89	70-D18-33-4P	19	C23	ES-0081	05-Feb-08
18	TU89	70-D18-33-4P	20	C31	ES-0083	05-Feb-08
18	TU89	70-D18-33-4P	21	C31	ES-0083	05-Feb-08
18	TU89	70-D18-33-4P	22	C23	ES-0081	05-Feb-08
18	TU89	70-D18-33-4P	23	C23	ES-0081	05-Feb-08
18	TU89	70-D18-33-4P	24	C31	ES-0083	05-Feb-08
18	TU89	70-D18-33-4P	25	C31	ES-0083	05-Feb-08
18	TU89	70-D18-33-4P	26	C31	ES-0083	05-Feb-08
18	TU89	70-D18-33-4P	27	C23	ES-0081	05-Feb-08
18	TU89	70-D18-33-4P	28	C23	ES-0081	05-Feb-08
18	TU89	70-D18-33-4P	29	C31	ES-0083	05-Feb-08
18	TU89	70-D18-33-4P	30	C31	ES-0083	05-Feb-08
18	TU89	70-D18-33-4P	31	C32	ES-0084	05-Feb-08
18	TU89	70-D18-33-4P	32	C31	ES-0083	05-Feb-08
18	TU89	70-D18-33-4P	33	C31	ES-0083	05-Feb-08
18	TU89	70-D18-33-4P	34	C32	ES-0084	05-Feb-08
18	TU89	70-D18-33-4P	35	C32	ES-0084	06-Feb-08
18	TU89	70-D18-33-4P	36	C32	ES-0084	06-Feb-08
18	TU89	70-D18-33-4P	37	C32	ES-0084	06-Feb-08

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU89	70-D18-33-4P	38	C32	ES-0084	06-Feb-08
18	TU89	70-D18-33-4P	39	C32	ES-0084	06-Feb-08
18	TU89	70-D18-33-4P	40	C32	ES-0084	06-Feb-08
18	TU89	70-D18-33-4P	41	C32	ES-0084	06-Feb-08
18	TU89	70-D18-33-4P	42	C32	ES-0084	06-Feb-08
18	TU89	70-D18-33-4P	43	C32	ES-0084	07-Feb-08
18	TU89	70-D18-33-4P	44	C32	ES-0084	07-Feb-08
18	TU89	70-D18-33-4P	45	C31	ES-0083	07-Feb-08
18	TU89	70-D18-33-4P	46	C31	ES-0083	07-Feb-08
18	TU89	70-D18-33-4P	47	C31	ES-0083	07-Feb-08
18	TU89	70-D18-33-4P	48	C31	ES-0083	07-Feb-08
18	TU89	70-D18-33-4P	49	C31	ES-0083	07-Feb-08
18	TU89	70-D18-33-4P	50	C31	ES-0083	07-Feb-08
18	TU89	70-D18-33-4P	51	C32	ES-0084	07-Feb-08
18	TU89	70-D18-33-4P	52	C32	ES-0084	07-Feb-08
18	TU89	70-D18-33-4P	53	C32	ES-0084	07-Feb-08
18	TU89	70-D18-33-4P	54	C31	ES-0083	07-Feb-08
18	TU89	70-D18-33-4V	1	C12	ES-0078	15-Jan-08
18	TU89	70-D18-33-4V	2	C12	ES-0078	15-Jan-08
18	TU89	70-D18-33-4V	3	C12	ES-0078	15-Jan-08
18	TU89	70-D18-33-4V	4	C12	ES-0078	15-Jan-08
18	TU89	70-D18-33-4V	5	C12	ES-0078	15-Jan-08
18	TU89	70-D18-33-4V	6	C12	ES-0078	15-Jan-08
18	TU89	70-D18-33-4V	7	C21	ES-0079	15-Jan-08
18	TU89	70-D18-33-4V	8	C21	ES-0079	15-Jan-08
18	TU89	70-D18-33-4V	9	C21	ES-0079	15-Jan-08
18	TU89	70-D18-33-4V	10	C12	ES-0078	15-Jan-08
18	TU89	70-D18-33-4V	11	C12	ES-0078	15-Jan-08
18	TU89	70-D18-33-4V	12	C12	ES-0078	15-Jan-08
18	TU89	70-D18-33-4V	13	C12	ES-0078	15-Jan-08
18	TU89	70-D18-33-4V	14	C12	ES-0078	15-Jan-08
18	TU89	70-D18-33-4V	15	C12	ES-0078	15-Jan-08
18	TU89	70-D18-33-4V	16	C12	ES-0078	15-Jan-08
18	TU89	70-D18-33-4V	17	C12	ES-0078	15-Jan-08
18	TU89	70-D18-33-4V	18	C21	ES-0079	15-Jan-08
18	TU89	70-D18-33-4V	19	C21	ES-0079	15-Jan-08
18	TU89	70-D18-33-4V	20	C21	ES-0079	15-Jan-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU89	70-D18-33-4V	21	C21	ES-0079	15-Jan-08
18	TU89	70-D18-33-4V	22	C12	ES-0078	15-Jan-08
18	TU89	70-D18-33-4V	23	C21	ES-0079	15-Jan-08
18	TU89	70-D18-33-4V	24	C21	ES-0079	15-Jan-08
18	TU89	70-D18-33-4V	25	C21	ES-0079	15-Jan-08
18	TU89	70-D18-33-4V	26	C12	ES-0078	15-Jan-08
18	TU89	70-D18-33-4V	27	C12	ES-0078	15-Jan-08
18	TU89	70-D18-33-4V	28	C22	ES-0080	16-Jan-08
18	TU89	70-D18-33-4V	29	C12	ES-0078	16-Jan-08
18	TU89	70-D18-33-4V	30	C23	ES-0081	16-Jan-08
18	TU89	70-D18-33-4V	31	C23	ES-0081	16-Jan-08
18	TU89	70-D18-33-4V	32	C22	ES-0080	16-Jan-08
18	TU89	70-D18-33-4V	33	C22	ES-0080	16-Jan-08
18	TU89	70-D18-33-4V	34	C22	ES-0080	16-Jan-08
18	TU89	70-D18-33-4V	35	C23	ES-0081	16-Jan-08
18	TU89	70-D18-33-4V	36	C23	ES-0081	16-Jan-08
18	TU89	70-D18-33-4V	37	C23	ES-0081	16-Jan-08
18	TU89	70-D18-33-4V	38	C23	ES-0081	16-Jan-08
18	TU89	70-D18-33-4V	39	C23	ES-0081	16-Jan-08
18	TU89	70-D18-33-4V	40	C22	ES-0080	16-Jan-08
18	TU89	70-D18-33-4V	41	C22	ES-0080	16-Jan-08
18	TU89	70-D18-33-4V	42	C22	ES-0080	16-Jan-08
18	TU89	70-D18-33-4V	43	C23	ES-0081	16-Jan-08
18	TU89	70-D18-33-4V	44	C23	ES-0081	21-Jan-08
18	TU89	70-D18-33-4V	45	C23	ES-0081	21-Jan-08
18	TU89	70-D18-33-4V	46	C23	ES-0081	21-Jan-08
18	TU89	70-D18-33-4V	47	C33	ES-0082	21-Jan-08
18	TU89	70-D18-33-4V	48	C33	ES-0082	21-Jan-08
18	TU89	70-D18-33-4V	49	C23	ES-0081	21-Jan-08
18	TU90	70-D18-33-4O	1	C36	ES-0086	08-Feb-08
18	TU90	70-D18-33-4O	2	C36	ES-0086	08-Feb-08
18	TU90	70-D18-33-4O	3	C36	ES-0086	08-Feb-08
18	TU90	70-D18-33-4O	4	C36	ES-0086	08-Feb-08
18	TU90	70-D18-33-4O	5	C36	ES-0086	08-Feb-08
18	TU90	70-D18-33-4O	6	C35	ES-0085	08-Feb-08
18	TU90	70-D18-33-4O	7	C35	ES-0085	08-Feb-08
18	TU90	70-D18-33-4P	55	C35	ES-0085	07-Feb-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU90	70-D18-33-4P	56	C32	ES-0084	07-Feb-08
18	TU90	70-D18-33-4P	57	C32	ES-0084	07-Feb-08
18	TU90	70-D18-33-4P	58	C32	ES-0084	07-Feb-08
18	TU90	70-D18-33-4P	59	C35	ES-0085	07-Feb-08
18	TU90	70-D18-33-4P	60	C35	ES-0085	07-Feb-08
18	TU90	70-D18-33-4P	61	C32	ES-0084	07-Feb-08
18	TU90	70-D18-33-4P	62	C32	ES-0084	07-Feb-08
18	TU90	70-D18-33-4P	63	C32	ES-0084	07-Feb-08
18	TU90	70-D18-33-4P	64	C32	ES-0084	07-Feb-08
18	TU90	70-D18-33-4P	65	C35	ES-0085	07-Feb-08
18	TU90	70-D18-33-4P	66	C35	ES-0085	07-Feb-08
18	TU90	70-D18-33-4P	67	C35	ES-0085	07-Feb-08
18	TU90	70-D18-33-4P	68	C35	ES-0085	07-Feb-08
18	TU90	70-D18-33-4P	69	C32	ES-0084	07-Feb-08
18	TU90	70-D18-33-4P	70	C32	ES-0084	07-Feb-08
18	TU90	70-D18-33-4P	71	C32	ES-0084	07-Feb-08
18	TU90	70-D18-33-4P	72	C35	ES-0085	07-Feb-08
18	TU90	70-D18-33-4P	73	C35	ES-0085	07-Feb-08
18	TU90	70-D18-33-4P	74	C36	ES-0086	08-Feb-08
18	TU90	70-D18-33-4P	75	C36	ES-0086	08-Feb-08
18	TU90	70-D18-33-4P	76	C36	ES-0086	08-Feb-08
18	TU90	70-D18-33-4P	77	C36	ES-0086	08-Feb-08
18	TU90	70-D18-33-4P	78	C36	ES-0086	08-Feb-08
18	TU90	70-D18-33-4P	79	C36	ES-0086	08-Feb-08
18	TU90	70-D18-33-4P	80	C35	ES-0085	08-Feb-08
18	TU90	70-D18-33-4P	81	C35	ES-0085	08-Feb-08
18	TU90	70-D18-33-4P	82	C35	ES-0085	08-Feb-08
18	TU90	70-D18-33-4P	83	C35	ES-0085	08-Feb-08
18	TU90	70-D18-33-4P	84	C35	ES-0085	08-Feb-08
18	TU90	70-D18-33-4P	85	C35	ES-0085	08-Feb-08
18	TU90	70-D18-33-4P	86	C10	ES-0134	16-Jul-08
18	TU90	70-D18-33-4P	87	C10	ES-0134	16-Jul-08
18	TU90	70-D18-33-4P	88	C10	ES-0134	16-Jul-08
18	TU90	70-D18-33-4P	89	C06	ES-0133	16-Jul-08
18	TU90	70-D18-33-4P	90	C06	ES-0133	16-Jul-08
18	TU90	70-D18-33-4P	91	C10	ES-0134	16-Jul-08
18	TU90	70-D18-33-4P	92	C06	ES-0133	16-Jul-08

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU90	70-D18-33-4P	93	C10	ES-0134	16-Jul-08
18	TU90	70-D18-33-4P	94	C10	ES-0134	16-Jul-08
18	TU90	70-D18-33-4Q	1	C11	ES-0135	19-Jul-08
18	TU90	70-D18-33-8E	1	C35	ES-0085	08-Feb-08
18	TU90	70-D18-33-8E	2	C35	ES-0085	08-Feb-08
18	TU91	70-D18-33-1M	1	C33	ES-0095	09-May-08
18	TU91	70-D18-33-1M	2	C33	ES-0095	09-May-08
18	TU91	70-D18-33-1M	3	C34	ES-0096	09-May-08
18	TU91	70-D18-33-1M	4	C34	ES-0096	09-May-08
18	TU91	70-D18-33-1M	5	C34	ES-0096	10-May-08
18	TU91	70-D18-33-1M	6	C33	ES-0095	10-May-08
18	TU91	70-D18-33-1M	7	C34	ES-0096	10-May-08
18	TU91	70-D18-33-1M	8	C34	ES-0096	10-May-08
18	TU91	70-D18-33-1M	9	C33	ES-0095	10-May-08
18	TU91	70-D18-33-1M	10	C33	ES-0095	10-May-08
18	TU91	70-D18-33-1M	11	C36	ES-0097	10-May-08
18	TU91	70-D18-33-1M	12	C28	ES-0098	10-May-08
18	TU91	70-D18-33-1M	13	C36	ES-0097	10-May-08
18	TU91	70-D18-33-1M	14	C28	ES-0098	10-May-08
18	TU91	70-D18-33-1M	15	C36	ES-0097	10-May-08
18	TU91	70-D18-33-1M	16	C36	ES-0097	10-May-08
18	TU91	70-D18-33-1M	17	C10	ES-0134	17-Jul-08
18	TU91	70-D18-33-1M	18	C10	ES-0134	17-Jul-08
18	TU91	70-D18-33-2X	1	C32	ES-0084	07-Feb-08
18	TU91	70-D18-33-2X	2	C32	ES-0084	07-Feb-08
18	TU91	70-D18-33-2X	3	C32	ES-0084	07-Feb-08
18	TU91	70-D18-33-2X	4	C35	ES-0085	07-Feb-08
18	TU91	70-D18-33-2X	5	C32	ES-0084	07-Feb-08
18	TU91	70-D18-33-2X	6	C32	ES-0084	07-Feb-08
18	TU91	70-D18-33-2X	7	C36	ES-0086	07-Feb-08
18	TU91	70-D18-33-2X	8	C36	ES-0086	07-Feb-08
18	TU91	70-D18-33-2X	9	C36	ES-0086	07-Feb-08
18	TU91	70-D18-33-2X	10	C36	ES-0086	08-Feb-08
18	TU91	70-D18-33-2X	11	C36	ES-0086	08-Feb-08
18	TU91	70-D18-33-2X	12	C35	ES-0085	08-Feb-08
18	TU91	70-D18-33-2X	13	C36	ES-0086	08-Feb-08
18	TU91	70-D18-33-2X	14	C36	ES-0086	08-Feb-08

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU91	70-D18-33-2X	15	C35	ES-0085	08-Feb-08
18	TU91	70-D18-33-2X	16	C35	ES-0085	08-Feb-08
18	TU91	70-D18-33-2X	17	C35	ES-0085	08-Feb-08
18	TU91	70-D18-33-2X	18	C36	ES-0086	08-Feb-08
18	TU91	70-D18-33-2X	19	C35	ES-0085	08-Feb-08
18	TU91	70-D18-33-2X	20	C35	ES-0085	08-Feb-08
18	TU91	70-D18-33-2X	21	C35	ES-0085	08-Feb-08
18	TU91	70-D18-33-2X	22	C33	ES-0095	09-May-08
18	TU91	70-D18-33-2X	23	C33	ES-0095	09-May-08
18	TU91	70-D18-33-2X	24	C33	ES-0095	09-May-08
18	TU91	70-D18-33-2X	25	C34	ES-0096	09-May-08
18	TU91	70-D18-33-2X	26	C34	ES-0096	09-May-08
18	TU91	70-D18-33-2X	27	C34	ES-0096	09-May-08
18	TU91	70-D18-33-2X	28	C33	ES-0095	09-May-08
18	TU91	70-D18-33-2X	29	C33	ES-0095	09-May-08
18	TU91	70-D18-33-2X	30	C34	ES-0096	09-May-08
18	TU91	70-D18-33-2X	31	C34	ES-0096	09-May-08
18	TU91	70-D18-33-2X	32	C34	ES-0096	09-May-08
18	TU91	70-D18-33-2X	33	C10	ES-0134	15-Jul-08
18	TU91	70-D18-33-2X	34	C10	ES-0134	15-Jul-08
18	TU91	70-D18-33-8D	1	C35	ES-0085	08-Feb-08
18	TU92	70-D18-44-2G	1	C27	ES-0088	11-Feb-08
18	TU92	70-D18-44-2G	2	C37	ES-0087	11-Feb-08
18	TU92	70-D18-44-2G	3	C27	ES-0088	11-Feb-08
18	TU92	70-D18-44-2G	4	C27	ES-0088	11-Feb-08
18	TU92	70-D18-44-2G	5	C27	ES-0088	11-Feb-08
18	TU92	70-D18-44-2G	6	C37	ES-0087	11-Feb-08
18	TU92	70-D18-44-2G	7	C37	ES-0087	11-Feb-08
18	TU92	70-D18-44-2G	8	C27	ES-0088	11-Feb-08
18	TU92	70-D18-44-2G	9	C27	ES-0088	11-Feb-08
18	TU92	70-D18-44-2G	10	C27	ES-0088	11-Feb-08
18	TU92	70-D18-44-2G	11	C37	ES-0087	11-Feb-08
18	TU92	70-D18-44-2G	12	C37	ES-0087	12-Feb-08
18	TU92	70-D18-44-2G	13	C37	ES-0087	12-Feb-08
18	TU92	70-D18-44-2G	14	C37	ES-0087	12-Feb-08
18	TU92	70-D18-44-2G	15	C27	ES-0088	12-Feb-08
18	TU92	70-D18-44-2G	16	C27	ES-0088	12-Feb-08

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU92	70-D18-44-2G	17	C37	ES-0087	12-Feb-08
18	TU92	70-D18-44-2G	18	C37	ES-0087	12-Feb-08
18	TU92	70-D18-44-2G	19	C37	ES-0087	12-Feb-08
18	TU92	70-D18-44-2G	20	C37	ES-0087	12-Feb-08
18	TU92	70-D18-44-2G	21	C37	ES-0087	12-Feb-08
18	TU92	70-D18-44-2G	22	C37	ES-0087	12-Feb-08
18	TU92	70-D18-44-2G	23	C37	ES-0087	12-Feb-08
18	TU92	70-D18-44-2G	24	C37	ES-0087	12-Feb-08
18	TU93	70-D18-44-2I	1	C27	ES-0088	12-Feb-08
18	TU93	70-D18-44-2I	2	C27	ES-0088	12-Feb-08
18	TU93	70-D18-44-2I	3	C37	ES-0087	12-Feb-08
18	TU93	70-D18-44-2I	4	C37	ES-0087	12-Feb-08
18	TU93	70-D18-44-2I	5	C27	ES-0088	12-Feb-08
18	TU93	70-D18-44-2I	6	C27	ES-0088	12-Feb-08
18	TU93	70-D18-44-2I	7	C27	ES-0088	12-Feb-08
18	TU93	70-D18-44-2I	8	C27	ES-0088	13-Feb-08
18	TU93	70-D18-44-2I	9	C26	ES-0089	13-Feb-08
18	TU93	70-D18-44-2I	10	C26	ES-0089	13-Feb-08
18	TU93	70-D18-44-2I	11	C26	ES-0089	13-Feb-08
18	TU93	70-D18-44-2I	12	C26	ES-0089	13-Feb-08
18	TU93	70-D18-44-2J	1	C27	ES-0088	13-Feb-08
18	TU93	70-D18-44-2J	2	C27	ES-0088	13-Feb-08
18	TU93	70-D18-44-2J	3	C26	ES-0089	13-Feb-08
18	TU93	70-D18-44-2J	4	C27	ES-0088	14-Feb-08
18	TU93	70-D18-44-2J	5	C27	ES-0088	14-Feb-08
18	TU93	70-D18-44-2J	6	C26	ES-0089	14-Feb-08
18	TU93	70-D18-44-2J	7	C26	ES-0089	14-Feb-08
18	TU93	70-D18-44-2J	8	C27	ES-0088	14-Feb-08
18	TU93	70-D18-44-2J	9	C27	ES-0088	14-Feb-08
18	TU93	70-D18-44-2J	10	C26	ES-0089	14-Feb-08
18	TU93	70-D18-44-2J	11	C26	ES-0089	14-Feb-08
18	TU93	70-D18-44-2K	1	C26	ES-0089	14-Feb-08
18	TU93	70-D18-44-2K	2	C26	ES-0089	14-Feb-08
18	TU93	70-D18-44-2K	3	C26	ES-0089	14-Feb-08
18	TU93	70-D18-44-2K	4	C26	ES-0089	14-Feb-08
18	TU93	70-D18-44-2K	5	C27	ES-0088	14-Feb-08
18	TU93	70-D18-44-2K	6	C27	ES-0088	14-Feb-08

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU93	70-D18-44-2K	7	C27	ES-0088	14-Feb-08
18	TU93	70-D18-44-2K	8	C27	ES-0088	14-Feb-08
18	TU93	70-D18-44-2K	9	C26	ES-0089	14-Feb-08
18	TU93	70-D18-44-2K	10	C26	ES-0089	14-Feb-08
18	TU93	70-D18-44-2K	11	C26	ES-0089	14-Feb-08
18	TU93	70-D18-44-2K	12	C26	ES-0089	14-Feb-08
18	TU93	70-D18-44-2K	13	C26	ES-0089	14-Feb-08
18	TU93	70-D18-44-2K	14	C26	ES-0089	14-Feb-08
18	TU93	70-D18-44-2K	15	C25	ES-0090	14-Feb-08
18	TU93	70-D18-44-2K	16	C25	ES-0090	14-Feb-08
18	TU93	70-D18-44-2K	17	C27	ES-0088	14-Feb-08
18	TU93	70-D18-44-2K	18	C25	ES-0090	14-Feb-08
18	TU93	70-D18-44-2K	19	C25	ES-0090	14-Feb-08
18	TU93	70-D18-44-2K	20	C25	ES-0090	14-Feb-08
18	TU93	70-D18-44-2K	21	C25	ES-0090	14-Feb-08
18	TU93	70-D18-44-2K	22	C27	ES-0088	14-Feb-08
18	TU93	70-D18-44-2K	23	C25	ES-0090	14-Feb-08
18	TU93	70-D18-44-2K	24	C25	ES-0090	15-Feb-08
18	TU93	70-D18-44-2K	25	C25	ES-0090	15-Feb-08
18	TU93	70-D18-44-2K	26	C25	ES-0090	15-Feb-08
18	TU93	70-D18-44-2K	27	C25	ES-0090	15-Feb-08
18	TU93	70-D18-44-2K	28	C25	ES-0090	15-Feb-08
18	TU93	70-D18-44-2K	29	C25	ES-0090	15-Feb-08
18	TU94	70-D18-44-1L	1	C17	ES-0138	30-Jul-08
18	TU94	70-D18-44-1L	2	C24	ES-0137	01-Aug-08
18	TU94	70-D18-44-1L	3	C17	ES-0138	01-Aug-08
18	TU94	70-D18-44-1L	4	C17	ES-0138	01-Aug-08
18	TU94	70-D18-44-1L	5	C17	ES-0138	01-Aug-08
18	TU94	70-D18-44-1L	6	C17	ES-0138	01-Aug-08
18	TU94	70-D18-44-1L	7	C17	ES-0138	01-Aug-08
18	TU94	70-D18-44-1L	8	C17	ES-0138	01-Aug-08
18	TU94	70-D18-44-1L	9	C17	ES-0138	01-Aug-08
18	TU94	70-D18-44-1L	10	C17	ES-0138	02-Aug-08
18	TU94	70-D18-44-1L	11	C24	ES-0137	05-Aug-08
18	TU94	70-D18-44-1L	26	C16	ES-0139	07-Aug-08
18	TU94	70-D18-44-1L	27	C16	ES-0139	07-Aug-08
18	TU94	70-D18-44-1L	28	C16	ES-0139	07-Aug-08

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU94	70-D18-44-1L	29	C09	ES-0141	07-Aug-08
18	TU94	70-D18-44-1L	30	C09	ES-0141	07-Aug-08
18	TU94	70-D18-44-1L	31	C15	ES-0140	07-Aug-08
18	TU94	70-D18-44-1L	32	C09	ES-0141	07-Aug-08
18	TU94	70-D18-44-1L	33	C09	ES-0141	07-Aug-08
18	TU94	70-D18-44-1L	34	C09	ES-0141	08-Aug-08
18	TU94	70-D18-44-1M	1	C24	ES-0137	28-Jul-08
18	TU94	70-D18-44-1M	2	C18	ES-0136	28-Jul-08
18	TU94	70-D18-44-1M	3	C24	ES-0137	28-Jul-08
18	TU94	70-D18-44-1M	4	C18	ES-0136	28-Jul-08
18	TU94	70-D18-44-1M	5	C18	ES-0136	28-Jul-08
18	TU94	70-D18-44-1M	6	C24	ES-0137	29-Jul-08
18	TU94	70-D18-44-1M	7	C24	ES-0137	29-Jul-08
18	TU94	70-D18-44-1M	8	C18	ES-0136	30-Jul-08
18	TU94	70-D18-44-1M	9	C24	ES-0137	30-Jul-08
18	TU94	70-D18-44-1M	10	C24	ES-0137	31-Jul-08
18	TU94	70-D18-44-1M	11	C17	ES-0138	31-Jul-08
18	TU94	70-D18-44-1M	12	C17	ES-0138	31-Jul-08
18	TU94	70-D18-44-1M	13	C17	ES-0138	31-Jul-08
18	TU94	70-D18-44-1O	1	C18	ES-0136	23-Jul-08
18	TU94	70-D18-44-1O	2	C18	ES-0136	23-Jul-08
18	TU94	70-D18-44-1O	3	C18	ES-0136	23-Jul-08
18	TU94	70-D18-44-1O	4	C18	ES-0136	23-Jul-08
18	TU94	70-D18-44-1O	5	C18	ES-0136	23-Jul-08
18	TU94	70-D18-44-1O	6	C18	ES-0136	23-Jul-08
18	TU94	70-D18-44-1O	7	C18	ES-0136	29-Jul-08
18	TU94	70-D18-44-1O	8	C18	ES-0136	29-Jul-08
18	TU94	70-D18-44-1O	9	C24	ES-0137	29-Jul-08
18	TU94	70-D18-44-1O	10	C24	ES-0137	29-Jul-08
18	TU94	70-D18-44-1O	11	C18	ES-0136	29-Jul-08
18	TU94	70-D18-44-1O	12	C16	ES-0139	07-Aug-08
18	TU94	70-D18-44-1O	13	C09	ES-0141	07-Aug-08
18	TU94	70-D18-44-1Q	1	C18	ES-0136	24-Jul-08
18	TU94	70-D18-44-1Q	2	C18	ES-0136	25-Jul-08
18	TU94	70-D18-44-1Q	3	C18	ES-0136	25-Jul-08
18	TU94	70-D18-44-1Q	4	C24	ES-0137	25-Jul-08
18	TU94	70-D18-44-1Q	5	C24	ES-0137	25-Jul-08

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU94	70-D18-44-1Q	6	C18	ES-0136	25-Jul-08
18	TU94	70-D18-44-1Q	7	C18	ES-0136	25-Jul-08
18	TU94	70-D18-44-1Q	8	C18	ES-0136	25-Jul-08
18	TU94	70-D18-44-1Q	9	C17	ES-0138	31-Jul-08
18	TU94	70-D18-44-1Q	10	C17	ES-0138	31-Jul-08
18	TU94	70-D18-44-1Q	11	C17	ES-0138	31-Jul-08
18	TU94	70-D18-44-1Q	12	C17	ES-0138	31-Jul-08
18	TU94	70-D18-44-1Q	13	C17	ES-0138	31-Jul-08
18	TU94	70-D18-44-1Q	14	C17	ES-0138	31-Jul-08
18	TU94	70-D18-44-1S	1	C24	ES-0137	22-Jul-08
18	TU94	70-D18-44-1S	2	C18	ES-0136	22-Jul-08
18	TU94	70-D18-44-1S	3	C18	ES-0136	22-Jul-08
18	TU94	70-D18-44-1S	4	C18	ES-0136	22-Jul-08
18	TU94	70-D18-44-1S	5	C18	ES-0136	23-Jul-08
18	TU94	70-D18-44-1S	6	C18	ES-0136	23-Jul-08
18	TU94	70-D18-44-1S	7	C18	ES-0136	23-Jul-08
18	TU94	70-D18-44-1S	8	C18	ES-0136	24-Jul-08
18	TU94	70-D18-44-1S	9	C18	ES-0136	24-Jul-08
18	TU94	70-D18-44-1S	10	C18	ES-0136	24-Jul-08
18	TU94	70-D18-44-1S	11	C24	ES-0137	24-Jul-08
18	TU94	70-D18-44-1S	12	C24	ES-0137	24-Jul-08
18	TU94	70-D18-44-1S	13	C18	ES-0136	24-Jul-08
18	TU94	70-D18-44-1S	14	C18	ES-0136	24-Jul-08
18	TU94	70-D18-44-1T	1	C18	ES-0136	24-Jul-08
18	TU95	70-D18-00-1G	1	C12	ES-0106	17-May-08
18	TU95	70-D18-00-1G	2	C12	ES-0106	17-May-08
18	TU95	70-D18-00-1G	3	C12	ES-0106	17-May-08
18	TU95	70-D18-00-1G	4	C20	ES-0107	17-May-08
18	TU95	70-D18-00-1G	5	C20	ES-0107	17-May-08
18	TU95	70-D18-00-2K	1	C12	ES-0106	17-May-08
18	TU95	70-D18-00-2K	2	C20	ES-0107	17-May-08
18	TU95	70-D18-00-2K	3	C12	ES-0106	17-May-08
18	TU95	70-D18-00-2K	4	C20	ES-0107	17-May-08
18	TU95	70-D18-00-2K	5	C12	ES-0106	17-May-08
18	TU95	70-D18-00-2K	6	C12	ES-0106	17-May-08
18	TU95	70-D18-00-2K	7	C20	ES-0107	17-May-08
18	TU95	70-D18-00-2K	8	C18	ES-0136	23-Jul-08

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU95	70-D18-00-2K	9	C18	ES-0136	23-Jul-08
18	TU95	70-D18-33-1F	1	C07	ES-0105	16-May-08
18	TU95	70-D18-33-1G	1	C01	ES-0104	16-May-08
18	TU95	70-D18-33-1G	2	C07	ES-0105	16-May-08
18	TU95	70-D18-33-1G	3	C01	ES-0104	16-May-08
18	TU95	70-D18-33-1G	4	C07	ES-0105	16-May-08
18	TU95	70-D18-33-1G	5	C01	ES-0104	16-May-08
18	TU95	70-D18-33-1G	6	C01	ES-0104	16-May-08
18	TU95	70-D18-33-1G	7	C07	ES-0105	16-May-08
18	TU95	70-D18-33-1G	8	C07	ES-0105	16-May-08
18	TU95	70-D18-33-1G	9	C07	ES-0105	16-May-08
18	TU95	70-D18-33-1G	10	C01	ES-0104	16-May-08
18	TU95	70-D18-33-1G	11	C01	ES-0104	16-May-08
18	TU95	70-D18-33-1G	12	C01	ES-0104	16-May-08
18	TU95	70-D18-33-1G	13	C07	ES-0105	16-May-08
18	TU95	70-D18-33-1G	14	C07	ES-0105	16-May-08
18	TU95	70-D18-33-1G	15	C07	ES-0105	16-May-08
18	TU95	70-D18-33-1G	16	C07	ES-0105	16-May-08
18	TU95	70-D18-33-1G	17	C01	ES-0104	17-May-08
18	TU95	70-D18-33-1G	18	C07	ES-0105	17-May-08
18	TU95	70-D18-33-1G	19	C07	ES-0105	17-May-08
18	TU95	70-D18-33-2M	1	C02	ES-0103	16-May-08
18	TU95	70-D18-33-2M	2	C02	ES-0103	16-May-08
18	TU95	70-D18-33-2M	3	C02	ES-0103	16-May-08
18	TU95	70-D18-33-2M	4	C01	ES-0104	16-May-08
18	TU95	70-D18-33-2M	5	C01	ES-0104	16-May-08
18	TU95	70-D18-33-2N	41	C02	ES-0103	15-May-08
18	TU95	70-D18-33-2N	42	C03	ES-0102	15-May-08
18	TU95	70-D18-33-2N	43	C03	ES-0102	15-May-08
18	TU95	70-D18-33-2N	44	C03	ES-0102	15-May-08
18	TU95	70-D18-33-2N	45	C02	ES-0103	15-May-08
18	TU95	70-D18-33-2N	46	C02	ES-0103	15-May-08
18	TU95	70-D18-33-2N	47	C03	ES-0102	15-May-08
18	TU95	70-D18-33-2N	48	C03	ES-0102	15-May-08
18	TU95	70-D18-33-2N	49	C02	ES-0103	15-May-08
18	TU95	70-D18-33-2N	50	C02	ES-0103	15-May-08
18	TU95	70-D18-33-2N	51	C01	ES-0104	16-May-08

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU95	70-D18-33-2N	52	C01	ES-0104	16-May-08
18	TU95	70-D18-33-2N	53	C01	ES-0104	16-May-08
18	TU95	70-D18-33-2N	54	C07	ES-0105	16-May-08
18	TU95	70-D18-33-8O	1	C03	ES-0102	15-May-08
18	TU95	70-D18-33-8O	2	C03	ES-0102	15-May-08
18	TU95	70-D18-33-8O	3	C02	ES-0103	15-May-08
18	TU95	70-D18-33-8S	1	C02	ES-0103	16-May-08
18	TU95	70-D18-33-8S	2	C01	ES-0104	16-May-08
18	TU95	70-D18-33-8S	3	C07	ES-0105	16-May-08
18	TU95	70-D18-33-8T	1	C01	ES-0104	17-May-08
18	TU95	70-D18-33-8T	2	C07	ES-0105	17-May-08
18	TU96	70-D18-33-2M	6	C02	ES-0103	16-May-08
18	TU96	70-D18-33-2M	7	C07	ES-0105	16-May-08
18	TU96	70-D18-33-2M	8	C07	ES-0105	16-May-08
18	TU96	70-D18-33-2O	1	C05	ES-0100	14-May-08
18	TU96	70-D18-33-2O	2	C04	ES-0101	14-May-08
18	TU96	70-D18-33-2P	1	C05	ES-0100	14-May-08
18	TU96	70-D18-33-2P	2	C04	ES-0101	14-May-08
18	TU96	70-D18-33-2R	1	C06	ES-0099	13-May-08
18	TU96	70-D18-33-2R	2	C06	ES-0099	13-May-08
18	TU96	70-D18-33-2R	3	C06	ES-0099	13-May-08
18	TU96	70-D18-33-4M	1	C05	ES-0100	13-May-08
18	TU96	70-D18-33-4M	2	C05	ES-0100	13-May-08
18	TU96	70-D18-33-4M	3	C06	ES-0099	13-May-08
18	TU96	70-D18-33-4M	4	C05	ES-0100	13-May-08
18	TU96	70-D18-33-4M	5	C06	ES-0099	13-May-08
18	TU96	70-D18-33-4M	6	C05	ES-0100	13-May-08
18	TU96	70-D18-33-4M	7	C05	ES-0100	13-May-08
18	TU96	70-D18-33-4M	8	C06	ES-0099	13-May-08
18	TU96	70-D18-33-4M	9	C05	ES-0100	13-May-08
18	TU96	70-D18-33-4M	10	C05	ES-0100	13-May-08
18	TU96	70-D18-33-4M	11	C04	ES-0101	13-May-08
18	TU96	70-D18-33-4M	12	C04	ES-0101	13-May-08
18	TU96	70-D18-33-4M	13	C05	ES-0100	13-May-08
18	TU96	70-D18-33-4M	14	C04	ES-0101	13-May-08
18	TU96	70-D18-33-4M	15	C04	ES-0101	13-May-08
18	TU96	70-D18-33-4M	16	C05	ES-0100	13-May-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU96	70-D18-33-4M	17	C05	ES-0100	13-May-08
18	TU96	70-D18-33-4M	18	C04	ES-0101	13-May-08
18	TU96	70-D18-33-4M	19	C05	ES-0100	14-May-08
18	TU96	70-D18-33-4M	20	C05	ES-0100	14-May-08
18	TU96	70-D18-33-4M	21	C04	ES-0101	14-May-08
18	TU96	70-D18-33-4M	22	C04	ES-0101	14-May-08
18	TU96	70-D18-33-4M	23	C04	ES-0101	14-May-08
18	TU96	70-D18-33-4M	24	C04	ES-0101	14-May-08
18	TU96	70-D18-33-4M	25	C05	ES-0100	14-May-08
18	TU96	70-D18-33-4M	26	C05	ES-0100	14-May-08
18	TU96	70-D18-33-4M	27	C04	ES-0101	14-May-08
18	TU96	70-D18-33-4M	28	C04	ES-0101	14-May-08
18	TU96	70-D18-33-4M	29	C04	ES-0101	14-May-08
18	TU96	70-D18-33-4M	30	C03	ES-0102	14-May-08
18	TU96	70-D18-33-4M	31	C04	ES-0101	14-May-08
18	TU96	70-D18-33-4M	32	C04	ES-0101	14-May-08
18	TU96	70-D18-33-4M	33	C04	ES-0101	14-May-08
18	TU96	70-D18-33-4M	34	C03	ES-0102	14-May-08
18	TU96	70-D18-33-4M	35	C03	ES-0102	14-May-08
18	TU96	70-D18-33-4M	36	C04	ES-0101	14-May-08
18	TU96	70-D18-33-4M	37	C04	ES-0101	14-May-08
18	TU96	70-D18-33-4M	38	C03	ES-0102	14-May-08
18	TU96	70-D18-33-4M	39	C04	ES-0101	14-May-08
18	TU96	70-D18-33-4M	40	C03	ES-0102	14-May-08
18	TU96	70-D18-33-4M	41	C02	ES-0103	15-May-08
18	TU96	70-D18-33-4M	42	C03	ES-0102	15-May-08
18	TU96	70-D18-33-4M	43	C02	ES-0103	15-May-08
18	TU96	70-D18-33-4M	44	C03	ES-0102	15-May-08
18	TU96	70-D18-33-4M	45	C02	ES-0103	15-May-08
18	TU96	70-D18-33-4M	46	C03	ES-0102	15-May-08
18	TU96	70-D18-33-4M	47	C02	ES-0103	15-May-08
18	TU96	70-D18-33-4M	48	C03	ES-0102	15-May-08
18	TU96	70-D18-33-4M	49	C03	ES-0102	15-May-08
18	TU96	70-D18-33-4M	50	C02	ES-0103	15-May-08
18	TU96	70-D18-33-4M	51	C03	ES-0102	15-May-08
18	TU96	70-D18-33-4M	52	C02	ES-0103	15-May-08
18	TU96	70-D18-33-4M	53	C03	ES-0102	15-May-08

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU96	70-D18-33-4M	54	C03	ES-0102	15-May-08
18	TU96	70-D18-33-4M	55	C02	ES-0103	15-May-08
18	TU96	70-D18-33-4M	56	C36	ES-0164	15-May-08
18	TU96	70-D18-33-4M	57	C36	ES-0164	15-May-08
18	TU96	70-D18-33-4M	58	C36	ES-0164	15-May-08
18	TU96	70-D18-33-4M	59	C36	ES-0164	15-May-08
18	TU96	70-D18-33-4O	63	C06	ES-0099	13-May-08
18	TU96	70-D18-33-4O	64	C28	ES-0098	13-May-08
18	TU96	70-D18-33-4O	65	C28	ES-0098	13-May-08
18	TU96	70-D18-33-4O	66	C06	ES-0099	13-May-08
18	TU96	70-D18-33-4O	67	C05	ES-0100	13-May-08
18	TU96	70-D18-33-4O	68	C06	ES-0099	13-May-08
18	TU96	70-D18-33-4O	69	C06	ES-0099	13-May-08
18	TU96	70-D18-33-8P	1	C01	ES-0104	16-May-08
18	TU96	70-D18-33-8P	2	C02	ES-0103	16-May-08
18	TU96	70-D18-33-8P	3	C01	ES-0104	16-May-08
18	TU97	70-D18-33-2N	1	C28	ES-0098	10-May-08
18	TU97	70-D18-33-2N	2	C36	ES-0097	10-May-08
18	TU97	70-D18-33-2N	3	C28	ES-0098	12-May-08
18	TU97	70-D18-33-2N	4	C28	ES-0098	12-May-08
18	TU97	70-D18-33-2N	5	C36	ES-0097	12-May-08
18	TU97	70-D18-33-2N	6	C36	ES-0097	12-May-08
18	TU97	70-D18-33-2N	7	C36	ES-0097	12-May-08
18	TU97	70-D18-33-2N	8	C28	ES-0098	12-May-08
18	TU97	70-D18-33-2N	9	C36	ES-0097	12-May-08
18	TU97	70-D18-33-2N	10	C06	ES-0099	12-May-08
18	TU97	70-D18-33-2N	11	C06	ES-0099	12-May-08
18	TU97	70-D18-33-2N	12	C28	ES-0098	12-May-08
18	TU97	70-D18-33-2N	13	C28	ES-0098	12-May-08
18	TU97	70-D18-33-2N	14	C06	ES-0099	12-May-08
18	TU97	70-D18-33-2N	15	C06	ES-0099	12-May-08
18	TU97	70-D18-33-2N	16	C06	ES-0099	13-May-08
18	TU97	70-D18-33-2N	17	C06	ES-0099	13-May-08
18	TU97	70-D18-33-2N	18	C28	ES-0098	13-May-08
18	TU97	70-D18-33-2N	19	C06	ES-0099	13-May-08
18	TU97	70-D18-33-2N	20	C06	ES-0099	13-May-08
18	TU97	70-D18-33-2N	21	C05	ES-0100	13-May-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU97	70-D18-33-2N	22	C05	ES-0100	13-May-08
18	TU97	70-D18-33-2N	23	C06	ES-0099	13-May-08
18	TU97	70-D18-33-2N	24	C05	ES-0100	13-May-08
18	TU97	70-D18-33-2N	25	C06	ES-0099	13-May-08
18	TU97	70-D18-33-2N	26	C05	ES-0100	14-May-08
18	TU97	70-D18-33-2N	27	C05	ES-0100	14-May-08
18	TU97	70-D18-33-2N	28	C04	ES-0101	14-May-08
18	TU97	70-D18-33-2N	29	C04	ES-0101	14-May-08
18	TU97	70-D18-33-2N	30	C05	ES-0100	14-May-08
18	TU97	70-D18-33-2N	31	C04	ES-0101	14-May-08
18	TU97	70-D18-33-2N	32	C04	ES-0101	14-May-08
18	TU97	70-D18-33-2N	33	C05	ES-0100	14-May-08
18	TU97	70-D18-33-2N	34	C05	ES-0100	14-May-08
18	TU97	70-D18-33-2N	35	C05	ES-0100	14-May-08
18	TU97	70-D18-33-2N	36	C04	ES-0101	14-May-08
18	TU97	70-D18-33-2N	37	C04	ES-0101	14-May-08
18	TU97	70-D18-33-2N	38	C03	ES-0102	15-May-08
18	TU97	70-D18-33-2N	39	C02	ES-0103	15-May-08
18	TU97	70-D18-33-2N	40	C02	ES-0103	15-May-08
18	TU97	70-D18-33-2N	55	C36	ES-0164	02-Dec-08
18	TU97	70-D18-33-2N	56	C36	ES-0164	02-Dec-08
18	TU97	70-D18-33-2N	57	C36	ES-0164	02-Dec-08
18	TU97	70-D18-33-2N	58	C36	ES-0164	02-Dec-08
18	TU97	70-D18-33-2N	59	C36	ES-0164	02-Dec-08
18	TU97	70-D18-33-2S	1	C36	ES-0097	12-May-08
18	TU97	70-D18-33-8J	1	C36	ES-0097	12-May-08
18	TU97	70-D18-33-8J	2	C36	ES-0097	12-May-08
18	TU97	70-D18-33-8K	1	C28	ES-0098	12-May-08
18	TU97	70-D18-33-8K	2	C06	ES-0099	12-May-08
18	TU97	70-D18-33-8K	3	C06	ES-0099	12-May-08
18	TU97	70-D18-33-8M	1	C03	ES-0102	15-May-08
18	TU97	70-D18-33-8N	1	C03	ES-0102	15-May-08
18	TU97	70-D18-33-8N	2	C02	ES-0103	15-May-08
18	TU97	70-D18-34-2S	1	C30	ES-0168	08-Dec-08
18	TU97	70-D18-34-2S	2	C30	ES-0168	08-Dec-08
18	TU97	70-D18-34-2S	3	C30	ES-0168	08-Dec-08
18	TU97	70-D18-34-2S	4	C30	ES-0168	08-Dec-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU97	70-D18-34-8J	1	C30	ES-0168	06-Dec-08
18	TU97	70-D18-34-8J	2	C30	ES-0168	06-Dec-08
18	TU97	70-D18-34-8J	3	C30	ES-0168	06-Dec-08
18	TU98	70-D18-33-2T	1	C28	ES-0098	12-May-08
18	TU98	70-D18-33-2T	2	C28	ES-0098	12-May-08
18	TU98	70-D18-33-2T	3	C36	ES-0097	12-May-08
18	TU98	70-D18-33-2T	4	C36	ES-0097	12-May-08
18	TU98	70-D18-33-2U	1	C33	ES-0095	10-May-08
18	TU98	70-D18-33-2U	2	C36	ES-0097	10-May-08
18	TU98	70-D18-33-2W	1	C34	ES-0096	09-May-08
18	TU98	70-D18-33-2W	2	C34	ES-0096	09-May-08
18	TU98	70-D18-33-4O	8	C33	ES-0095	09-May-08
18	TU98	70-D18-33-4O	9	C33	ES-0095	09-May-08
18	TU98	70-D18-33-4O	10	C33	ES-0095	09-May-08
18	TU98	70-D18-33-4O	11	C33	ES-0095	09-May-08
18	TU98	70-D18-33-4O	12	C34	ES-0096	09-May-08
18	TU98	70-D18-33-4O	13	C34	ES-0096	09-May-08
18	TU98	70-D18-33-4O	14	C33	ES-0095	09-May-08
18	TU98	70-D18-33-4O	15	C33	ES-0095	09-May-08
18	TU98	70-D18-33-4O	16	C33	ES-0095	09-May-08
18	TU98	70-D18-33-4O	17	C33	ES-0095	09-May-08
18	TU98	70-D18-33-4O	18	C33	ES-0095	09-May-08
18	TU98	70-D18-33-4O	19	C33	ES-0095	09-May-08
18	TU98	70-D18-33-4O	20	C33	ES-0095	09-May-08
18	TU98	70-D18-33-4O	21	C33	ES-0095	09-May-08
18	TU98	70-D18-33-4O	22	C34	ES-0096	09-May-08
18	TU98	70-D18-33-4O	23	C34	ES-0096	09-May-08
18	TU98	70-D18-33-4O	24	C33	ES-0095	09-May-08
18	TU98	70-D18-33-4O	25	C34	ES-0096	09-May-08
18	TU98	70-D18-33-4O	26	C34	ES-0096	09-May-08
18	TU98	70-D18-33-4O	27	C34	ES-0096	09-May-08
18	TU98	70-D18-33-4O	28	C33	ES-0095	09-May-08
18	TU98	70-D18-33-4O	29	C33	ES-0095	09-May-08
18	TU98	70-D18-33-4O	30	C33	ES-0095	09-May-08
18	TU98	70-D18-33-4O	31	C34	ES-0096	09-May-08
18	TU98	70-D18-33-4O	32	C34	ES-0096	10-May-08
18	TU98	70-D18-33-4O	33	C33	ES-0095	10-May-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU98	70-D18-33-4O	34	C34	ES-0096	10-May-08
18	TU98	70-D18-33-4O	35	C34	ES-0096	10-May-08
18	TU98	70-D18-33-4O	36	C36	ES-0097	10-May-08
18	TU98	70-D18-33-4O	37	C28	ES-0098	10-May-08
18	TU98	70-D18-33-4O	38	C36	ES-0097	10-May-08
18	TU98	70-D18-33-4O	39	C36	ES-0097	10-May-08
18	TU98	70-D18-33-4O	40	C28	ES-0098	10-May-08
18	TU98	70-D18-33-4O	41	C28	ES-0098	10-May-08
18	TU98	70-D18-33-4O	42	C28	ES-0098	10-May-08
18	TU98	70-D18-33-4O	43	C36	ES-0097	10-May-08
18	TU98	70-D18-33-4O	44	C28	ES-0098	12-May-08
18	TU98	70-D18-33-4O	45	C36	ES-0097	12-May-08
18	TU98	70-D18-33-4O	46	C36	ES-0097	12-May-08
18	TU98	70-D18-33-4O	47	C36	ES-0097	12-May-08
18	TU98	70-D18-33-4O	48	C28	ES-0098	12-May-08
18	TU98	70-D18-33-4O	49	C28	ES-0098	12-May-08
18	TU98	70-D18-33-4O	50	C28	ES-0098	12-May-08
18	TU98	70-D18-33-4O	51	C36	ES-0097	12-May-08
18	TU98	70-D18-33-4O	52	C36	ES-0097	12-May-08
18	TU98	70-D18-33-4O	53	C28	ES-0098	12-May-08
18	TU98	70-D18-33-4O	54	C06	ES-0099	12-May-08
18	TU98	70-D18-33-4O	55	C28	ES-0098	12-May-08
18	TU98	70-D18-33-4O	56	C28	ES-0098	12-May-08
18	TU98	70-D18-33-4O	57	C06	ES-0099	12-May-08
18	TU98	70-D18-33-4O	58	C06	ES-0099	12-May-08
18	TU98	70-D18-33-4O	59	C06	ES-0099	12-May-08
18	TU98	70-D18-33-4O	60	C28	ES-0098	12-May-08
18	TU98	70-D18-33-4O	61	C28	ES-0098	12-May-08
18	TU98	70-D18-33-4O	62	C06	ES-0099	12-May-08
18	TU98	70-D18-33-4O	70	C06	ES-0133	17-Jul-08
18	TU98	70-D18-33-4O	71	C06	ES-0133	17-Jul-08
18	TU98	70-D18-33-4O	72	C06	ES-0133	17-Jul-08
18	TU98	70-D18-33-4O	73	C06	ES-0133	17-Jul-08
18	TU98	70-D18-33-4O	74	C06	ES-0133	17-Jul-08
18	TU98	70-D18-33-4O	75	C06	ES-0133	17-Jul-08
18	TU98	70-D18-33-4O	76	C10	ES-0134	17-Jul-08
18	TU98	70-D18-33-4O	77	C10	ES-0134	17-Jul-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU98	70-D18-33-4O	78	C10	ES-0134	17-Jul-08
18	TU98	70-D18-33-4O	79	C10	ES-0134	17-Jul-08
18	TU99	70-D18-00-1H	1	C21	ES-0145	13-Aug-08
18	TU99	70-D18-00-1H	2	C21	ES-0145	13-Aug-08
18	TU99	70-D18-00-1H	3	C20	ES-0144	13-Aug-08
18	TU99	70-D18-00-1H	4	C21	ES-0145	13-Aug-08
18	TU99	70-D18-00-1H	5	C21	ES-0145	13-Aug-08
18	TU99	70-D18-00-1H	6	C20	ES-0144	13-Aug-08
18	TU99	70-D18-00-1H	7	C20	ES-0144	13-Aug-08
18	TU99	70-D18-00-1H	8	C21	ES-0145	13-Aug-08
18	TU99	70-D18-00-1H	9	C21	ES-0145	13-Aug-08
18	TU99	70-D18-00-1H	10	C21	ES-0145	13-Aug-08
18	TU99	70-D18-00-1H	11	C20	ES-0144	13-Aug-08
18	TU99	70-D18-00-1H	12	C20	ES-0144	13-Aug-08
18	TU99	70-D18-00-1H	13	C20	ES-0144	13-Aug-08
18	TU99	70-D18-00-1H	14	C21	ES-0145	13-Aug-08
18	TU99	70-D18-00-1H	15	C21	ES-0145	13-Aug-08
18	TU99	70-D18-00-1H	16	C21	ES-0145	13-Aug-08
18	TU99	70-D18-00-1H	17	C20	ES-0144	13-Aug-08
18	TU99	70-D18-00-1H	18	C20	ES-0144	13-Aug-08
18	TU99	70-D18-00-1H	19	C21	ES-0145	13-Aug-08
18	TU99	70-D18-00-1H	20	C21	ES-0145	13-Aug-08
18	TU99	70-D18-00-1H	21	C21	ES-0145	13-Aug-08
18	TU99	70-D18-00-1H	22	C20	ES-0144	13-Aug-08
18	TU99	70-D18-00-1H	23	C20	ES-0144	13-Aug-08
18	TU99	70-D18-00-1H	24	C21	ES-0145	13-Aug-08
18	TU99	70-D18-00-1H	25	C21	ES-0145	13-Aug-08
18	TU99	70-D18-00-1H	26	C20	ES-0144	13-Aug-08
18	TU99	70-D18-00-1H	27	C20	ES-0144	13-Aug-08
18	TU99	70-D18-00-1H	28	C21	ES-0145	13-Aug-08
18	TU99	70-D18-00-1H	29	C21	ES-0145	13-Aug-08
18	TU99	70-D18-00-1H	30	C21	ES-0145	13-Aug-08
18	TU99	70-D18-00-1H	31	C21	ES-0145	13-Aug-08
18	TU99	70-D18-00-1H	32	C20	ES-0144	13-Aug-08
18	TU99	70-D18-00-1J	1	C21	ES-0145	14-Aug-08
18	TU99	70-D18-00-1J	2	C20	ES-0144	14-Aug-08
18	TU99	70-D18-00-1J	3	C20	ES-0144	14-Aug-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU99	70-D18-00-1J	4	C21	ES-0145	14-Aug-08
18	TU99	70-D18-00-1J	5	C21	ES-0145	14-Aug-08
18	TU99	70-D18-00-1J	6	C20	ES-0144	14-Aug-08
18	TU99	70-D18-00-1J	7	C20	ES-0144	14-Aug-08
18	TU99	70-D18-00-1J	8	C01	ES-0146	14-Aug-08
18	TU99	70-D18-00-1J	9	C01	ES-0146	14-Aug-08
18	TU99	70-D18-00-1J	10	C20	ES-0144	14-Aug-08
18	TU99	70-D18-00-1J	11	C20	ES-0144	14-Aug-08
18	TU99	70-D18-00-1J	12	C20	ES-0144	14-Aug-08
18	TU99	70-D18-00-1J	13	C20	ES-0144	14-Aug-08
18	TU99	70-D18-00-1J	14	C20	ES-0144	14-Aug-08
18	TU99	70-D18-00-1J	15	C20	ES-0144	14-Aug-08
18	TU99	70-D18-00-1L	1	C21	ES-0145	13-Aug-08
18	TU99	70-D18-00-1L	2	C21	ES-0145	13-Aug-08
18	TU99	70-D18-00-1L	3	C20	ES-0144	13-Aug-08
18	TU99	70-D18-00-1L	4	C20	ES-0144	13-Aug-08
18	TU99	70-D18-00-1L	5	C21	ES-0145	13-Aug-08
18	TU99	70-D18-00-1L	6	C20	ES-0144	13-Aug-08
18	TU99	70-D18-44-1L	35	C09	ES-0141	08-Aug-08
17	TU100	72-D17-34-8E	1	C09	ES-0108	03-Jun-08
17	TU100	72-D17-34-9L	1	C09	ES-0108	04-Jun-08
17	TU100	72-D17-34-9Q	1	C09	ES-0108	09-Jun-08
17	TU100	72-D17-34-9R	1	C09	ES-0108	10-Jun-08
17	TU100	72-D17-34-9R	2	C09	ES-0108	10-Jun-08
17	TU101	72-D17-34-8A	1	C09	ES-0108	06-Jun-08
17	TU101	72-D17-34-8B	1	C09	ES-0108	07-Jun-08
17	TU101	72-D17-34-9C	1	C09	ES-0108	02-Jun-08
17	TU101	72-D17-34-9D	1	C09	ES-0108	02-Jun-08
17	TU101	72-D17-34-9E	1	C09	ES-0108	02-Jun-08
17	TU101	72-D17-34-9E	2	C09	ES-0108	11-Jun-08
17	TU101	72-D17-34-9E	3	C09	ES-0108	13-Jun-08
17	TU101	72-D17-34-9F	1	C09	ES-0108	02-Jun-08
17	TU101	72-D17-34-9G	1	C09	ES-0108	03-Jun-08
17	TU101	72-D17-34-9H	1	C09	ES-0108	03-Jun-08
17	TU101	72-D17-34-9I	1	C09	ES-0108	03-Jun-08
17	TU101	72-D17-34-9J	1	C09	ES-0108	03-Jun-08
17	TU101	72-D17-34-9K	1	C09	ES-0108	04-Jun-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17	TU101	72-D17-34-9N	1	C09	ES-0108	07-Jun-08
17	TU101	72-D17-34-9P	1	C09	ES-0108	09-Jun-08
17	TU101	72-D17-34-9P	2	C09	ES-0108	09-Jun-08
17	TU102	72-D17-34-8D	1	C09	ES-0108	12-Jun-08
17	TU102	72-D17-34-8F	1	C09	ES-0108	12-Jun-08
17	TU102	72-D17-34-8F	2	C09	ES-0108	14-Jun-08
17	TU102	72-D17-34-8F	3	C09	ES-0108	25-Jun-08
17	TU102	72-D17-34-8G	1	C09	ES-0108	17-Jun-08
27	TU103	70-D27-00-2T	1	C15	ES-0109	21-Jun-08
27	TU103	70-D27-00-2T	2	C15	ES-0109	21-Jun-08
27	TU103	70-D27-00-2T	3	C16	ES-0110	21-Jun-08
27	TU103	70-D27-00-2T	4	C16	ES-0110	21-Jun-08
27	TU103	70-D27-00-2T	5	C15	ES-0109	21-Jun-08
27	TU103	70-D27-00-2T	6	C17	ES-0113	21-Jun-08
27	TU103	70-D27-00-2T	7	C15	ES-0109	21-Jun-08
27	TU103	70-D27-00-2T	8	C15	ES-0109	21-Jun-08
27	TU103	70-D27-00-2T	9	C17	ES-0113	21-Jun-08
27	TU103	70-D27-00-2T	10	C17	ES-0113	21-Jun-08
27	TU103	70-D27-00-2V	1	C17	ES-0113	21-Jun-08
27	TU103	70-D27-00-2W	1	C15	ES-0109	20-Jun-08
27	TU103	70-D27-00-2W	2	C15	ES-0109	20-Jun-08
27	TU103	70-D27-00-2W	3	C16	ES-0110	20-Jun-08
27	TU103	70-D27-00-2W	4	C16	ES-0110	20-Jun-08
27	TU103	70-D27-37-2T	1	C13	ES-0111	20-Jun-08
27	TU103	70-D27-37-2T	2	C13	ES-0111	21-Jun-08
27	TU103	70-D27-37-2T	3	C14	ES-0112	21-Jun-08
27	TU103	70-D27-37-2T	4	C14	ES-0112	21-Jun-08
27	TU103	70-D27-37-2W	1	C14	ES-0112	20-Jun-08
27	TU103	70-D27-37-2W	2	C13	ES-0111	20-Jun-08
27	TU103	70-D27-37-2W	3	C14	ES-0112	20-Jun-08
27	TU103	70-D27-37-2W	4	C13	ES-0111	20-Jun-08
27	TU103	70-D27-37-2W	5	C14	ES-0112	20-Jun-08
27	TU103	70-D27-37-2W	6	C14	ES-0112	20-Jun-08
27	TU103	70-D27-37-2W	7	C14	ES-0112	20-Jun-08
27	TU103	70-D27-37-2W	8	C13	ES-0111	20-Jun-08
27	TU104	70-D27-00-2Y	1	C15	ES-0109	18-Jun-08
27	TU104	70-D27-00-2Y	2	C15	ES-0109	18-Jun-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
27	TU104	70-D27-00-2Y	3	C15	ES-0109	18-Jun-08
27	TU104	70-D27-00-2Y	4	C15	ES-0109	18-Jun-08
27	TU104	70-D27-00-2Y	5	C15	ES-0109	18-Jun-08
27	TU104	70-D27-00-2Y	6	C16	ES-0110	19-Jun-08
27	TU104	70-D27-00-2Y	7	C16	ES-0110	19-Jun-08
27	TU104	70-D27-00-2Y	8	C16	ES-0110	19-Jun-08
27	TU104	70-D27-00-2Y	9	C16	ES-0110	19-Jun-08
27	TU104	70-D27-00-2Y	10	C16	ES-0110	19-Jun-08
27	TU104	70-D27-00-2Y	11	C16	ES-0110	19-Jun-08
27	TU104	70-D27-00-8A	1	C15	ES-0109	19-Jun-08
27	TU104	70-D27-00-8A	2	C16	ES-0110	19-Jun-08
27	TU104	70-D27-00-8A	3	C16	ES-0110	19-Jun-08
27	TU104	70-E27-00-3K	1	C17	ES-0113	23-Jun-08
27	TU104	70-E27-00-3K	2	C17	ES-0113	23-Jun-08
27	TU104	70-E27-00-3K	3	C17	ES-0113	23-Jun-08
27	TU104	70-E27-00-3K	4	C18	ES-0114	23-Jun-08
27	TU104	70-E27-00-3K	5	C17	ES-0113	24-Jun-08
27	TU104	70-E27-00-3K	6	C17	ES-0113	24-Jun-08
27	TU104	70-E27-00-3K	7	C18	ES-0114	24-Jun-08
27	TU104	70-E27-00-3K	8	C18	ES-0114	24-Jun-08
27	TU104	70-E27-00-3K	9	C18	ES-0114	24-Jun-08
27	TU104	70-E27-00-3K	10	C17	ES-0113	24-Jun-08
27	TU104	70-E27-00-3K	11	C18	ES-0114	24-Jun-08
27	TU104	70-E27-00-3K	12	C11	ES-0115	24-Jun-08
27	TU104	70-E27-00-3K	13	C18	ES-0114	24-Jun-08
27	TU104	70-E27-00-3K	14	C18	ES-0114	24-Jun-08
27	TU104	70-E27-00-3K	15	C18	ES-0114	24-Jun-08
27	TU104	70-E27-00-3L	1	C15	ES-0109	19-Jun-08
27	TU104	70-E27-00-3L	2	C15	ES-0109	19-Jun-08
27	TU104	70-E27-00-3L	3	C15	ES-0109	19-Jun-08
27	TU104	70-E27-00-3L	4	C16	ES-0110	20-Jun-08
27	TU104	70-E27-00-3L	5	C16	ES-0110	20-Jun-08
27	TU104	70-E27-00-3L	6	C16	ES-0110	20-Jun-08
27	TU104	70-E27-00-3L	7	C16	ES-0110	20-Jun-08
27	TU104	70-E27-00-3L	8	C16	ES-0110	20-Jun-08
27	TU104	70-E27-00-3L	9	C15	ES-0109	20-Jun-08
27	TU104	70-E27-00-3L	10	C15	ES-0109	20-Jun-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
27	TU104	70-E27-00-3L	11	C16	ES-0110	20-Jun-08
27	TU104	70-E27-00-3L	12	C15	ES-0109	20-Jun-08
27	TU104	70-E27-00-3L	13	C16	ES-0110	20-Jun-08
27	TU104	70-E27-00-3L	14	C15	ES-0109	20-Jun-08
27	TU104	70-E27-00-3L	15	C16	ES-0110	20-Jun-08
27	TU104	70-E27-00-3L	16	C15	ES-0109	20-Jun-08
27	TU104	70-E27-00-3L	17	C15	ES-0109	20-Jun-08
27	TU104	70-E27-00-3L	18	C16	ES-0110	20-Jun-08
27	TU104	70-E27-00-3L	19	C16	ES-0110	20-Jun-08
27	TU104	70-E27-00-3L	20	C17	ES-0113	21-Jun-08
27	TU104	70-E27-00-3L	21	C17	ES-0113	21-Jun-08
27	TU104	70-E27-00-3L	22	C17	ES-0113	21-Jun-08
27	TU104	70-E27-00-3L	23	C17	ES-0113	21-Jun-08
27	TU104	70-E27-00-3L	24	C15	ES-0109	21-Jun-08
27	TU104	70-E27-00-3L	25	C15	ES-0109	21-Jun-08
27	TU104	70-E27-00-3L	26	C17	ES-0113	21-Jun-08
27	TU104	70-E27-00-3L	27	C17	ES-0113	21-Jun-08
27	TU104	70-E27-00-3L	28	C15	ES-0109	21-Jun-08
27	TU104	70-E27-00-3L	29	C15	ES-0109	21-Jun-08
27	TU104	70-E27-00-3L	30	C18	ES-0114	21-Jun-08
27	TU104	70-E27-00-3L	31	C17	ES-0113	21-Jun-08
27	TU104	70-E27-00-3L	32	C17	ES-0113	23-Jun-08
27	TU104	70-E27-00-3L	33	C17	ES-0113	23-Jun-08
27	TU104	70-E27-00-3L	34	C18	ES-0114	23-Jun-08
27	TU104	70-E27-00-3L	35	C17	ES-0113	23-Jun-08
27	TU104	70-E27-00-3L	36	C18	ES-0114	23-Jun-08
27	TU104	70-E27-00-3L	37	C17	ES-0113	23-Jun-08
27	TU104	70-E27-00-3L	38	C18	ES-0114	23-Jun-08
27	TU104	70-E27-00-3L	39	C18	ES-0114	23-Jun-08
27	TU104	70-E27-00-3L	40	C17	ES-0113	23-Jun-08
27	TU104	70-E27-00-3L	41	C18	ES-0114	23-Jun-08
27	TU104	70-E27-00-3L	42	C17	ES-0113	23-Jun-08
27	TU104	70-E27-00-3L	43	C18	ES-0114	23-Jun-08
27	TU104	70-E27-00-3L	44	C17	ES-0113	23-Jun-08
27	TU104	70-E27-00-3L	45	C17	ES-0113	23-Jun-08
27	TU104	70-E27-00-3L	46	C18	ES-0114	23-Jun-08
27	TU104	70-E27-00-3L	47	C17	ES-0113	23-Jun-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
27	TU104	70-E27-00-3L	48	C18	ES-0114	23-Jun-08
27	TU104	70-E27-00-3L	49	C17	ES-0113	23-Jun-08
27	TU104	70-E27-00-3L	50	C18	ES-0114	23-Jun-08
27	TU104	70-E27-00-3L	51	C18	ES-0114	23-Jun-08
27	TU104	70-E27-00-3L	52	C17	ES-0113	23-Jun-08
27	TU104	70-E27-36-2V	1	C14	ES-0112	23-Jun-08
27	TU104	70-E27-36-2V	2	C14	ES-0112	23-Jun-08
27	TU105	70-D27-00-2S	1	C27	ES-0117	26-Jun-08
27	TU105	70-D27-00-2S	2	C28	ES-0118	26-Jun-08
27	TU105	70-D27-00-2S	3	C28	ES-0118	26-Jun-08
27	TU105	70-D27-00-8B	1	C21	ES-0116	25-Jun-08
27	TU105	70-D27-00-8B	2	C28	ES-0118	25-Jun-08
27	TU105	70-D27-00-8B	3	C28	ES-0118	25-Jun-08
27	TU105	70-D27-00-8B	4	C14	ES-0149	25-Aug-08
27	TU105	70-D27-00-8B	5	C14	ES-0149	25-Aug-08
27	TU105	70-D27-00-8B	6	C14	ES-0149	25-Aug-08
27	TU105	70-D27-00-8B	7	C14	ES-0149	25-Aug-08
27	TU105	70-E27-00-3I	1	C21	ES-0116	25-Jun-08
27	TU105	70-E27-00-3K	16	C11	ES-0115	24-Jun-08
27	TU105	70-E27-00-3K	17	C18	ES-0114	24-Jun-08
27	TU105	70-E27-00-3K	18	C18	ES-0114	24-Jun-08
27	TU105	70-E27-00-3K	19	C18	ES-0114	24-Jun-08
27	TU105	70-E27-00-3K	20	C18	ES-0114	24-Jun-08
27	TU105	70-E27-00-3K	21	C18	ES-0114	24-Jun-08
27	TU105	70-E27-00-3K	22	C18	ES-0114	24-Jun-08
27	TU105	70-E27-00-3K	23	C11	ES-0115	24-Jun-08
27	TU105	70-E27-00-3K	24	C18	ES-0114	24-Jun-08
27	TU105	70-E27-00-3K	25	C11	ES-0115	24-Jun-08
27	TU105	70-E27-00-3K	26	C11	ES-0115	24-Jun-08
27	TU105	70-E27-00-3K	27	C11	ES-0115	24-Jun-08
27	TU105	70-E27-00-3K	28	C18	ES-0114	24-Jun-08
27	TU105	70-E27-00-3K	29	C11	ES-0115	24-Jun-08
27	TU105	70-E27-00-3K	30	C11	ES-0115	24-Jun-08
27	TU105	70-E27-00-3K	31	C18	ES-0114	24-Jun-08
27	TU105	70-E27-00-3K	32	C11	ES-0115	24-Jun-08
27	TU105	70-E27-00-3K	33	C21	ES-0116	24-Jun-08
27	TU105	70-E27-00-3K	34	C21	ES-0116	24-Jun-08

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
27	TU105	70-E27-00-3K	35	C11	ES-0115	24-Jun-08
27	TU105	70-E27-00-3K	36	C11	ES-0115	25-Jun-08
27	TU105	70-E27-00-3K	37	C11	ES-0115	25-Jun-08
27	TU105	70-E27-00-3K	38	C11	ES-0115	25-Jun-08
27	TU105	70-E27-00-3K	39	C21	ES-0116	25-Jun-08
27	TU105	70-E27-00-3K	40	C21	ES-0116	25-Jun-08
27	TU105	70-E27-00-3K	41	C11	ES-0115	25-Jun-08
27	TU105	70-E27-00-3K	42	C11	ES-0115	25-Jun-08
27	TU105	70-E27-00-3K	43	C11	ES-0115	25-Jun-08
27	TU105	70-E27-00-3K	44	C21	ES-0116	25-Jun-08
27	TU105	70-E27-00-3K	45	C11	ES-0115	25-Jun-08
27	TU105	70-E27-00-3K	46	C21	ES-0116	25-Jun-08
27	TU105	70-E27-00-3K	47	C21	ES-0116	25-Jun-08
27	TU105	70-E27-00-3K	48	C11	ES-0115	25-Jun-08
27	TU105	70-E27-00-3K	49	C21	ES-0116	25-Jun-08
27	TU105	70-E27-00-3K	50	C21	ES-0116	25-Jun-08
27	TU105	70-E27-00-3K	51	C11	ES-0115	25-Jun-08
27	TU105	70-E27-00-3K	52	C11	ES-0115	25-Jun-08
27	TU105	70-E27-00-3K	53	C21	ES-0116	25-Jun-08
27	TU105	70-E27-00-3K	54	C21	ES-0116	25-Jun-08
27	TU105	70-E27-00-3K	55	C21	ES-0116	25-Jun-08
27	TU105	70-E27-00-3K	56	C21	ES-0116	25-Jun-08
27	TU105	70-E27-00-3K	57	C21	ES-0116	25-Jun-08
27	TU105	70-E27-00-3K	58	C12	ES-0129	11-Jul-08
27	TU105	70-E27-00-3K	59	C12	ES-0129	11-Jul-08
27	TU105	70-E27-00-3K	60	C05	ES-0132	11-Jul-08
27	TU105	70-E27-00-3K	61	C05	ES-0132	11-Jul-08
27	TU105	70-E27-00-3K	62	C05	ES-0132	11-Jul-08
27	TU105	70-E27-00-3K	63	C02	ES-0131	11-Jul-08
27	TU105	70-E27-00-3K	64	C05	ES-0132	11-Jul-08
27	TU105	70-E27-00-3K	65	C05	ES-0132	11-Jul-08
27	TU105	70-E27-00-3K	66	C02	ES-0131	11-Jul-08
27	TU105	70-E27-00-3K	67	C02	ES-0131	11-Jul-08
27	TU105	70-E27-00-3K	68	C05	ES-0132	11-Jul-08
27	TU105	70-E27-00-3K	69	C05	ES-0132	11-Jul-08
27	TU105	70-E27-00-3K	70	C05	ES-0132	11-Jul-08
27	TU105	70-E27-00-3K	71	C05	ES-0132	11-Jul-08

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
27	TU105	70-E27-00-3K	72	C05	ES-0132	11-Jul-08
27	TU105	70-E27-00-3K	73	C05	ES-0132	11-Jul-08
27	TU105	70-E27-00-3K	74	C05	ES-0132	11-Jul-08
27	TU105	70-E27-00-3K	75	C05	ES-0132	11-Jul-08
27	TU105	70-E27-00-3K	76	C02	ES-0131	11-Jul-08
27	TU105	70-E27-00-3K	77	C05	ES-0132	11-Jul-08
27	TU105	70-E27-00-3K	78	C05	ES-0132	11-Jul-08
27	TU105	70-E27-00-3K	79	C05	ES-0132	11-Jul-08
27	TU105	70-E27-00-3K	80	C02	ES-0131	11-Jul-08
27	TU105	70-E27-00-3K	81	C02	ES-0131	11-Jul-08
27	TU105	70-E27-00-3K	82	C02	ES-0131	11-Jul-08
27	TU105	70-E27-00-3K	83	C02	ES-0131	11-Jul-08
27	TU105	70-E27-36-3J	1	C13	ES-0111	25-Jun-08
27	TU105	70-E27-36-3J	2	C14	ES-0112	25-Jun-08
27	TU105	70-E27-36-3J	3	C14	ES-0112	25-Jun-08
18	TU106	70-D18-44-1L	12	C16	ES-0139	05-Aug-08
18	TU106	70-D18-44-1L	13	C24	ES-0137	05-Aug-08
18	TU106	70-D18-44-1L	14	C24	ES-0137	05-Aug-08
18	TU106	70-D18-44-1L	15	C24	ES-0137	05-Aug-08
18	TU106	70-D18-44-1L	16	C16	ES-0139	05-Aug-08
18	TU106	70-D18-44-1L	17	C24	ES-0137	05-Aug-08
18	TU106	70-D18-44-1L	18	C24	ES-0137	05-Aug-08
18	TU106	70-D18-44-1L	19	C16	ES-0139	05-Aug-08
18	TU106	70-D18-44-1L	20	C16	ES-0139	05-Aug-08
18	TU106	70-D18-44-1L	21	C24	ES-0137	05-Aug-08
18	TU106	70-D18-44-1L	22	C17	ES-0138	05-Aug-08
18	TU106	70-D18-44-1L	23	C24	ES-0137	05-Aug-08
18	TU106	70-D18-44-1L	24	C16	ES-0139	05-Aug-08
18	TU106	70-D18-44-1L	25	C15	ES-0140	06-Aug-08
18	TU106	70-D18-44-1U	1	C27	ES-0088	13-Feb-08
18	TU106	70-D18-44-1U	2	C26	ES-0089	13-Feb-08
18	TU106	70-D18-44-1U	3	C26	ES-0089	13-Feb-08
18	TU106	70-D18-44-1U	4	C26	ES-0089	13-Feb-08
18	TU106	70-D18-44-1U	5	C26	ES-0089	13-Feb-08
18	TU106	70-D18-44-1U	6	C26	ES-0089	13-Feb-08
18	TU106	70-D18-44-1U	7	C26	ES-0089	13-Feb-08
18	TU106	70-D18-44-1U	8	C26	ES-0089	13-Feb-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU106	70-D18-44-1U	9	C26	ES-0089	13-Feb-08
18	TU106	70-D18-44-1U	10	C26	ES-0089	13-Feb-08
18	TU106	70-D18-44-1U	11	C17	ES-0138	31-Jul-08
18	TU106	70-D18-44-1U	12	C17	ES-0138	31-Jul-08
18	TU106	70-D18-44-1U	13	C17	ES-0138	31-Jul-08
18	TU106	70-D18-44-1U	14	C17	ES-0138	31-Jul-08
18	TU106	70-D18-44-1V	1	C26	ES-0089	13-Feb-08
18	TU106	70-D18-44-1V	2	C26	ES-0089	13-Feb-08
18	TU106	70-D18-44-1V	3	C26	ES-0089	13-Feb-08
18	TU106	70-D18-44-1W	1	C37	ES-0087	12-Feb-08
18	TU106	70-D18-44-1W	2	C37	ES-0087	12-Feb-08
18	TU106	70-D18-44-1W	3	C37	ES-0087	12-Feb-08
18	TU106	70-D18-44-1W	4	C27	ES-0088	12-Feb-08
18	TU106	70-D18-44-1W	5	C27	ES-0088	12-Feb-08
18	TU106	70-D18-44-1W	6	C37	ES-0087	12-Feb-08
18	TU106	70-D18-44-1W	7	C27	ES-0088	12-Feb-08
18	TU106	70-D18-44-1W	8	C37	ES-0087	13-Feb-08
18	TU106	70-D18-44-1W	9	C37	ES-0087	13-Feb-08
18	TU106	70-D18-44-1X	1	C37	ES-0087	13-Feb-08
18	TU106	70-D18-44-1Y	1	C16	ES-0139	06-Aug-08
18	TU106	70-D18-44-1Y	2	C24	ES-0137	06-Aug-08
18	TU106	70-D18-44-1Y	3	C16	ES-0139	06-Aug-08
18	TU106	70-D18-44-1Y	4	C16	ES-0139	06-Aug-08
18	TU106	70-D18-44-1Y	5	C24	ES-0137	06-Aug-08
18	TU106	70-D18-44-1Y	6	C16	ES-0139	06-Aug-08
18	TU106	70-D18-44-1Y	7	C15	ES-0140	06-Aug-08
18	TU106	70-D18-44-1Y	8	C16	ES-0139	06-Aug-08
18	TU106	70-D18-44-1Y	9	C16	ES-0139	06-Aug-08
18	TU106	70-D18-44-1Y	10	C16	ES-0139	06-Aug-08
18	TU106	70-D18-44-1Y	11	C16	ES-0139	06-Aug-08
18	TU106	70-D18-44-1Y	12	C16	ES-0139	06-Aug-08
18	TU106	70-D18-44-1Y	13	C16	ES-0139	06-Aug-08
18	TU106	70-D18-44-1Y	14	C16	ES-0139	06-Aug-08
18	TU106	70-D18-44-1Z	1	C16	ES-0139	06-Aug-08
18	TU106	70-D18-44-2A	1	C24	ES-0137	05-Aug-08
18	TU106	70-D18-44-2A	2	C24	ES-0137	05-Aug-08
18	TU106	70-D18-44-2A	3	C17	ES-0138	05-Aug-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU106	70-D18-44-2A	4	C24	ES-0137	05-Aug-08
18	TU106	70-D18-44-2A	5	C24	ES-0137	05-Aug-08
18	TU106	70-D18-44-2A	6	C17	ES-0138	05-Aug-08
18	TU106	70-D18-44-2A	7	C17	ES-0138	05-Aug-08
18	TU106	70-D18-44-2A	8	C17	ES-0138	05-Aug-08
18	TU106	70-D18-44-2A	9	C17	ES-0138	05-Aug-08
18	TU106	70-D18-44-2A	10	C16	ES-0139	06-Aug-08
18	TU106	70-D18-44-2B	1	C17	ES-0138	05-Aug-08
18	TU106	70-D18-44-2B	2	C16	ES-0139	06-Aug-08
19	TU107	70-D19-00-1M	1	C37	ES-0040	04-Sep-07
19	TU107	70-D19-00-1M	2	C37	ES-0040	04-Sep-07
19	TU107	70-D19-00-1M	3	C37	ES-0040	04-Sep-07
19	TU107	70-D19-00-1M	4	C29	ES-0142	09-Aug-08
19	TU107	70-D19-00-1M	5	C29	ES-0142	09-Aug-08
19	TU107	70-D19-00-1M	6	C29	ES-0142	09-Aug-08
19	TU107	70-D19-00-1M	7	C30	ES-0143	09-Aug-08
19	TU107	70-D19-00-1M	8	C30	ES-0143	09-Aug-08
19	TU107	70-D19-00-1M	9	C30	ES-0143	09-Aug-08
19	TU107	70-D19-00-1M	10	C30	ES-0143	09-Aug-08
19	TU107	70-D19-00-1M	11	C29	ES-0142	09-Aug-08
19	TU107	70-D19-00-1M	12	C30	ES-0143	09-Aug-08
19	TU107	70-D19-00-1M	13	C29	ES-0142	09-Aug-08
19	TU107	70-D19-00-1M	14	C30	ES-0143	09-Aug-08
19	TU107	70-D19-00-1M	15	C29	ES-0142	09-Aug-08
19	TU107	70-D19-00-1M	16	C29	ES-0142	09-Aug-08
19	TU107	70-D19-00-1M	17	C30	ES-0143	09-Aug-08
19	TU107	70-D19-00-1M	18	C30	ES-0143	09-Aug-08
19	TU107	70-D19-00-1M	19	C30	ES-0143	09-Aug-08
19	TU107	70-D19-00-1M	20	C29	ES-0142	09-Aug-08
19	TU107	70-D19-00-1M	21	C29	ES-0142	09-Aug-08
19	TU107	70-D19-00-1M	22	C30	ES-0143	09-Aug-08
19	TU107	70-D19-00-1M	23	C29	ES-0142	09-Aug-08
19	TU107	70-D19-00-1M	24	C29	ES-0142	09-Aug-08
19	TU107	70-D19-00-1M	25	C30	ES-0143	09-Aug-08
19	TU107	70-D19-00-1M	26	C30	ES-0143	11-Aug-08
19	TU107	70-D19-00-1M	27	C30	ES-0143	11-Aug-08
19	TU107	70-D19-00-1M	28	C30	ES-0143	11-Aug-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU107	70-D19-00-1M	29	C20	ES-0144	11-Aug-08
19	TU107	70-D19-00-1M	30	C20	ES-0144	11-Aug-08
19	TU107	70-D19-00-1M	31	C20	ES-0144	11-Aug-08
19	TU107	70-D19-44-1L	1	C09	ES-0141	11-Aug-08
19	TU107	70-D19-44-1L	2	C09	ES-0141	11-Aug-08
19	TU107	70-D19-44-1L	3	C15	ES-0140	11-Aug-08
19	TU107	70-D19-44-1L	4	C09	ES-0141	11-Aug-08
19	TU108	70-D19-00-3P	1	C29	ES-0142	08-Aug-08
19	TU108	70-D19-00-3P	2	C29	ES-0142	08-Aug-08
19	TU108	70-D19-00-3P	3	C29	ES-0142	08-Aug-08
19	TU108	70-D19-00-3P	4	C29	ES-0142	08-Aug-08
19	TU108	70-D19-00-3P	5	C29	ES-0142	08-Aug-08
19	TU108	70-D19-00-3P	6	C30	ES-0143	08-Aug-08
19	TU108	70-D19-00-3P	7	C30	ES-0143	08-Aug-08
19	TU108	70-D19-00-3P	8	C29	ES-0142	08-Aug-08
19	TU108	70-D19-00-3P	9	C29	ES-0142	08-Aug-08
19	TU108	70-D19-00-3P	10	C30	ES-0143	08-Aug-08
19	TU108	70-D19-00-3P	11	C29	ES-0142	08-Aug-08
19	TU108	70-D19-00-3P	12	C29	ES-0142	08-Aug-08
19	TU108	70-D19-00-3P	13	C30	ES-0143	08-Aug-08
19	TU108	70-D19-00-3P	14	C29	ES-0142	08-Aug-08
19	TU108	70-D19-00-3P	15	C29	ES-0142	08-Aug-08
19	TU108	70-D19-00-3P	16	C30	ES-0143	08-Aug-08
19	TU108	70-D19-00-3P	17	C29	ES-0142	08-Aug-08
19	TU108	70-D19-00-3P	18	C29	ES-0142	08-Aug-08
19	TU108	70-D19-00-3P	19	C30	ES-0143	08-Aug-08
19	TU108	70-D19-00-3P	20	C30	ES-0143	08-Aug-08
19	TU108	70-D19-00-3P	21	C29	ES-0142	08-Aug-08
19	TU108	70-D19-00-3P	22	C30	ES-0143	08-Aug-08
19	TU108	70-D19-00-3P	23	C30	ES-0143	08-Aug-08
19	TU108	70-D19-00-3P	24	C29	ES-0142	08-Aug-08
19	TU108	70-D19-00-3P	25	C30	ES-0143	08-Aug-08
19	TU108	70-D19-00-3P	26	C30	ES-0143	08-Aug-08
19	TU108	70-D19-00-3P	27	C29	ES-0142	08-Aug-08
19	TU108	70-D19-00-3P	28	C29	ES-0142	09-Aug-08
19	TU108	70-D19-00-3P	29	C30	ES-0143	09-Aug-08
19	TU108	70-D19-00-3P	30	C29	ES-0142	09-Aug-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU108	70-D19-00-3P	31	C30	ES-0143	09-Aug-08
19	TU108	70-D19-00-3P	32	C29	ES-0142	09-Aug-08
19	TU108	70-D19-00-3P	33	C30	ES-0143	09-Aug-08
19	TU108	70-D19-00-3P	34	C30	ES-0143	09-Aug-08
19	TU108	70-D19-00-3P	35	C30	ES-0143	09-Aug-08
19	TU108	70-D19-00-3P	36	C30	ES-0143	09-Aug-08
19	TU108	70-D19-00-6A	1	C29	ES-0142	09-Aug-08
19	TU108	70-D19-00-6A	2	C30	ES-0143	11-Aug-08
19	TU108	70-D19-00-6A	3	C30	ES-0143	11-Aug-08
19	TU108	70-D19-00-6A	4	C29	ES-0142	11-Aug-08
19	TU108	70-D19-00-6A	5	C20	ES-0144	11-Aug-08
19	TU108	70-D19-00-6A	6	C29	ES-0142	11-Aug-08
19	TU108	70-D19-00-6A	7	C29	ES-0142	11-Aug-08
19	TU108	70-D19-67-8G	1	C01	ES-0159	20-Sep-08
27	TU109	70-D27-67-2B	1	C01	ES-0159	20-Sep-08
27	TU109	70-E27-00-2B	1	C21	ES-0160	20-Sep-08
27	TU109	70-E27-00-2B	2	C21	ES-0160	20-Sep-08
27	TU109	70-E27-00-2F	1	C27	ES-0117	28-Jun-08
27	TU109	70-E27-00-2F	2	C27	ES-0117	28-Jun-08
27	TU109	70-E27-00-2F	3	C26	ES-0119	28-Jun-08
27	TU109	70-E27-00-2F	4	C26	ES-0119	28-Jun-08
27	TU109	70-E27-00-2H	1	C27	ES-0117	27-Jun-08
27	TU109	70-E27-00-2H	2	C27	ES-0117	27-Jun-08
27	TU109	70-E27-00-2H	3	C27	ES-0117	27-Jun-08
27	TU109	70-E27-00-2H	4	C28	ES-0118	27-Jun-08
27	TU109	70-E27-00-2H	5	C28	ES-0118	27-Jun-08
27	TU109	70-E27-00-2H	6	C28	ES-0118	27-Jun-08
27	TU109	70-E27-00-2H	7	C28	ES-0118	27-Jun-08
27	TU109	70-E27-00-2H	8	C28	ES-0118	27-Jun-08
27	TU109	70-E27-00-2H	9	C28	ES-0118	27-Jun-08
27	TU109	70-E27-00-2H	10	C27	ES-0117	27-Jun-08
27	TU109	70-E27-00-2H	11	C27	ES-0117	27-Jun-08
27	TU109	70-E27-00-2H	12	C28	ES-0118	27-Jun-08
27	TU109	70-E27-00-2H	13	C27	ES-0117	27-Jun-08
27	TU109	70-E27-00-2H	14	C27	ES-0117	27-Jun-08
27	TU109	70-E27-00-2H	15	C28	ES-0118	27-Jun-08
27	TU109	70-E27-00-2H	16	C27	ES-0117	27-Jun-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
27	TU109	70-E27-00-2H	17	C27	ES-0117	27-Jun-08
27	TU109	70-E27-00-2H	18	C28	ES-0118	27-Jun-08
27	TU109	70-E27-00-2H	19	C28	ES-0118	27-Jun-08
27	TU109	70-E27-00-2H	20	C27	ES-0117	27-Jun-08
27	TU109	70-E27-00-2H	21	C27	ES-0117	27-Jun-08
27	TU109	70-E27-00-2H	22	C28	ES-0118	27-Jun-08
27	TU109	70-E27-00-2H	23	C28	ES-0118	27-Jun-08
27	TU109	70-E27-00-2H	24	C28	ES-0118	27-Jun-08
27	TU109	70-E27-00-2H	25	C27	ES-0117	27-Jun-08
27	TU109	70-E27-00-2H	26	C26	ES-0119	27-Jun-08
27	TU109	70-E27-00-2H	27	C27	ES-0117	27-Jun-08
27	TU109	70-E27-00-2H	28	C27	ES-0117	27-Jun-08
27	TU109	70-E27-00-2H	29	C27	ES-0117	27-Jun-08
27	TU109	70-E27-00-2H	30	C26	ES-0119	27-Jun-08
27	TU109	70-E27-00-2H	31	C26	ES-0119	27-Jun-08
27	TU109	70-E27-00-2H	32	C26	ES-0119	28-Jun-08
27	TU109	70-E27-00-2H	33	C26	ES-0119	28-Jun-08
27	TU109	70-E27-00-2H	34	C27	ES-0117	28-Jun-08
27	TU109	70-E27-00-2H	35	C27	ES-0117	28-Jun-08
27	TU109	70-E27-00-2H	36	C27	ES-0117	28-Jun-08
27	TU109	70-E27-00-2H	37	C26	ES-0119	28-Jun-08
27	TU109	70-E27-00-2H	38	C26	ES-0119	28-Jun-08
27	TU109	70-E27-00-2H	39	C26	ES-0119	28-Jun-08
27	TU109	70-E27-00-2H	40	C26	ES-0119	28-Jun-08
27	TU109	70-E27-00-2H	41	C26	ES-0119	28-Jun-08
27	TU109	70-E27-00-2H	42	C23	ES-0120	28-Jun-08
27	TU109	70-E27-00-2H	43	C26	ES-0119	28-Jun-08
27	TU109	70-E27-00-2H	44	C23	ES-0120	28-Jun-08
27	TU109	70-E27-00-2H	45	C26	ES-0119	28-Jun-08
27	TU109	70-E27-00-2H	46	C26	ES-0119	28-Jun-08
27	TU109	70-E27-00-2H	47	C26	ES-0119	30-Jun-08
27	TU109	70-E27-00-2H	48	C26	ES-0119	30-Jun-08
27	TU109	70-E27-00-2I	1	C26	ES-0119	28-Jun-08
27	TU109	70-E27-00-2I	2	C26	ES-0119	28-Jun-08
27	TU109	70-E27-00-2J	1	C21	ES-0160	22-Sep-08
27	TU109	70-E27-00-2K	1	C27	ES-0117	28-Jun-08
27	TU109	70-E27-00-2K	2	C23	ES-0120	28-Jun-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
27	TU109	70-E27-00-2K	3	C23	ES-0120	28-Jun-08
27	TU109	70-E27-00-2K	4	C26	ES-0119	28-Jun-08
27	TU109	70-E27-00-2K	5	C26	ES-0119	28-Jun-08
27	TU109	70-E27-00-2K	6	C26	ES-0119	28-Jun-08
27	TU109	70-E27-00-2K	7	C26	ES-0119	28-Jun-08
27	TU109	70-E27-00-2K	8	C26	ES-0119	30-Jun-08
27	TU109	70-E27-00-2K	9	C26	ES-0119	30-Jun-08
27	TU109	70-E27-00-2K	10	C26	ES-0119	30-Jun-08
27	TU109	70-E27-00-2K	11	C23	ES-0120	30-Jun-08
27	TU109	70-E27-00-2K	12	C23	ES-0120	30-Jun-08
27	TU109	70-E27-00-2K	13	C23	ES-0120	30-Jun-08
27	TU109	70-E27-00-2K	14	C26	ES-0119	30-Jun-08
27	TU109	70-E27-00-2K	15	C23	ES-0120	30-Jun-08
27	TU109	70-E27-00-2K	16	C22	ES-0121	30-Jun-08
27	TU109	70-E27-00-2K	17	C22	ES-0121	30-Jun-08
27	TU109	70-E27-00-2K	18	C22	ES-0121	30-Jun-08
27	TU109	70-E27-00-2K	19	C23	ES-0120	30-Jun-08
27	TU109	70-E27-00-2K	20	C23	ES-0120	30-Jun-08
27	TU109	70-E27-00-2K	21	C22	ES-0121	30-Jun-08
27	TU109	70-E27-00-2K	22	C22	ES-0121	30-Jun-08
27	TU109	70-E27-00-2K	23	C22	ES-0121	30-Jun-08
27	TU109	70-E27-00-2K	24	C23	ES-0120	30-Jun-08
27	TU109	70-E27-00-2K	25	C23	ES-0120	30-Jun-08
27	TU109	70-E27-00-2K	26	C22	ES-0121	30-Jun-08
27	TU109	70-E27-00-2K	27	C22	ES-0121	30-Jun-08
27	TU109	70-E27-00-2K	28	C22	ES-0121	30-Jun-08
27	TU109	70-E27-00-2K	29	C23	ES-0120	30-Jun-08
27	TU109	70-E27-00-2K	30	C23	ES-0120	30-Jun-08
27	TU109	70-E27-00-2K	31	C22	ES-0121	30-Jun-08
27	TU109	70-E27-00-2K	32	C22	ES-0121	30-Jun-08
27	TU109	70-E27-00-2K	33	C23	ES-0120	30-Jun-08
27	TU110	70-E27-00-2K	34	C23	ES-0120	30-Jun-08
27	TU110	70-E27-00-2K	35	C22	ES-0121	30-Jun-08
27	TU110	70-E27-00-2K	36	C22	ES-0121	30-Jun-08
27	TU110	70-E27-00-2L	1	C23	ES-0120	30-Jun-08
27	TU110	70-E27-00-2L	2	C23	ES-0120	30-Jun-08
27	TU110	70-E27-00-2M	1	C23	ES-0120	30-Jun-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
27	TU110	70-E27-00-2M	2	C23	ES-0120	30-Jun-08
27	TU110	70-E27-00-2M	3	C23	ES-0120	30-Jun-08
27	TU110	70-E27-00-2M	4	C22	ES-0121	30-Jun-08
27	TU110	70-E27-00-2M	5	C22	ES-0121	30-Jun-08
27	TU110	70-E27-00-2M	6	C22	ES-0121	30-Jun-08
27	TU110	70-E27-00-2M	7	C22	ES-0121	01-Jul-08
27	TU110	70-E27-00-2M	8	C22	ES-0121	01-Jul-08
27	TU110	70-E27-00-2M	9	C29	ES-0122	01-Jul-08
27	TU110	70-E27-00-2M	10	C22	ES-0121	01-Jul-08
27	TU110	70-E27-00-2M	11	C22	ES-0121	01-Jul-08
27	TU110	70-E27-00-2M	12	C29	ES-0122	01-Jul-08
27	TU110	70-E27-00-2M	13	C29	ES-0122	01-Jul-08
27	TU110	70-E27-00-2M	14	C22	ES-0121	01-Jul-08
27	TU110	70-E27-00-2M	15	C30	ES-0123	01-Jul-08
27	TU110	70-E27-00-2M	16	C22	ES-0121	01-Jul-08
27	TU110	70-E27-00-2M	17	C30	ES-0123	01-Jul-08
27	TU110	70-E27-00-2M	18	C30	ES-0123	01-Jul-08
27	TU110	70-E27-00-2M	19	C29	ES-0122	01-Jul-08
27	TU110	70-E27-00-2M	20	C29	ES-0122	01-Jul-08
27	TU110	70-E27-00-2M	21	C30	ES-0123	01-Jul-08
27	TU110	70-E27-00-2M	22	C30	ES-0123	01-Jul-08
27	TU110	70-E27-00-2M	23	C31	ES-0124	03-Jul-08
27	TU110	70-E27-00-2M	24	C31	ES-0124	03-Jul-08
27	TU110	70-E27-00-2M	25	C32	ES-0125	03-Jul-08
27	TU110	70-E27-00-2M	26	C31	ES-0124	03-Jul-08
27	TU110	70-E27-00-2M	27	C32	ES-0125	03-Jul-08
27	TU110	70-E27-00-2M	28	C32	ES-0125	03-Jul-08
27	TU110	70-E27-00-2M	29	C32	ES-0125	03-Jul-08
27	TU110	70-E27-00-2M	30	C32	ES-0125	03-Jul-08
27	TU110	70-E27-00-2M	31	C31	ES-0124	03-Jul-08
27	TU110	70-E27-00-2M	32	C32	ES-0125	03-Jul-08
27	TU110	70-E27-00-2M	33	C32	ES-0125	03-Jul-08
27	TU110	70-E27-00-2M	34	C32	ES-0125	03-Jul-08
27	TU110	70-E27-00-2M	35	C31	ES-0124	03-Jul-08
27	TU110	70-E27-00-2M	36	C31	ES-0124	03-Jul-08
27	TU110	70-E27-00-2M	37	C32	ES-0125	03-Jul-08
27	TU110	70-E27-00-2M	38	C32	ES-0125	03-Jul-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
27	TU110	70-E27-00-2M	39	C31	ES-0124	03-Jul-08
27	TU110	70-E27-00-2M	40	C31	ES-0124	03-Jul-08
27	TU110	70-E27-00-2M	41	C32	ES-0125	03-Jul-08
27	TU110	70-E27-00-2M	42	C32	ES-0125	03-Jul-08
27	TU110	70-E27-00-2M	43	C31	ES-0124	03-Jul-08
27	TU110	70-E27-00-2M	44	C32	ES-0125	03-Jul-08
27	TU110	70-E27-00-2M	45	C33	ES-0126	03-Jul-08
27	TU110	70-E27-00-2M	46	C35	ES-0127	03-Jul-08
27	TU110	70-E27-00-2M	47	C35	ES-0127	03-Jul-08
27	TU110	70-E27-00-2M	48	C35	ES-0127	03-Jul-08
27	TU110	70-E27-00-2M	49	C33	ES-0126	07-Jul-08
27	TU110	70-E27-00-2M	50	C33	ES-0126	07-Jul-08
27	TU110	70-E27-00-2M	51	C35	ES-0127	07-Jul-08
27	TU110	70-E27-00-2M	52	C35	ES-0127	07-Jul-08
27	TU110	70-E27-00-2N	1	C35	ES-0127	07-Jul-08
27	TU110	70-E27-00-2N	2	C35	ES-0127	07-Jul-08
27	TU110	70-E27-00-2O	2	C32	ES-0125	02-Jul-08
27	TU110	70-E27-00-2O	3	C33	ES-0126	03-Jul-08
27	TU110	70-E27-00-2O	4	C35	ES-0127	03-Jul-08
27	TU110	70-E27-00-2P	1	C33	ES-0126	07-Jul-08
27	TU110	70-E27-00-2P	2	C35	ES-0127	07-Jul-08
27	TU110	70-E27-00-3B	1	C23	ES-0120	01-Jul-08
27	TU110	70-E27-00-3B	2	C29	ES-0122	01-Jul-08
27	TU110	70-E27-00-3B	3	C22	ES-0121	01-Jul-08
27	TU110	70-E27-00-3B	4	C22	ES-0121	01-Jul-08
27	TU110	70-E27-00-3B	5	C22	ES-0121	01-Jul-08
27	TU110	70-E27-00-3D	3	C35	ES-0127	07-Jul-08
27	TU110	70-E27-00-3D	4	C35	ES-0127	07-Jul-08
27	TU110	70-E27-00-3E	1	C35	ES-0127	07-Jul-08
27	TU110	70-E27-00-3E	2	C35	ES-0127	07-Jul-08
27	TU110	70-E27-00-3E	3	C35	ES-0127	07-Jul-08
27	TU110	70-E27-00-3E	4	C35	ES-0127	07-Jul-08
27	TU110	70-E27-00-3E	5	C35	ES-0127	07-Jul-08
27	TU110	70-E27-00-8A	1	C29	ES-0122	01-Jul-08
27	TU110	70-E27-00-8A	2	C30	ES-0123	01-Jul-08
27	TU110	70-E27-00-8B	1	C35	ES-0127	07-Jul-08
27	TU110	70-E27-00-8B	2	C35	ES-0127	07-Jul-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
27	TU111	70-E27-00-2O	1	C32	ES-0125	02-Jul-08
27	TU111	70-E27-00-3B	6	C29	ES-0122	01-Jul-08
27	TU111	70-E27-00-3B	7	C29	ES-0122	01-Jul-08
27	TU111	70-E27-00-3B	8	C30	ES-0123	01-Jul-08
27	TU111	70-E27-00-3C	1	C29	ES-0122	01-Jul-08
27	TU111	70-E27-00-3C	2	C29	ES-0122	01-Jul-08
27	TU111	70-E27-00-3C	3	C29	ES-0122	01-Jul-08
27	TU111	70-E27-00-3C	4	C29	ES-0122	01-Jul-08
27	TU111	70-E27-00-3C	5	C30	ES-0123	02-Jul-08
27	TU111	70-E27-00-3C	6	C29	ES-0122	02-Jul-08
27	TU111	70-E27-00-3C	7	C29	ES-0122	02-Jul-08
27	TU111	70-E27-00-3C	8	C29	ES-0122	02-Jul-08
27	TU111	70-E27-00-3C	9	C30	ES-0123	02-Jul-08
27	TU111	70-E27-00-3C	10	C30	ES-0123	02-Jul-08
27	TU111	70-E27-00-3C	11	C30	ES-0123	02-Jul-08
27	TU111	70-E27-00-3C	12	C29	ES-0122	02-Jul-08
27	TU111	70-E27-00-3C	13	C29	ES-0122	02-Jul-08
27	TU111	70-E27-00-3C	14	C30	ES-0123	02-Jul-08
27	TU111	70-E27-00-3C	15	C29	ES-0122	02-Jul-08
27	TU111	70-E27-00-3C	16	C29	ES-0122	02-Jul-08
27	TU111	70-E27-00-3C	17	C29	ES-0122	02-Jul-08
27	TU111	70-E27-00-3C	18	C30	ES-0123	02-Jul-08
27	TU111	70-E27-00-3C	19	C30	ES-0123	02-Jul-08
27	TU111	70-E27-00-3C	20	C29	ES-0122	02-Jul-08
27	TU111	70-E27-00-3C	21	C30	ES-0123	02-Jul-08
27	TU111	70-E27-00-3C	22	C30	ES-0123	02-Jul-08
27	TU111	70-E27-00-3C	23	C29	ES-0122	02-Jul-08
27	TU111	70-E27-00-3C	24	C29	ES-0122	02-Jul-08
27	TU111	70-E27-00-3C	25	C30	ES-0123	02-Jul-08
27	TU111	70-E27-00-3C	26	C30	ES-0123	02-Jul-08
27	TU111	70-E27-00-3C	27	C31	ES-0124	02-Jul-08
27	TU111	70-E27-00-3C	28	C30	ES-0123	02-Jul-08
27	TU111	70-E27-00-3C	29	C31	ES-0124	02-Jul-08
27	TU111	70-E27-00-3C	30	C31	ES-0124	02-Jul-08
27	TU111	70-E27-00-3C	31	C30	ES-0123	02-Jul-08
27	TU111	70-E27-00-3C	32	C30	ES-0123	02-Jul-08
27	TU111	70-E27-00-3C	33	C30	ES-0123	02-Jul-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
27	TU111	70-E27-00-3C	34	C32	ES-0125	02-Jul-08
27	TU111	70-E27-00-3C	35	C31	ES-0124	02-Jul-08
27	TU111	70-E27-00-3C	36	C31	ES-0124	02-Jul-08
27	TU111	70-E27-00-3C	37	C32	ES-0125	02-Jul-08
27	TU111	70-E27-00-3C	38	C32	ES-0125	02-Jul-08
27	TU111	70-E27-00-3C	39	C32	ES-0125	02-Jul-08
27	TU111	70-E27-00-3C	40	C32	ES-0125	02-Jul-08
27	TU111	70-E27-00-3C	41	C32	ES-0125	02-Jul-08
27	TU111	70-E27-00-3C	42	C31	ES-0124	02-Jul-08
27	TU111	70-E27-00-3C	43	C31	ES-0124	02-Jul-08
27	TU111	70-E27-00-3C	44	C32	ES-0125	02-Jul-08
27	TU111	70-E27-00-3C	45	C32	ES-0125	02-Jul-08
27	TU111	70-E27-00-3C	46	C32	ES-0125	02-Jul-08
27	TU111	70-E27-00-3C	47	C32	ES-0125	02-Jul-08
27	TU111	70-E27-00-3C	48	C32	ES-0125	03-Jul-08
27	TU111	70-E27-00-3C	49	C32	ES-0125	03-Jul-08
27	TU111	70-E27-00-3C	50	C31	ES-0124	03-Jul-08
27	TU111	70-E27-00-3C	51	C32	ES-0125	03-Jul-08
27	TU111	70-E27-00-3C	52	C32	ES-0125	03-Jul-08
27	TU111	70-E27-00-3C	53	C31	ES-0124	03-Jul-08
27	TU111	70-E27-00-3C	54	C31	ES-0124	03-Jul-08
27	TU111	70-E27-00-3C	55	C32	ES-0125	03-Jul-08
27	TU111	70-E27-00-3C	56	C33	ES-0126	07-Jul-08
27	TU111	70-E27-00-3C	57	C33	ES-0126	07-Jul-08
27	TU111	70-E27-00-3C	58	C37	ES-0128	07-Jul-08
27	TU111	70-E27-00-3C	59	C37	ES-0128	08-Jul-08
27	TU111	70-E27-00-3C	60	C33	ES-0126	08-Jul-08
27	TU111	70-E27-00-3C	61	C33	ES-0126	08-Jul-08
27	TU111	70-E27-00-3C	62	C33	ES-0126	08-Jul-08
27	TU111	70-E27-00-3C	63	C37	ES-0128	08-Jul-08
27	TU111	70-E27-00-3D	1	C31	ES-0124	03-Jul-08
27	TU111	70-E27-00-3D	2	C32	ES-0125	03-Jul-08
27	TU111	70-E27-00-3F	1	C33	ES-0126	08-Jul-08
27	TU111	70-E27-00-3F	2	C37	ES-0128	08-Jul-08
27	TU111	70-E27-00-3G	1	C33	ES-0126	08-Jul-08
27	TU111	70-E27-00-3G	2	C37	ES-0128	08-Jul-08
27	TU111	70-E27-00-3G	3	C12	ES-0129	09-Jul-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
27	TU111	70-E27-00-3G	4	C03	ES-0130	10-Jul-08
27	TU111	70-E27-00-3G	5	C03	ES-0130	10-Jul-08
27	TU111	70-E27-00-3G	6	C03	ES-0130	10-Jul-08
27	TU111	70-E27-00-3H	1	C33	ES-0126	08-Jul-08
27	TU111	70-E27-00-3H	2	C33	ES-0126	08-Jul-08
27	TU111	70-E27-00-3H	3	C37	ES-0128	08-Jul-08
27	TU111	70-E27-00-3H	4	C37	ES-0128	08-Jul-08
27	TU111	70-E27-00-3H	5	C37	ES-0128	08-Jul-08
27	TU111	70-E27-00-3H	6	C37	ES-0128	08-Jul-08
27	TU111	70-E27-00-3H	7	C37	ES-0128	08-Jul-08
27	TU111	70-E27-00-3H	8	C33	ES-0126	08-Jul-08
27	TU111	70-E27-00-3H	9	C33	ES-0126	08-Jul-08
27	TU111	70-E27-00-3H	10	C37	ES-0128	08-Jul-08
27	TU111	70-E27-00-3H	11	C33	ES-0126	08-Jul-08
27	TU111	70-E27-00-3H	12	C33	ES-0126	08-Jul-08
27	TU111	70-E27-00-3H	13	C33	ES-0126	08-Jul-08
27	TU111	70-E27-00-3H	14	C37	ES-0128	08-Jul-08
27	TU111	70-E27-00-3H	15	C33	ES-0126	08-Jul-08
27	TU111	70-E27-00-3H	16	C33	ES-0126	08-Jul-08
27	TU111	70-E27-00-3H	17	C37	ES-0128	08-Jul-08
27	TU111	70-E27-00-3H	18	C37	ES-0128	08-Jul-08
27	TU111	70-E27-00-3H	19	C37	ES-0128	08-Jul-08
27	TU111	70-E27-00-3H	20	C33	ES-0126	09-Jul-08
27	TU111	70-E27-00-3H	21	C33	ES-0126	09-Jul-08
27	TU111	70-E27-00-3H	22	C37	ES-0128	09-Jul-08
27	TU111	70-E27-00-3H	23	C37	ES-0128	09-Jul-08
27	TU111	70-E27-00-3H	24	C12	ES-0129	09-Jul-08
27	TU111	70-E27-00-3H	25	C12	ES-0129	09-Jul-08
27	TU111	70-E27-00-3H	26	C37	ES-0128	09-Jul-08
27	TU111	70-E27-00-3H	27	C37	ES-0128	09-Jul-08
27	TU111	70-E27-00-3H	28	C12	ES-0129	09-Jul-08
27	TU111	70-E27-00-3H	29	C12	ES-0129	09-Jul-08
27	TU111	70-E27-00-3H	30	C37	ES-0128	09-Jul-08
27	TU111	70-E27-00-3H	31	C37	ES-0128	09-Jul-08
27	TU111	70-E27-00-3H	32	C37	ES-0128	09-Jul-08
27	TU111	70-E27-00-3H	33	C12	ES-0129	09-Jul-08
27	TU111	70-E27-00-3H	34	C37	ES-0128	09-Jul-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
27	TU111	70-E27-00-3H	35	C37	ES-0128	09-Jul-08
27	TU111	70-E27-00-3H	36	C37	ES-0128	09-Jul-08
27	TU111	70-E27-00-3H	37	C12	ES-0129	09-Jul-08
27	TU111	70-E27-00-3H	38	C12	ES-0129	09-Jul-08
27	TU111	70-E27-00-3H	39	C12	ES-0129	09-Jul-08
27	TU111	70-E27-00-3H	40	C03	ES-0130	09-Jul-08
27	TU111	70-E27-00-3H	41	C03	ES-0130	09-Jul-08
27	TU111	70-E27-00-3H	42	C12	ES-0129	09-Jul-08
27	TU111	70-E27-00-3H	43	C12	ES-0129	09-Jul-08
27	TU111	70-E27-00-3H	44	C03	ES-0130	09-Jul-08
27	TU111	70-E27-00-3H	45	C05	ES-0132	12-Jul-08
27	TU111	70-E27-00-3H	46	C05	ES-0132	12-Jul-08
27	TU111	70-E27-00-3H	47	C05	ES-0132	12-Jul-08
27	TU111	70-E27-00-3H	48	C05	ES-0132	12-Jul-08
27	TU111	70-E27-00-3H	49	C05	ES-0132	12-Jul-08
27	TU111	70-E27-00-3H	50	C05	ES-0132	12-Jul-08
27	TU111	70-E27-00-3H	51	C05	ES-0132	12-Jul-08
27	TU111	70-E27-00-3H	52	C02	ES-0131	12-Jul-08
27	TU111	70-E27-00-3H	53	C02	ES-0131	12-Jul-08
27	TU111	70-E27-00-3H	54	C02	ES-0131	12-Jul-08
27	TU111	70-E27-00-3H	55	C02	ES-0131	12-Jul-08
27	TU111	70-E27-00-3H	56	C02	ES-0131	12-Jul-08
27	TU111	70-E27-00-3H	57	C02	ES-0131	12-Jul-08
27	TU112	70-D27-00-2Q	1	C12	ES-0129	10-Jul-08
27	TU112	70-D27-00-2Q	2	C12	ES-0129	10-Jul-08
27	TU112	70-D27-00-2Q	3	C12	ES-0129	10-Jul-08
27	TU112	70-D27-00-2Q	4	C12	ES-0129	10-Jul-08
27	TU112	70-D27-00-2Q	5	C03	ES-0130	10-Jul-08
27	TU112	70-D27-00-2Q	6	C03	ES-0130	10-Jul-08
27	TU112	70-D27-00-2Q	7	C02	ES-0131	10-Jul-08
27	TU112	70-D27-00-2Q	8	C02	ES-0131	10-Jul-08
27	TU112	70-D27-00-2Q	9	C12	ES-0129	10-Jul-08
27	TU112	70-D27-00-2Q	10	C02	ES-0131	10-Jul-08
27	TU112	70-D27-00-2Q	11	C05	ES-0132	12-Jul-08
27	TU112	70-D27-00-2Q	12	C02	ES-0131	12-Jul-08
27	TU112	70-D27-00-2Q	13	C05	ES-0132	12-Jul-08
27	TU112	70-D27-00-2Q	14	C02	ES-0131	12-Jul-08

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
27	TU112	70-D27-00-2Q	15	C05	ES-0132	12-Jul-08
27	TU112	70-D27-00-2Q	16	C02	ES-0131	12-Jul-08
27	TU112	70-D27-00-2Q	17	C02	ES-0131	12-Jul-08
27	TU112	70-D27-00-2S	4	C28	ES-0118	26-Jun-08
27	TU112	70-D27-00-2S	5	C27	ES-0117	26-Jun-08
27	TU112	70-D27-00-2S	6	C27	ES-0117	26-Jun-08
27	TU112	70-D27-00-2S	7	C28	ES-0118	26-Jun-08
27	TU112	70-D27-00-2S	8	C27	ES-0117	26-Jun-08
27	TU112	70-D27-00-2S	9	C28	ES-0118	26-Jun-08
27	TU112	70-D27-36-2Q	1	C13	ES-0111	26-Jun-08
27	TU112	70-D27-36-2Q	2	C14	ES-0112	26-Jun-08
27	TU112	70-D27-36-2Q	3	C14	ES-0112	26-Jun-08
27	TU112	70-D27-36-2Q	4	C14	ES-0112	26-Jun-08
27	TU112	70-D27-36-2Q	5	C13	ES-0111	12-Jul-08
27	TU112	70-D27-36-2Q	6	C13	ES-0111	12-Jul-08
27	TU112	70-D27-36-2Q	7	C14	ES-0112	12-Jul-08
27	TU112	70-D27-36-2Q	8	C14	ES-0112	12-Jul-08
27	TU112	70-D27-36-2Q	9	C14	ES-0112	12-Jul-08
27	TU112	70-D27-36-2Q	10	C14	ES-0112	12-Jul-08
27	TU112	70-D27-36-2Q	11	C14	ES-0112	14-Jul-08
27	TU112	70-E27-00-2P	3	C35	ES-0127	07-Jul-08
27	TU112	70-E27-00-2P	4	C35	ES-0127	07-Jul-08
27	TU112	70-E27-00-2P	5	C33	ES-0126	07-Jul-08
27	TU112	70-E27-00-2P	6	C33	ES-0126	07-Jul-08
27	TU112	70-E27-00-2P	7	C35	ES-0127	07-Jul-08
27	TU112	70-E27-00-2P	8	C35	ES-0127	07-Jul-08
27	TU112	70-E27-00-2P	9	C33	ES-0126	07-Jul-08
27	TU112	70-E27-00-2P	10	C33	ES-0126	07-Jul-08
27	TU112	70-E27-00-2P	11	C35	ES-0127	07-Jul-08
27	TU112	70-E27-00-2P	12	C35	ES-0127	07-Jul-08
27	TU112	70-E27-00-2P	13	C35	ES-0127	07-Jul-08
27	TU112	70-E27-00-2P	14	C33	ES-0126	07-Jul-08
27	TU112	70-E27-00-2P	15	C35	ES-0127	07-Jul-08
27	TU112	70-E27-00-2P	16	C35	ES-0127	07-Jul-08
27	TU112	70-E27-00-2P	17	C03	ES-0130	10-Jul-08
27	TU112	70-E27-00-2P	18	C12	ES-0129	10-Jul-08
27	TU112	70-E27-00-2P	19	C12	ES-0129	10-Jul-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
27	TU112	70-E27-00-2P	20	C03	ES-0130	10-Jul-08
27	TU112	70-E27-00-2P	21	C03	ES-0130	10-Jul-08
27	TU112	70-E27-00-2P	22	C03	ES-0130	10-Jul-08
27	TU112	70-E27-00-2P	23	C03	ES-0130	10-Jul-08
27	TU112	70-E27-00-2P	24	C03	ES-0130	10-Jul-08
27	TU112	70-E27-00-2P	25	C12	ES-0129	10-Jul-08
27	TU112	70-E27-00-2P	26	C03	ES-0130	10-Jul-08
27	TU112	70-E27-00-2P	27	C03	ES-0130	10-Jul-08
27	TU112	70-E27-00-2P	28	C12	ES-0129	10-Jul-08
27	TU112	70-E27-00-2P	29	C03	ES-0130	10-Jul-08
27	TU112	70-E27-00-2P	30	C03	ES-0130	10-Jul-08
27	TU112	70-E27-00-2P	31	C12	ES-0129	10-Jul-08
27	TU112	70-E27-00-2P	32	C03	ES-0130	10-Jul-08
27	TU112	70-E27-00-2P	33	C03	ES-0130	10-Jul-08
27	TU112	70-E27-00-2P	34	C12	ES-0129	10-Jul-08
27	TU112	70-E27-00-2P	35	C03	ES-0130	10-Jul-08
27	TU112	70-E27-00-2P	36	C03	ES-0130	10-Jul-08
27	TU112	70-E27-00-2P	37	C03	ES-0130	10-Jul-08
27	TU112	70-E27-00-2P	38	C03	ES-0130	10-Jul-08
27	TU113	70-D27-00-2R	1	C28	ES-0118	25-Jun-08
27	TU113	70-E27-00-3I	2	C21	ES-0116	25-Jun-08
27	TU113	70-E27-00-3I	3	C11	ES-0115	25-Jun-08
27	TU113	70-E27-00-3I	4	C11	ES-0115	25-Jun-08
27	TU113	70-E27-00-3I	5	C21	ES-0116	25-Jun-08
27	TU113	70-E27-00-3I	6	C11	ES-0115	25-Jun-08
27	TU113	70-E27-00-3I	7	C11	ES-0115	25-Jun-08
27	TU113	70-E27-00-3I	8	C21	ES-0116	25-Jun-08
27	TU113	70-E27-00-3I	9	C21	ES-0116	25-Jun-08
27	TU113	70-E27-00-3I	10	C21	ES-0116	25-Jun-08
27	TU113	70-E27-00-3I	11	C21	ES-0116	25-Jun-08
27	TU113	70-E27-00-3I	12	C21	ES-0116	25-Jun-08
27	TU113	70-E27-00-3I	13	C11	ES-0115	25-Jun-08
27	TU113	70-E27-00-3I	14	C28	ES-0118	25-Jun-08
27	TU113	70-E27-00-3I	15	C21	ES-0116	25-Jun-08
27	TU113	70-E27-00-3I	16	C21	ES-0116	25-Jun-08
27	TU113	70-E27-00-3I	17	C28	ES-0118	25-Jun-08
27	TU113	70-E27-00-3I	18	C28	ES-0118	25-Jun-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
27	TU113	70-E27-00-3I	19	C28	ES-0118	25-Jun-08
27	TU113	70-E27-36-2R	1	C11	ES-0157	20-Sep-08
27	TU113	70-E27-36-2R	2	C11	ES-0157	20-Sep-08
27	TU113	70-E27-36-3H	1	C13	ES-0111	26-Jun-08
27	TU113	70-E27-36-3H	2	C13	ES-0111	26-Jun-08
27	TU113	70-E27-36-3H	3	C14	ES-0112	26-Jun-08
27	TU113	70-E27-36-3H	4	C14	ES-0112	26-Jun-08
27	TU113	70-E27-36-3H	5	C13	ES-0111	26-Jun-08
27	TU113	70-E27-36-3H	6	C13	ES-0111	26-Jun-08
27	TU113	70-E27-36-3H	7	C14	ES-0112	26-Jun-08
27	TU113	70-E27-36-3H	8	C13	ES-0111	26-Jun-08
27	TU113	70-E27-36-3H	9	C14	ES-0112	26-Jun-08
27	TU113	70-E27-36-3H	10	C13	ES-0111	11-Jul-08
27	TU113	70-E27-36-3H	11	C13	ES-0111	11-Jul-08
27	TU113	70-E27-36-3H	12	C13	ES-0111	11-Jul-08
27	TU113	70-E27-36-3H	13	C14	ES-0112	11-Jul-08
27	TU113	70-E27-36-3H	14	C13	ES-0111	11-Jul-08
27	TU113	70-E27-36-3H	15	C13	ES-0111	11-Jul-08
27	TU113	70-E27-36-3H	16	C13	ES-0111	11-Jul-08
27	TU113	70-E27-36-3H	17	C14	ES-0112	11-Jul-08
27	TU113	70-E27-36-3H	18	C13	ES-0111	12-Jul-08
27	TU113	70-E27-36-3H	19	C13	ES-0111	12-Jul-08
27	TU113	70-E27-36-3H	20	C14	ES-0112	12-Jul-08
27	TU113	70-E27-36-3H	21	C13	ES-0111	12-Jul-08
27	TU113	70-E27-36-3H	22	C14	ES-0112	12-Jul-08
18	TU114	70-D18-09-8D	1	C18	ES-0071	29-Nov-07
18	TU114	70-D18-09-8D	2	C19	ES-0070	29-Nov-07
18	TU114	70-D18-09-8D	3	C19	ES-0070	29-Nov-07
18	TU114	70-D18-09-8D	4	C19	ES-0070	29-Nov-07
19	TU114	70-D19-09-8A	1	C07	ES-0068	28-Nov-07
19	TU114	70-D19-09-8A	2	C07	ES-0068	28-Nov-07
19	TU114	70-D19-09-8A	3	C19	ES-0070	28-Nov-07
19	TU114	70-D19-09-8A	4	C18	ES-0071	28-Nov-07
19	TU114	70-D19-09-8A	5	C19	ES-0070	28-Nov-07
19	TU114	70-D19-09-8A	6	C19	ES-0070	28-Nov-07
19	TU114	70-D19-09-8A	7	C19	ES-0070	28-Nov-07
19	TU114	70-D19-09-8A	8	C19	ES-0070	29-Nov-07

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU115	72-D18-34-8A	1	C37	ES-0153	02-Sep-08
18	TU115	72-D18-34-8A	1	C37	ES-0153	04-Sep-08
18	TU115	72-D18-34-8A	2	C37	ES-0153	05-Sep-08
18	TU115	72-D18-34-8B	1	C37	ES-0133	16-Sep-08
18	TU115	72-D18-34-8C	1	C37	ES-0153	04-Sep-08
18	TU115	72-D18-34-8C	2	C37	ES-0153	05-Sep-08
18	TU115	72-D18-34-8C	3	C37	ES-0153	06-Sep-08
18	TU115	72-D18-34-8C	4	C37	ES-0153	06-Sep-08
18	TU115	72-D18-34-8C	5	C37	ES-0153	08-Sep-08
18	TU115	72-D18-34-8C	6	C37	ES-0153	08-Sep-08
18	TU115	72-D18-34-8C	7	C37	ES-0153	10-Sep-08
18	TU115	72-D18-34-8C	8	C37	ES-0153	11-Sep-08
18	TU115	72-D18-34-8C	9	C37	ES-0153	11-Sep-08
18	TU115	72-D18-34-8C	10	C37	ES-0153	12-Sep-08
18	TU115	72-D18-34-8C	11	C37	ES-0153	15-Sep-08
18	TU115	72-D18-34-8D	1	C37	ES-0153	17-Sep-08
18	TU115	72-D18-34-8D	2	C37	ES-0153	23-Sep-08
18	TU115	72-D18-34-8D	3	C37	ES-0153	24-Sep-08
18	TU115	72-D18-34-8D	4	C37	ES-0153	29-Sep-08
18	TU115	72-D18-34-8E	1	C37	ES-0153	02-Oct-08
18	TU116	70-D18-44-1L	36	C22	ES-0161	30-Sep-08
18	TU116	70-D18-44-1L	37	C22	ES-0161	30-Sep-08
18	TU116	70-D18-44-1L	38	C22	ES-0161	30-Sep-08
18	TU116	70-D18-44-1L	39	C22	ES-0161	30-Sep-08
18	TU116	70-D18-44-1L	40	C22	ES-0161	30-Sep-08
18	TU116	70-D18-44-1L	41	C22	ES-0161	30-Sep-08
18	TU116	70-D18-44-1L	42	C22	ES-0161	30-Sep-08
18	TU116	70-D18-44-1L	43	C22	ES-0161	30-Sep-08
18	TU116	70-D18-44-2C	1	C22	ES-0161	30-Sep-08
18	TU116	70-D18-44-2C	2	C22	ES-0161	30-Sep-08
18	TU116	70-D18-44-2C	3	C22	ES-0161	30-Sep-08
18	TU116	70-D18-44-2C	4	C22	ES-0161	30-Sep-08
18	TU116	70-D18-44-2C	5	C22	ES-0161	01-Oct-08
18	TU116	70-D18-44-2C	6	C22	ES-0161	01-Oct-08
18	TU116	70-D18-44-2C	7	C22	ES-0161	01-Oct-08
18	TU116	70-D18-44-2C	8	C22	ES-0161	01-Oct-08
18	TU116	70-D18-44-2C	9	C22	ES-0161	01-Oct-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU116	70-D18-44-2C	10	C22	ES-0161	01-Oct-08
18	TU116	70-D18-44-2C	11	C22	ES-0161	01-Oct-08
18	TU116	70-D18-44-2E	1	C22	ES-0161	02-Oct-08
18	TU116	70-D18-44-2F	1	C22	ES-0161	01-Oct-08
18	TU116	70-D18-44-2F	2	C22	ES-0161	01-Oct-08
18	TU116	70-D18-44-2F	3	C22	ES-0161	02-Oct-08
18	TU116	70-D18-44-2F	4	C22	ES-0161	02-Oct-08
18	TU116	70-D18-44-2F	5	C22	ES-0161	02-Oct-08
18	TU116	70-D18-44-2F	6	C22	ES-0161	02-Oct-08
18	TU116	70-D18-44-2F	7	C36	ES-0163	10-Oct-08
18	TU116	70-D18-44-2F	8	C36	ES-0163	10-Oct-08
17	TU117	70-D17-00-8H	1	C19	ES-0148	19-Aug-08
17	TU117	70-D17-00-8H	2	C19	ES-0148	19-Aug-08
17	TU117	70-D17-00-8H	3	C19	ES-0148	19-Aug-08
18	TU117	70-D18-00-1A	13	C07	ES-0147	18-Aug-08
18	TU117	70-D18-00-1A	14	C07	ES-0147	18-Aug-08
18	TU117	70-D18-00-1A	15	C07	ES-0147	18-Aug-08
18	TU117	70-D18-00-1A	16	C07	ES-0147	18-Aug-08
18	TU117	70-D18-00-8C	1	C07	ES-0147	18-Aug-08
18	TU117	70-D18-00-8C	2	C07	ES-0147	18-Aug-08
18	TU117	70-D18-00-8C	3	C07	ES-0147	18-Aug-08
18	TU117	70-D18-00-8C	4	C07	ES-0147	18-Aug-08
18	TU117	70-D18-00-8C	5	C07	ES-0147	18-Aug-08
18	TU117	70-D18-71-1A	1	C07	ES-0147	18-Aug-08
18	TU117	70-D18-71-1A	2	C07	ES-0147	18-Aug-08
18	TU117	70-D18-71-1A	3	C07	ES-0147	18-Aug-08
18	TU117	70-D18-71-1A	4	C07	ES-0147	18-Aug-08
18	TU117	70-D18-71-1A	5	C07	ES-0147	18-Aug-08
18	TU117	70-D18-71-1A	6	C07	ES-0147	18-Aug-08
18	TU117	70-D18-71-1A	7	C07	ES-0147	18-Aug-08
18	TU117	70-D18-71-1A	8	C07	ES-0147	18-Aug-08
18	TU117	70-D18-71-1A	9	C07	ES-0147	18-Aug-08
18	TU117	70-D18-71-1A	10	C07	ES-0147	18-Aug-08
18	TU117	70-D18-71-1A	11	C07	ES-0147	18-Aug-08
18	TU117	70-D18-71-1A	12	C07	ES-0147	18-Aug-08
18	TU117	70-D18-71-1A	13	C07	ES-0147	18-Aug-08
18	TU117	70-D18-71-1A	14	C07	ES-0147	18-Aug-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU117	70-D18-71-1A	15	C07	ES-0147	18-Aug-08
18	TU117	70-D18-71-1A	16	C07	ES-0147	18-Aug-08
17	TU118	70-D17-00-8E	1	C07	ES-0038	28-Aug-07
17	TU118	70-D17-00-8E	2	C27	ES-0039	28-Aug-07
17	TU118	70-D17-00-8E	3	C27	ES-0039	28-Aug-07
17	TU118	70-D17-00-8E	4	C27	ES-0039	28-Aug-07
17	TU118	70-D17-00-8E	5	C19	ES-0148	18-Aug-08
17	TU118	70-D17-00-8E	6	C19	ES-0148	18-Aug-08
17	TU118	70-D17-00-8E	7	C19	ES-0148	18-Aug-08
17	TU118	70-D17-00-8E	8	C19	ES-0148	18-Aug-08
17	TU118	70-D17-00-8E	9	C19	ES-0148	18-Aug-08
17	TU118	70-D17-00-8E	10	C19	ES-0148	18-Aug-08
17	TU118	70-D17-00-8E	11	C19	ES-0148	18-Aug-08
17	TU118	70-D17-00-8E	12	C19	ES-0148	18-Aug-08
17	TU118	70-D17-00-8E	13	C19	ES-0148	18-Aug-08
17	TU118	70-D17-00-8E	14	C19	ES-0148	18-Aug-08
17	TU118	70-D17-00-8I	1	C19	ES-0148	19-Aug-08
17	TU118	70-D17-00-8I	2	C19	ES-0148	19-Aug-08
17	TU118	70-D17-00-8I	3	C19	ES-0148	19-Aug-08
17	TU118	70-D17-00-8I	4	C19	ES-0148	19-Aug-08
17	TU118	70-D17-00-8I	5	C19	ES-0148	19-Aug-08
17	TU118	70-D17-00-8I	6	C19	ES-0148	19-Aug-08
17	TU118	70-D17-00-8I	7	C19	ES-0148	19-Aug-08
17	TU118	70-D17-00-8I	8	C19	ES-0148	19-Aug-08
17	TU118	70-D17-00-8I	9	C19	ES-0148	19-Aug-08
17	TU118	70-D17-00-8I	10	C19	ES-0148	19-Aug-08
17	TU118	70-D17-00-8I	11	C19	ES-0148	19-Aug-08
17	TU118	70-D17-00-8I	12	C19	ES-0148	19-Aug-08
17	TU118	70-D17-00-8I	13	C19	ES-0148	19-Aug-08
17	TU118	70-D17-00-8I	14	C19	ES-0148	19-Aug-08
17	TU118	70-D17-00-8I	15	C19	ES-0148	19-Aug-08
17	TU118	70-D17-00-8I	16	C19	ES-0148	19-Aug-08
17	TU118	70-D17-00-8I	17	C19	ES-0148	19-Aug-08
17	TU118	70-D17-00-8I	18	C19	ES-0148	19-Aug-08
17	TU118	70-D17-00-8I	19	C19	ES-0148	19-Aug-08
18	TU118	70-D18-00-1A	1	C01	ES-0146	15-Aug-08
18	TU118	70-D18-00-1A	2	C01	ES-0146	15-Aug-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU118	70-D18-00-1A	3	C01	ES-0146	15-Aug-08
18	TU118	70-D18-00-1A	4	C01	ES-0146	15-Aug-08
18	TU118	70-D18-00-1A	5	C01	ES-0146	15-Aug-08
18	TU118	70-D18-00-1A	6	C01	ES-0146	15-Aug-08
18	TU118	70-D18-00-1A	7	C01	ES-0146	15-Aug-08
18	TU118	70-D18-00-1A	8	C07	ES-0147	15-Aug-08
18	TU118	70-D18-00-1A	9	C07	ES-0147	15-Aug-08
18	TU118	70-D18-00-1A	10	C07	ES-0147	15-Aug-08
18	TU118	70-D18-00-1A	11	C07	ES-0147	15-Aug-08
18	TU118	70-D18-00-1A	12	C07	ES-0147	18-Aug-08
18	TU118	70-D18-00-1B	1	C01	ES-0146	15-Aug-08
18	TU118	70-D18-00-1B	2	C01	ES-0146	15-Aug-08
18	TU118	70-D18-00-1B	3	C01	ES-0146	15-Aug-08
18	TU118	70-D18-00-1B	4	C01	ES-0146	15-Aug-08
18	TU118	70-D18-00-1B	5	C01	ES-0146	15-Aug-08
18	TU118	70-D18-00-1B	6	C01	ES-0146	15-Aug-08
18	TU118	70-D18-00-1B	7	C01	ES-0146	15-Aug-08
18	TU118	70-D18-00-1B	8	C01	ES-0146	15-Aug-08
18	TU118	70-D18-00-1B	9	C01	ES-0146	15-Aug-08
18	TU118	70-D18-00-8A	1	C01	ES-0146	15-Aug-08
18	TU118	70-D18-00-8A	2	C01	ES-0146	15-Aug-08
18	TU118	70-D18-00-8A	3	C01	ES-0146	15-Aug-08
18	TU118	70-D18-00-8A	4	C01	ES-0146	15-Aug-08
18	TU118	70-D18-00-8A	5	C01	ES-0146	15-Aug-08
18	TU118	70-D18-00-8A	6	C01	ES-0146	15-Aug-08
18	TU118	70-D18-00-8A	7	C01	ES-0146	15-Aug-08
18	TU118	70-D18-00-8A	8	C01	ES-0146	15-Aug-08
18	TU118	70-D18-00-8A	9	C01	ES-0146	15-Aug-08
18	TU119	70-D18-09-3S	13	C18	ES-0071	30-Nov-07
18	TU119	70-D18-09-3S	14	C18	ES-0071	30-Nov-07
18	TU119	70-D18-09-3S	15	C19	ES-0070	30-Nov-07
18	TU119	70-D18-09-3S	16	C19	ES-0070	30-Nov-07
18	TU119	70-D18-09-3S	17	C18	ES-0071	30-Nov-07
18	TU119	70-D18-09-3S	18	C19	ES-0070	30-Nov-07
18	TU119	70-D18-09-3S	19	C19	ES-0070	30-Nov-07
18	TU119	70-D18-09-3S	20	C18	ES-0071	30-Nov-07
18	TU119	70-D18-09-3S	21	C17	ES-0072	30-Nov-07

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU119	70-D18-09-3S	22	C17	ES-0072	30-Nov-07
18	TU119	70-D18-09-3S	23	C19	ES-0091	03-Apr-08
18	TU119	70-D18-09-3S	24	C19	ES-0091	03-Apr-08
18	TU119	70-D18-09-3S	25	C19	ES-0091	03-Apr-08
18	TU119	70-D18-09-3U	1	C18	ES-0071	30-Nov-07
18	TU119	70-D18-09-3U	2	C18	ES-0071	30-Nov-07
18	TU119	70-D18-09-3U	3	C17	ES-0072	03-Dec-07
18	TU119	70-D18-09-3U	4	C18	ES-0071	03-Dec-07
18	TU119	70-D18-09-3U	5	C18	ES-0071	03-Dec-07
18	TU119	70-D18-09-3U	6	C17	ES-0072	03-Dec-07
18	TU119	70-D18-09-3U	7	C18	ES-0071	03-Dec-07
18	TU119	70-D18-09-3U	8	C17	ES-0072	03-Dec-07
18	TU119	70-D18-09-3U	9	C17	ES-0072	03-Dec-07
18	TU119	70-D18-09-3U	10	C18	ES-0071	03-Dec-07
18	TU119	70-D18-09-3U	11	C17	ES-0072	03-Dec-07
18	TU119	70-D18-09-3U	12	C18	ES-0071	03-Dec-07
18	TU119	70-D18-09-3U	13	C17	ES-0072	03-Dec-07
18	TU119	70-D18-09-3U	14	C17	ES-0072	03-Dec-07
18	TU119	70-D18-09-8F	1	C19	ES-0070	30-Nov-07
18	TU119	70-D18-09-8G	1	C18	ES-0071	30-Nov-07
18	TU119	70-D18-33-3U	1	C06	ES-0133	18-Jul-08
18	TU119	70-D18-33-3U	2	C06	ES-0133	18-Jul-08
18	TU119	70-D18-33-3U	3	C06	ES-0133	18-Jul-08
18	TU119	70-D18-33-3U	4	C10	ES-0134	18-Jul-08
18	TU119	70-D18-33-3U	5	C10	ES-0134	18-Jul-08
18	TU119	70-D18-33-3U	6	C10	ES-0134	18-Jul-08
18	TU119	70-D18-33-3U	7	C06	ES-0133	18-Jul-08
18	TU119	70-D18-33-3U	8	C11	ES-0135	18-Jul-08
18	TU119	70-D18-33-3U	9	C11	ES-0135	18-Jul-08
18	TU119	70-D18-33-4R	1	C06	ES-0133	14-Jul-08
18	TU119	70-D18-33-4R	2	C06	ES-0133	14-Jul-08
18	TU119	70-D18-33-4R	3	C06	ES-0133	14-Jul-08
18	TU119	70-D18-33-4R	4	C06	ES-0133	15-Jul-08
18	TU119	70-D18-33-4R	5	C10	ES-0134	15-Jul-08
18	TU119	70-D18-33-4R	6	C06	ES-0133	15-Jul-08
18	TU119	70-D18-33-4R	7	C10	ES-0134	15-Jul-08
18	TU119	70-D18-33-4R	8	C10	ES-0134	15-Jul-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU119	70-D18-33-4R	9	C10	ES-0134	15-Jul-08
18	TU119	70-D18-33-4R	10	C10	ES-0134	15-Jul-08
18	TU119	70-D18-33-4R	11	C10	ES-0134	15-Jul-08
18	TU119	70-D18-33-4R	12	C10	ES-0134	15-Jul-08
18	TU119	70-D18-33-4R	13	C10	ES-0134	15-Jul-08
18	TU119	70-D18-33-4R	14	C10	ES-0134	15-Jul-08
18	TU119	70-D18-33-4R	15	C10	ES-0134	15-Jul-08
18	TU120	70-D18-00-4S	1	C10	ES-0156	17-Sep-08
18	TU120	70-D18-00-4S	2	C10	ES-0156	17-Sep-08
18	TU120	70-D18-00-4S	3	C10	ES-0156	17-Sep-08
18	TU120	70-D18-00-4S	4	C10	ES-0156	17-Sep-08
18	TU120	70-D18-00-4S	5	C10	ES-0156	17-Sep-08
18	TU120	70-D18-00-4S	6	C10	ES-0156	17-Sep-08
18	TU120	70-D18-00-4S	7	C10	ES-0156	17-Sep-08
18	TU120	70-D18-00-4S	8	C10	ES-0156	18-Sep-08
18	TU120	70-D18-00-4S	9	C10	ES-0156	18-Sep-08
18	TU120	70-D18-00-4S	10	C10	ES-0156	18-Sep-08
18	TU120	70-D18-00-4S	11	C10	ES-0156	18-Sep-08
18	TU120	70-D18-00-4S	12	C10	ES-0156	18-Sep-08
18	TU120	70-D18-00-4S	13	C10	ES-0156	18-Sep-08
18	TU120	70-D18-00-4S	14	C10	ES-0156	18-Sep-08
18	TU120	70-D18-00-4S	15	C10	ES-0156	18-Sep-08
18	TU120	70-D18-00-4S	16	C10	ES-0156	18-Sep-08
18	TU120	70-D18-00-4S	17	C10	ES-0156	18-Sep-08
18	TU120	70-D18-00-4S	18	C10	ES-0156	18-Sep-08
18	TU120	70-D18-00-4S	19	C10	ES-0156	18-Sep-08
18	TU120	70-D18-00-4S	20	C10	ES-0156	18-Sep-08
18	TU120	70-D18-00-4S	21	C10	ES-0156	18-Sep-08
18	TU120	70-D18-00-4S	22	C10	ES-0156	18-Sep-08
18	TU120	70-D18-00-4S	23	C10	ES-0156	18-Sep-08
18	TU120	70-D18-00-4S	24	C17	ES-0155	18-Sep-08
18	TU120	70-D18-00-4S	25	C17	ES-0155	18-Sep-08
18	TU120	70-D18-00-4S	26	C17	ES-0155	18-Sep-08
18	TU120	70-D18-00-4S	27	C17	ES-0155	18-Sep-08
18	TU120	70-D18-00-4S	28	C17	ES-0155	18-Sep-08
18	TU120	70-D18-00-4S	29	C17	ES-0155	18-Sep-08
18	TU120	70-D18-00-4S	30	C17	ES-0155	18-Sep-08

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU120	70-D18-00-4S	31	C17	ES-0155	18-Sep-08
18	TU120	70-D18-00-4T	1	C10	ES-0156	17-Sep-08
18	TU120	70-D18-00-4T	2	C10	ES-0156	17-Sep-08
18	TU120	70-D18-00-4T	3	C10	ES-0156	17-Sep-08
18	TU120	70-D18-00-4T	4	C10	ES-0156	17-Sep-08
18	TU120	70-D18-00-4T	5	C10	ES-0156	17-Sep-08
18	TU120	70-D18-00-4T	6	C10	ES-0156	17-Sep-08
18	TU120	70-D18-00-4T	7	C10	ES-0156	17-Sep-08
18	TU120	70-D18-00-4T	8	C10	ES-0156	17-Sep-08
18	TU120	70-D18-00-4T	9	C10	ES-0156	17-Sep-08
18	TU120	70-D18-00-4T	10	C10	ES-0156	17-Sep-08
18	TU120	70-D18-00-4T	11	C10	ES-0156	17-Sep-08
18	TU120	70-D18-00-4T	12	C10	ES-0156	17-Sep-08
18	TU120	70-D18-00-4U	1	C17	ES-0155	18-Sep-08
18	TU120	70-D18-00-4U	2	C17	ES-0155	18-Sep-08
18	TU120	70-D18-00-4U	3	C17	ES-0155	18-Sep-08
18	TU120	70-D18-00-4U	4	C17	ES-0155	18-Sep-08
18	TU120	70-D18-00-4U	5	C17	ES-0155	18-Sep-08
18	TU120	70-D18-00-4U	6	C17	ES-0155	18-Sep-08
18	TU120	70-D18-00-4U	7	C24	ES-0158	19-Sep-08
18	TU120	70-D18-00-4U	8	C24	ES-0158	19-Sep-08
18	TU120	70-D18-00-4U	9	C24	ES-0158	19-Sep-08
18	TU120	70-D18-00-8F	1	C24	ES-0158	20-Sep-08
18	TU120	70-D18-00-8F	2	C24	ES-0158	20-Sep-08
18	TU120	70-D18-00-8F	3	C24	ES-0158	20-Sep-08
18	TU120	70-D18-00-8F	4	C24	ES-0158	20-Sep-08
18	TU120	70-D18-00-8F	5	C24	ES-0158	20-Sep-08
18	TU120	70-D18-00-8F	6	C24	ES-0158	20-Sep-08
18	TU120	70-D18-00-8F	7	C24	ES-0158	20-Sep-08
18	TU120	70-D18-00-8F	8	C24	ES-0158	20-Sep-08
18	TU120	70-D18-33-3Y	1	C11	ES-0157	17-Sep-08
18	TU120	70-D18-33-3Y	2	C11	ES-0157	17-Sep-08
18	TU120	70-D18-33-8W	1	C11	ES-0157	18-Sep-08
18	TU120	70-D18-33-8W	2	C11	ES-0157	18-Sep-08
18	TU120	70-D18-33-8W	3	C11	ES-0157	18-Sep-08
18	TU121	70-D18-00-4F	1	C15	ES-0154	05-Sep-08
18	TU121	70-D18-00-4F	2	C15	ES-0154	05-Sep-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU121	70-D18-00-4F	3	C15	ES-0154	05-Sep-08
18	TU121	70-D18-00-4F	4	C15	ES-0154	05-Sep-08
18	TU121	70-D18-00-4H	1	C15	ES-0154	04-Sep-08
18	TU121	70-D18-00-4H	2	C15	ES-0154	04-Sep-08
18	TU121	70-D18-00-4H	3	C15	ES-0154	04-Sep-08
18	TU121	70-D18-00-4H	4	C15	ES-0154	04-Sep-08
18	TU121	70-D18-00-4H	5	C15	ES-0154	04-Sep-08
18	TU121	70-D18-00-4H	6	C15	ES-0154	04-Sep-08
18	TU121	70-D18-00-4H	7	C15	ES-0154	04-Sep-08
18	TU121	70-D18-00-4H	8	C15	ES-0154	05-Sep-08
18	TU121	70-D18-00-4H	9	C15	ES-0154	05-Sep-08
18	TU121	70-D18-00-4H	10	C15	ES-0154	05-Sep-08
18	TU121	70-D18-00-4H	11	C15	ES-0154	05-Sep-08
18	TU121	70-D18-00-4H	12	C15	ES-0154	05-Sep-08
18	TU121	70-D18-00-4H	13	C15	ES-0154	05-Sep-08
18	TU121	70-D18-00-4H	14	C15	ES-0154	05-Sep-08
18	TU121	70-D18-00-4H	15	C17	ES-0155	06-Sep-08
18	TU121	70-D18-00-4H	16	C33B	ES-0166	04-Dec-08
18	TU121	70-D18-00-4H	17	C33B	ES-0166	04-Dec-08
18	TU121	70-D18-00-4H	18	C33B	ES-0166	04-Dec-08
18	TU121	70-D18-00-4H	19	C33B	ES-0166	04-Dec-08
18	TU121	70-D18-00-4J	1	C15	ES-0154	04-Sep-08
18	TU121	70-D18-00-4K	1	C15	ES-0154	04-Sep-08
18	TU121	70-D18-00-4K	2	C15	ES-0154	04-Sep-08
18	TU121	70-D18-00-4X	1	C15	ES-0154	05-Sep-08
18	TU121	70-D18-00-8E	1	C15	ES-0154	05-Sep-08
18	TU121	70-D18-33-4E	1	C06	ES-0133	22-Jul-08
18	TU121	70-D18-33-4E	2	C11	ES-0135	22-Jul-08
18	TU121	70-D18-33-4E	3	C11	ES-0135	22-Jul-08
18	TU121	70-D18-33-5B	1	C06	ES-0133	19-Jul-08
18	TU121	70-D18-33-5B	2	C11	ES-0135	19-Jul-08
18	TU121	70-D18-33-5C	1	C11	ES-0135	22-Jul-08
18	TU121	70-D18-33-5C	2	C11	ES-0135	22-Jul-08
18	TU121	70-D18-33-6C	1	C06	ES-0133	22-Jul-08
18	TU121	70-D18-33-6C	2	C06	ES-0133	22-Jul-08
18	TU121	70-D18-33-6C	3	C11	ES-0135	22-Jul-08
18	TU121	70-D18-33-6C	4	C11	ES-0135	22-Jul-08

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU121	70-D18-33-6C	5	C11	ES-0135	22-Jul-08
18	TU121	70-D18-33-6C	6	C11	ES-0135	22-Jul-08
18	TU121	70-D18-33-8U	1	C06	ES-0133	22-Jul-08
18	TU122	70-D18-00-4G	1	C15	ES-0154	03-Sep-08
18	TU122	70-D18-00-4G	2	C15	ES-0154	04-Sep-08
18	TU122	70-D18-00-4G	3	C15	ES-0154	04-Sep-08
18	TU122	70-D18-00-4G	4	C15	ES-0154	04-Sep-08
18	TU122	70-D18-00-4G	5	C15	ES-0154	04-Sep-08
18	TU122	70-D18-00-4G	6	C17	ES-0155	06-Sep-08
18	TU122	70-D18-00-4G	7	C17	ES-0155	06-Sep-08
18	TU122	70-D18-00-4G	8	C17	ES-0155	06-Sep-08
18	TU122	70-D18-00-4G	9	C17	ES-0155	06-Sep-08
18	TU122	70-D18-00-4G	10	C17	ES-0155	06-Sep-08
18	TU122	70-D18-00-4V	1	C15	ES-0154	05-Sep-08
18	TU122	70-D18-00-4V	2	C15	ES-0154	06-Sep-08
18	TU122	70-D18-00-4V	3	C15	ES-0154	06-Sep-08
18	TU122	70-D18-00-4V	4	C15	ES-0154	06-Sep-08
18	TU122	70-D18-00-4V	5	C17	ES-0155	06-Sep-08
18	TU122	70-D18-00-4V	6	C17	ES-0155	06-Sep-08
18	TU122	70-D18-00-4V	7	C17	ES-0155	06-Sep-08
18	TU122	70-D18-00-4V	8	C17	ES-0155	06-Sep-08
18	TU122	70-D18-00-4V	9	C17	ES-0155	06-Sep-08
18	TU122	70-D18-00-4V	10	C17	ES-0155	06-Sep-08
18	TU122	70-D18-00-4V	11	C17	ES-0155	06-Sep-08
18	TU122	70-D18-00-4V	12	C17	ES-0155	06-Sep-08
18	TU122	70-D18-00-4V	13	C17	ES-0155	06-Sep-08
18	TU122	70-D18-00-4V	14	C17	ES-0155	08-Sep-08
18	TU122	70-D18-00-4V	15	C17	ES-0155	08-Sep-08
18	TU122	70-D18-00-4V	16	C17	ES-0155	08-Sep-08
18	TU122	70-D18-00-4V	17	C17	ES-0155	08-Sep-08
19	TU122	70-D19-00-2V	1	C18	ES-0152	02-Sep-08
19	TU122	70-D19-00-2V	2	C18	ES-0152	03-Sep-08
19	TU122	70-D19-00-2V	3	C18	ES-0152	03-Sep-08
19	TU122	70-D19-00-2V	4	C18	ES-0152	03-Sep-08
19	TU122	70-D19-00-2V	5	C18	ES-0152	03-Sep-08
19	TU122	70-D19-00-2V	6	C18	ES-0152	03-Sep-08
19	TU122	70-D19-00-2V	7	C18	ES-0152	03-Sep-08

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU122	70-D19-00-2V	8	C18	ES-0152	03-Sep-08
19	TU122	70-D19-00-2V	9	C18	ES-0152	03-Sep-08
19	TU122	70-D19-00-2V	10	C18	ES-0152	03-Sep-08
19	TU122	70-D19-00-2V	11	C18	ES-0152	03-Sep-08
19	TU122	70-D19-00-2W	1	C18	ES-0152	02-Sep-08
19	TU122	70-D19-00-2X	1	C18	ES-0152	02-Sep-08
19	TU122	70-D19-00-2Y	1	C18	ES-0152	02-Sep-08
19	TU122	70-D19-00-2Y	2	C18	ES-0152	02-Sep-08
19	TU122	70-D19-00-2Y	3	C18	ES-0152	02-Sep-08
19	TU122	70-D19-00-2Z	2	C18	ES-0152	29-Aug-08
19	TU122	70-D19-00-2Z	3	C18	ES-0152	29-Aug-08
19	TU122	70-D19-00-2Z	4	C18	ES-0152	29-Aug-08
19	TU122	70-D19-00-2Z	5	C18	ES-0152	29-Aug-08
19	TU122	70-D19-00-2Z	6	C18	ES-0152	29-Aug-08
19	TU122	70-D19-00-2Z	7	C18	ES-0152	29-Aug-08
19	TU122	70-D19-00-2Z	8	C18	ES-0152	29-Aug-08
19	TU122	70-D19-00-2Z	9	C18	ES-0152	29-Aug-08
19	TU122	70-D19-00-2Z	10	C18	ES-0152	29-Aug-08
19	TU122	70-D19-00-2Z	11	C18	ES-0152	29-Aug-08
19	TU122	70-D19-00-2Z	12	C18	ES-0152	02-Sep-08
19	TU122	70-D19-00-2Z	13	C18	ES-0152	02-Sep-08
19	TU122	70-D19-00-2Z	14	C18	ES-0152	02-Sep-08
19	TU122	70-D19-00-2Z	15	C33A	ES-0165	04-Dec-08
19	TU122	70-D19-00-2Z	16	C33A	ES-0165	04-Dec-08
19	TU122	70-D19-00-3M	1	C18	ES-0152	02-Sep-08
19	TU122	70-D19-00-3M	2	C18	ES-0152	02-Sep-08
19	TU122	70-D19-00-8H	1	C18	ES-0152	03-Sep-08
19	TU122	70-D19-00-8H	2	C18	ES-0152	03-Sep-08
19	TU123	70-D19-00-1K	13	C04	ES-0151	28-Aug-08
19	TU123	70-D19-00-1K	14	C04	ES-0151	28-Aug-08
19	TU123	70-D19-00-1K	15	C04	ES-0151	28-Aug-08
19	TU123	70-D19-00-1K	16	C04	ES-0151	28-Aug-08
19	TU123	70-D19-00-2Z	1	C18	ES-0152	29-Aug-08
19	TU123	70-D19-00-3A	1	C04	ES-0151	29-Aug-08
19	TU123	70-D19-00-3A	2	C04	ES-0151	29-Aug-08
19	TU123	70-D19-00-3A	3	C18	ES-0152	29-Aug-08
19	TU123	70-D19-00-3A	4	C18	ES-0152	29-Aug-08

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PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU123	70-D19-00-3B	1	C04	ES-0151	28-Aug-08
19	TU123	70-D19-00-3B	2	C04	ES-0151	28-Aug-08
19	TU123	70-D19-00-3B	3	C04	ES-0151	28-Aug-08
19	TU123	70-D19-00-3C	1	C04	ES-0151	28-Aug-08
19	TU123	70-D19-00-3C	2	C04	ES-0151	28-Aug-08
19	TU123	70-D19-00-3C	3	C04	ES-0151	28-Aug-08
19	TU123	70-D19-00-3C	4	C04	ES-0151	28-Aug-08
19	TU123	70-D19-00-3E	6	C04	ES-0151	27-Aug-08
19	TU123	70-D19-00-3E	7	C04	ES-0151	28-Aug-08
19	TU123	70-D19-00-3G	1	C04	ES-0151	28-Aug-08
19	TU123	70-D19-00-3H	1	C04	ES-0151	27-Aug-08
19	TU123	70-D19-00-3H	2	C04	ES-0151	28-Aug-08
19	TU123	70-D19-00-3I	1	C04	ES-0151	27-Aug-08
19	TU123	70-D19-00-3I	2	C04	ES-0151	27-Aug-08
19	TU123	70-D19-00-3I	3	C04	ES-0151	27-Aug-08
19	TU123	70-D19-00-3I	4	C04	ES-0151	27-Aug-08
19	TU123	70-D19-00-3I	5	C04	ES-0151	27-Aug-08
19	TU123	70-D19-00-3I	6	C04	ES-0151	27-Aug-08
19	TU123	70-D19-00-3K	1	C13	ES-0150	27-Aug-08
19	TU123	70-D19-00-3K	2	C04	ES-0151	27-Aug-08
19	TU123	70-D19-00-3L	1	C13	ES-0150	26-Aug-08
19	TU123	70-D19-00-3L	2	C13	ES-0150	26-Aug-08
19	TU123	70-D19-00-3L	3	C13	ES-0150	26-Aug-08
19	TU123	70-D19-00-3L	4	C13	ES-0150	26-Aug-08
19	TU123	70-D19-00-3L	5	C13	ES-0150	26-Aug-08
19	TU123	70-D19-00-3L	6	C13	ES-0150	26-Aug-08
19	TU123	70-D19-00-3L	7	C13	ES-0150	26-Aug-08
19	TU123	70-D19-00-3L	8	C13	ES-0150	26-Aug-08
19	TU123	70-D19-00-3L	9	C13	ES-0150	26-Aug-08
19	TU123	70-D19-00-3L	10	C13	ES-0150	26-Aug-08
19	TU123	70-D19-00-3L	11	C13	ES-0150	26-Aug-08
19	TU123	70-D19-00-3L	12	C13	ES-0150	26-Aug-08
19	TU123	70-D19-00-3O	1	C04	ES-0151	28-Aug-08
19	TU123	70-D19-00-3O	2	C04	ES-0151	28-Aug-08
19	TU123	70-D19-00-3O	3	C04	ES-0151	28-Aug-08
19	TU123	70-D19-00-3O	4	C04	ES-0151	28-Aug-08
19	TU123	70-D19-00-3O	5	C04	ES-0151	28-Aug-08

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU123	70-D19-00-3O	6	C33A	ES-0165	03-Dec-08
19	TU123	70-D19-00-3Z	1	C33A	ES-0165	03-Dec-08
19	TU123	70-D19-00-3Z	2	C33A	ES-0165	03-Dec-08
19	TU123	70-D19-00-3Z	3	C33A	ES-0165	03-Dec-08
19	TU123	70-D19-00-3Z	4	C33A	ES-0165	03-Dec-08
19	TU123	70-D19-00-3Z	5	C33A	ES-0165	03-Dec-08
19	TU123	70-D19-00-3Z	6	C33A	ES-0165	03-Dec-08
19	TU123	70-D19-00-3Z	7	C33A	ES-0165	03-Dec-08
19	TU123	70-D19-00-3Z	8	C33A	ES-0165	04-Dec-08
19	TU123	70-D19-00-3Z	9	C33A	ES-0165	04-Dec-08
19	TU123	70-D19-00-3Z	10	C33A	ES-0165	04-Dec-08
19	TU123	70-D19-00-3Z	11	C33A	ES-0165	04-Dec-08
19	TU123	70-D19-00-3Z	12	C33A	ES-0165	04-Dec-08
19	TU123	70-D19-00-3Z	13	C33A	ES-0165	04-Dec-08
19	TU123	70-D19-00-3Z	14	C33A	ES-0165	04-Dec-08
19	TU123	70-D19-00-3Z	15	C33A	ES-0165	04-Dec-08
19	TU123	70-D19-00-3Z	16	C33A	ES-0165	04-Dec-08
19	TU123	70-D19-00-3Z	17	C07	ES-0162	04-Dec-08
19	TU123	70-D19-00-3Z	18	C07	ES-0162	04-Dec-08
19	TU123	70-D19-00-3Z	19	C07	ES-0162	04-Dec-08
19	TU123	70-D19-00-3Z	20	C07	ES-0162	04-Dec-08
19	TU123	70-D19-00-3Z	21	C07	ES-0162	04-Dec-08
19	TU123	70-D19-00-3Z	22	C07	ES-0162	04-Dec-08
19	TU123	70-D19-00-3Z	23	C07	ES-0162	04-Dec-08
19	TU123	70-D19-00-3Z	24	C07	ES-0162	04-Dec-08
19	TU123	70-D19-00-8I	1	C13	ES-0150	27-Aug-08
19	TU124	70-D19-00-3E	1	C13	ES-0150	26-Aug-08
19	TU124	70-D19-00-3E	2	C13	ES-0150	26-Aug-08
19	TU124	70-D19-00-3E	3	C13	ES-0150	26-Aug-08
19	TU124	70-D19-00-3E	4	C13	ES-0150	26-Aug-08
19	TU124	70-D19-00-3E	5	C13	ES-0150	26-Aug-08
19	TU124	70-D19-00-3F	1	C13	ES-0150	25-Aug-08
19	TU124	70-D19-00-3F	2	C13	ES-0150	25-Aug-08
19	TU124	70-D19-00-3F	3	C13	ES-0150	25-Aug-08
19	TU124	70-D19-00-3F	4	C13	ES-0150	25-Aug-08
19	TU124	70-D19-00-3F	5	C13	ES-0150	25-Aug-08
19	TU124	70-D19-00-3F	6	C13	ES-0150	25-Aug-08

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU124	70-D19-00-3F	7	C13	ES-0150	25-Aug-08
19	TU124	70-D19-00-3F	8	C13	ES-0150	25-Aug-08
19	TU124	70-D19-00-3F	9	C13	ES-0150	26-Aug-08
19	TU124	70-D19-00-3F	10	C33A	ES-0165	03-Dec-08
19	TU124	70-D19-00-3F	11	C33A	ES-0165	03-Dec-08
19	TU124	70-D19-00-3J	7	C13	ES-0150	26-Aug-08
19	TU124	70-D19-00-4A	1	C13	ES-0150	26-Aug-08
19	TU124	70-D19-00-4A	2	C13	ES-0150	26-Aug-08
27	TU124	70-D27-00-2X	1	C14	ES-0149	25-Aug-08
27	TU124	70-D27-00-2X	2	C14	ES-0149	25-Aug-08
27	TU124	70-D27-00-2X	3	C14	ES-0149	25-Aug-08
27	TU124	70-D27-00-2X	4	C14	ES-0149	25-Aug-08
27	TU124	70-D27-00-2X	5	C14	ES-0149	25-Aug-08
27	TU124	70-D27-00-2X	6	C14	ES-0149	25-Aug-08
27	TU124	70-D27-00-8C	1	C14	ES-0149	25-Aug-08
19	TU129	70-D19-37-2I	1	C35	ES-0169	07-Jan-09
19	TU129	70-D19-37-2I	2	C35	ES-0169	07-Jan-09
19	TU129	70-D19-37-2I	3	C35	ES-0169	07-Jan-09
19	TU129	70-D19-37-2I	4	C35	ES-0169	07-Jan-09
19	TU129	70-D19-37-2I	5	C35	ES-0169	07-Jan-09
19	TU129	70-D19-37-2I	6	C35	ES-0169	07-Jan-09
19	TU129	70-D19-37-2I	7	C35	ES-0169	07-Jan-09
19	TU129	70-D19-37-2I	8	C35	ES-0169	07-Jan-09
19	TU129	70-D19-37-2I	9	C35	ES-0169	07-Jan-09
19	TU129	70-D19-37-2I	10	C35	ES-0169	07-Jan-09
19	TU129	70-D19-37-2I	11	C35	ES-0169	07-Jan-09
19	TU129	70-D19-37-2J	1	C35	ES-0169	06-Jan-09
19	TU129	70-D19-37-2J	2	C35	ES-0169	06-Jan-09
19	TU129	70-D19-37-2J	3	C35	ES-0169	06-Jan-09
19	TU129	70-D19-37-2J	4	C35	ES-0169	06-Jan-09
19	TU129	70-D19-37-2J	5	C35	ES-0169	06-Jan-09
19	TU129	70-D19-37-2J	6	C35	ES-0169	06-Jan-09
19	TU129	70-D19-37-2J	7	C35	ES-0169	07-Jan-09
19	TU129	70-D19-37-2J	8	C35	ES-0169	07-Jan-09
19	TU129	70-D19-37-2J	9	C35	ES-0169	07-Jan-09
19	TU129	70-D19-37-2J	10	C35	ES-0169	07-Jan-09
19	TU129	70-D19-37-3X	1	C35	ES-0169	06-Jan-09

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
19	TU129	70-D19-37-5C	8	C35	ES-0169	07-Jan-09
19	TU129	70-D19-37-5C	9	C35	ES-0169	07-Jan-09
19	TU129	70-D19-37-5C	10	C35	ES-0169	07-Jan-09
19	TU129	70-D19-37-8A	1	C35	ES-0169	07-Jan-09
18	TU151	70-D18-09-3P	1	C07	ES-0068	28-Nov-07
18	TU151	70-D18-09-3P	2	C19	ES-0070	28-Nov-07
18	TU151	70-D18-09-3P	3	C19	ES-0070	28-Nov-07
18	TU151	70-D18-09-3P	4	C19	ES-0070	28-Nov-07
18	TU151	70-D18-09-3P	5	C18	ES-0071	29-Nov-07
18	TU151	70-D18-09-3P	6	C19	ES-0070	29-Nov-07
18	TU151	70-D18-09-3P	7	C09	ES-0073	07-Dec-07
18	TU151	70-D18-09-3P	8	C09	ES-0073	07-Dec-07
18	TU151	70-D18-09-3P	9	C17	ES-0072	07-Dec-07
18	TU151	70-D18-09-3P	10	C17	ES-0072	10-Dec-07
18	TU151	70-D18-09-3P	11	C17	ES-0072	10-Dec-07
18	TU151	70-D18-09-3P	12	C17	ES-0072	10-Dec-07
18	TU151	70-D18-09-3P	13	C09	ES-0073	10-Dec-07
18	TU151	70-D18-09-3P	14	C09	ES-0073	10-Dec-07
18	TU151	70-D18-09-3P	15	C16	ES-0074	10-Dec-07
18	TU151	70-D18-09-3P	16	C16	ES-0074	10-Dec-07
18	TU151	70-D18-09-3P	17	C16	ES-0074	10-Dec-07
18	TU151	70-D18-09-3P	18	C09	ES-0073	10-Dec-07
18	TU151	70-D18-09-3P	19	C09	ES-0073	10-Dec-07
18	TU151	70-D18-09-3P	20	C16	ES-0074	10-Dec-07
18	TU151	70-D18-09-3P	21	C16	ES-0074	10-Dec-07
18	TU151	70-D18-09-3P	22	C05	ES-0075	11-Dec-07
18	TU153	70-D18-00-1D	1	C34	ES-0223	15-Jun-09
18	TU153	70-D18-00-1D	2	C34	ES-0223	15-Jun-09
18	TU153	70-D18-00-1D	3	C34	ES-0223	15-Jun-09
18	TU153	70-D18-00-1D	4	C34	ES-0223	15-Jun-09
18	TU153	70-D18-00-1D	5	C34	ES-0223	15-Jun-09
18	TU153	70-D18-00-1D	6	C34	ES-0223	15-Jun-09
18	TU153	70-D18-00-1D	7	C34	ES-0223	15-Jun-09
18	TU153	70-D18-00-1D	8	C34	ES-0223	15-Jun-09
18	TU153	70-D18-00-1D	9	C34	ES-0223	15-Jun-09
18	TU153	70-D18-00-1D	10	C34	ES-0223	15-Jun-09
18	TU153	70-D18-00-1D	11	C34	ES-0223	15-Jun-09

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU153	70-D18-00-1D	12	C34	ES-0223	15-Jun-09
18	TU153	70-D18-00-1D	13	C34	ES-0223	15-Jun-09
18	TU153	70-D18-00-1D	14	C34	ES-0223	15-Jun-09
18	TU153	70-D18-00-1D	15	C29	ES-0225	15-Jun-09
18	TU153	70-D18-00-1F	1	C34	ES-0223	15-Jun-09
18	TU153	70-D18-00-1F	2	C34	ES-0223	15-Jun-09
18	TU153	70-D18-00-1F	3	C34	ES-0223	15-Jun-09
18	TU153	70-D18-00-1F	4	C34	ES-0223	15-Jun-09
18	TU153	70-D18-00-1F	5	C34	ES-0223	15-Jun-09
18	TU153	70-D18-00-1F	6	C34	ES-0223	15-Jun-09
18	TU153	70-D18-00-1F	7	C34	ES-0223	15-Jun-09
18	TU153	70-D18-00-1F	8	C34	ES-0223	15-Jun-09
18	TU153	70-D18-00-1F	9	C29	ES-0225	15-Jun-09
18	TU153	70-D18-00-1F	10	C29	ES-0225	16-Jun-09
18	TU153	70-D18-00-1F	11	C29	ES-0225	16-Jun-09
18	TU153	70-D18-00-8G	1	C29	ES-0225	17-Jun-09
18	TU153	70-D18-00-8G	2	C29	ES-0225	17-Jun-09
18	TU153	70-D18-00-8G	3	C29	ES-0225	17-Jun-09
18	TU153	70-D18-00-8H	1	C29	ES-0225	17-Jun-09
18	TU153	70-D18-00-8H	2	C29	ES-0225	17-Jun-09
18	TU153	70-D18-00-8H	3	C29	ES-0225	17-Jun-09
18	TU153	70-D18-00-8H	4	C29	ES-0225	17-Jun-09
18	TU153	70-D18-00-8I	1	C29	ES-0225	17-Jun-09
18	TU153	70-D18-00-8I	2	C29	ES-0225	17-Jun-09
18	TU153	70-D18-00-8I	3	C29	ES-0225	17-Jun-09
18	TU153	70-D18-00-8J	1	C29	ES-0225	17-Jun-09
18	TU153	70-D18-00-8J	2	C29	ES-0225	17-Jun-09
18	TU153	70-D18-00-8J	3	C29	ES-0225	18-Jun-09
18	TU153	70-D18-33-1D	1	C34	ES-0223	15-Jun-09
18	TU153	70-D18-33-1D	2	C34	ES-0223	15-Jun-09
18	TU153	70-D18-33-1D	3	C34	ES-0223	15-Jun-09
18	TU153	70-D18-33-1D	4	C34	ES-0223	15-Jun-09
18	TU153	70-D18-33-1D	5	C34	ES-0223	15-Jun-09
18	TU153	70-D18-33-1D	6	C34	ES-0223	15-Jun-09
18	TU153	70-D18-33-1E	1	C34	ES-0223	16-Jun-09
18	TU153	70-D18-33-1E	2	C34	ES-0223	16-Jun-09
18	TU153	70-D18-33-1E	3	C34	ES-0223	16-Jun-09

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
18	TU153	70-D18-33-1E	4	C34	ES-0223	16-Jun-09
17, 18, 19, 27	TU204	70-D17-00-1G	39	E04	ES-0466	04-Apr-11
17, 18, 19, 27	TU204	70-D17-00-1G	40	E04	ES-0466	04-Apr-11
17, 18, 19, 27	TU204	70-D17-00-1G	41	E04	ES-0466	04-Apr-11
17, 18, 19, 27	TU204	70-D17-00-1G	42	E04	ES-0466	04-Apr-11
17, 18, 19, 27	TU204	70-D17-00-1G	43	E04	ES-0466	04-Apr-11
17, 18, 19, 27	TU204	70-D17-00-1G	44	E04	ES-0466	04-Apr-11
17, 18, 19, 27	TU204	70-D17-00-1G	45	E04	ES-0466	04-Apr-11
17, 18, 19, 27	TU204	70-D17-00-1G	46	E04	ES-0466	04-Apr-11
17, 18, 19, 27	TU204	70-D17-00-1G	47	E04	ES-0466	04-Apr-11
17, 18, 19, 27	TU204	70-D17-00-1G	48	E04	ES-0466	04-Apr-11
17, 18, 19, 27	TU204	70-D17-00-1G	49	E04	ES-0466	04-Apr-11
17, 18, 19, 27	TU204	70-D17-00-1G	50	E04	ES-0466	05-Apr-11
17, 18, 19, 27	TU204	70-D17-00-1G	51	E04	ES-0466	05-Apr-11
17, 18, 19, 27	TU204	70-D17-00-1G	52	E04	ES-0466	05-Apr-11
17, 18, 19, 27	TU204	70-D17-00-1G	53	E04	ES-0466	05-Apr-11
17, 18, 19, 27	TU204	70-D17-00-1G	54	E04	ES-0466	05-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	1	E04	ES-0466	05-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	2	E04	ES-0466	05-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	3	E04	ES-0466	05-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	4	E04	ES-0466	05-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	5	E04	ES-0466	06-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	6	E04	ES-0466	06-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	7	E03	ES-0470	06-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	8	E03	ES-0470	06-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	9	E03	ES-0470	06-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	10	E03	ES-0470	06-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	11	E03	ES-0470	06-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	12	E03	ES-0470	06-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	13	E03	ES-0470	06-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	14	E03	ES-0470	06-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	15	E03	ES-0470	06-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	16	E03	ES-0470	06-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	17	E03	ES-0470	06-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	18	E03	ES-0470	06-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	19	E03	ES-0470	06-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	20	E03	ES-0470	07-Apr-11

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17, 18, 19, 27	TU204	70-D17-00-2F	21	E03	ES-0470	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	22	E03	ES-0470	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	23	E03	ES-0470	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	24	E03	ES-0470	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	25	E03	ES-0470	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	26	E03	ES-0470	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	27	E03	ES-0470	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	28	E03	ES-0470	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	29	E03	ES-0470	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	30	E03	ES-0470	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	31	E03	ES-0470	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	32	E09	ES-0471	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2F	33	E09	ES-0471	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2G	58	E09	ES-0471	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2G	59	E09	ES-0471	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2G	60	E09	ES-0471	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2G	61	E09	ES-0471	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2G	62	E09	ES-0471	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2G	63	E09	ES-0471	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2G	64	E09	ES-0471	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2G	65	E09	ES-0471	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2G	66	E09	ES-0471	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2G	67	E09	ES-0471	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2G	68	E09	ES-0471	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2G	69	E09	ES-0471	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2G	70	E09	ES-0471	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2G	71	E09	ES-0471	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2G	72	E09	ES-0471	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2G	73	E09	ES-0471	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-2G	74	E09	ES-0471	07-Apr-11
17, 18, 19, 27	TU204	70-D17-00-8K	1	E04	ES-0466	04-Apr-11
17, 18, 19, 27	TU204	70-D17-00-8K	2	E04	ES-0466	04-Apr-11
17, 18, 19, 27	TU204	70-D17-00-8L	1	E04	ES-0466	05-Apr-11
17, 18, 19, 27	TU204	70-D17-00-8L	2	E04	ES-0466	05-Apr-11
17, 18, 19, 27	TU204	70-D17-00-8L	3	E04	ES-0466	05-Apr-11
17, 18, 19, 27	TU204	70-D17-32-1G	1	C30	ES-0368	04-Apr-11
17, 18, 19, 27	TU204	70-D18-00-1J	16	E08	ES-0472	07-Apr-11

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17, 18, 19, 27	TU204	70-D18-00-1J	17	E08	ES-0472	07-Apr-11
17, 18, 19, 27	TU204	70-D18-00-1J	18	E08	ES-0472	07-Apr-11
17, 18, 19, 27	TU204	70-D18-00-1J	19	E08	ES-0472	07-Apr-11
17, 18, 19, 27	TU204	70-D18-00-1J	20	E08	ES-0472	07-Apr-11
17, 18, 19, 27	TU204	70-D18-00-1J	21	E08	ES-0472	07-Apr-11
17, 18, 19, 27	TU204	70-D19-00-3P	37	E13	ES-0474	07-Apr-11
17, 18, 19, 27	TU204	70-D19-00-3P	38	E13	ES-0474	07-Apr-11
17, 18, 19, 27	TU204	70-D19-00-3P	39	E13	ES-0474	07-Apr-11
17, 18, 19, 27	TU204	70-D19-00-3P	40	E13	ES-0474	07-Apr-11
17, 18, 19, 27	TU204	70-D19-00-3P	41	E13	ES-0474	07-Apr-11
17, 18, 19, 27	TU204	70-D19-00-3P	42	E13	ES-0474	07-Apr-11
17, 18, 19, 27	TU204	70-D19-00-3P	43	E13	ES-0474	08-Apr-11
17, 18, 19, 27	TU204	70-D19-00-3P	44	E13	ES-0474	08-Apr-11
17, 18, 19, 27	TU204	70-D19-00-3P	45	E13	ES-0474	08-Apr-11
17, 18, 19, 27	TU204	70-D19-00-3P	46	E13	ES-0474	08-Apr-11
17, 18, 19, 27	TU204	70-D19-00-3P	47	E13	ES-0474	08-Apr-11
17, 18, 19, 27	TU204	70-D19-44-1L	5	E14	ES-0473	07-Apr-11
17, 18, 19, 27	TU204	70-D19-44-1L	6	E14	ES-0473	07-Apr-11
17, 18, 19, 27	TU204	70-D19-44-1L	7	E14	ES-0473	07-Apr-11
17, 18, 19, 27	TU204	70-D19-44-1L	8	E14	ES-0473	07-Apr-11
17, 18, 19, 27	TU204	70-D19-44-1L	9	E14	ES-0473	07-Apr-11
17, 18, 19, 27	TU204	70-D19-44-1L	10	E14	ES-0473	07-Apr-11
17, 18, 19, 27	TU204	70-D19-44-1L	11	E14	ES-0473	07-Apr-11
17, 18, 19, 27	TU204	70-D19-44-1L	12	E14	ES-0473	07-Apr-11
17, 18, 19, 27	TU204	70-D19-44-1L	13	E14	ES-0473	08-Apr-11
17, 18, 19, 27	TU204	70-E27-00-2A	1	E19	ES-0509	13-Jun-11
17, 18, 19, 27	TU204	70-E27-00-2A	2	E19	ES-0509	13-Jun-11
17, 18, 19, 27	TU204	70-E27-00-2A	3	E19	ES-0509	13-Jun-11
17, 18, 19, 27	TU204	70-E27-00-2A	4	E19	ES-0509	13-Jun-11
17, 18, 19, 27	TU204	70-E27-00-2A	5	E19	ES-0509	13-Jun-11
17, 18, 19, 27	TU204	70-E27-00-2A	6	E19	ES-0509	13-Jun-11
17, 18, 19, 27	TU204	70-E27-00-2A	7	E19	ES-0509	13-Jun-11
17, 18, 19, 27	TU204	70-E27-00-2A	8	E19	ES-0509	13-Jun-11
17, 18, 19, 27	TU204	70-E27-00-2A	9	E19	ES-0509	13-Jun-11
17, 18, 19, 27	TU204	70-E27-00-2A	10	E19	ES-0509	13-Jun-11
17, 18, 19, 27	TU204	70-E27-00-2A	11	E19	ES-0509	13-Jun-11
17, 18, 19, 27	TU204	70-E27-00-2A	12	E19	ES-0509	13-Jun-11

TABLE 3-3

PARCEL G EXCAVATED SOIL SUMMARY

Work Area(s)	Trench Survey Unit No.	Trench Segment	Truck Load No.	RSY Screening Pad[a]	Assigned ES Identification No.	Date Excavated
17, 18, 19, 27	TU204	70-E27-00-2A	13	E19	ES-0509	13-Jun-11
17, 18, 19, 27	TU204	70-E27-00-2A	14	E19	ES-0509	13-Jun-11
17, 18, 19, 27	TU204	70-E27-00-2A	15	E19	ES-0509	13-Jun-11
17, 18, 19, 27	TU204	70-E27-00-2A	16	E19	ES-0509	13-Jun-11
17, 18, 19, 27	TU204	70-E27-00-2A	17	E19	ES-0509	13-Jun-11
17, 18, 19, 27	TU204	70-E27-00-2A	18	E19	ES-0509	13-Jun-11

Notes:

[a] A "C" designation indicates that soil was radiologically processed in RSY2 and an "E" designation indicates that soil was processed in RSY4.

Abbreviations and Acronyms:

ES – Excavated Soil Survey Unit

RSY2 – Radiological Screening Yard 2

RSY4 – Radiological Screening Yard 4

TU – Trench Survey Unit

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TABLE 3-4

PARCEL G RADIOLOGICAL SCREENING YARD SOIL PROCESSING SUMMARY

ES Identification No.	RSY Screening Pad No.	Associated IR Site	Gamma Scan Performed	Total Soil Samples Collected	Identified ROC	Elevated Sample Results (pCi/g)	Estimated Soil Volume Remediated (cy)	Disposition
ES-0001	C01	00	10-Aug-07	52	Ra-226	1.5281	2	Backfilled[a]
ES-0002	C02	00	10-Aug-07	102	Ra-226	1.4899 to 2.7091	200[c]	LLRW[b]
ES-0003	C03	00	10-Aug-07	21	NA	NA	0	Backfilled[a]
ES-0004	C04	00	11-Aug-07	51	Ra-226	1.7622	2.5	Backfilled[a]
ES-0005	C05	00	11-Aug-07	52	Ra-226	1.8570 2.2525	3.5	Backfilled[a]
ES-0006	C06	00	11-Aug-07	70	Ra-226	1.5379 1.6589 2.1493 2.5302	18	Backfilled[a]
ES-0007	C07	00	11-Aug-07	27	NA	NA	0	Backfilled[a]
ES-0008	C09	00	11-Aug-07	57	Ra-226	2.1150 2.4249	4.25	Backfilled[a]
ES-0009	C10	00	11-Aug-07	58	Ra-226	1.6515 to 2.9108	41	Backfilled[a]
ES-0010	C12	00	13-Aug-07	61	Ra-226	1.5373 to 3.0586	37.25	Backfilled[a]
ES-0011	C13	00	13-Aug-07	47	Ra-226	2.6257	0	Backfilled[a]
ES-0012	C15	00	14-Aug-07	44	Ra-226	1.7022	17.25	Backfilled[a]
ES-0013	C16	00	14-Aug-07	54	Cs-137 Ra-226	0.17869 1.8308 to 3.1797	30	Backfilled[a]
ES-0014	C19	00	14-Aug-07	28	NA	NA	0	Backfilled[a]
ES-0015	C20	00	14-Aug-07	49	Ra-226	1.5299 to 3.0638	112	Backfilled[a]
ES-0016	C22	00	15-Aug-07	21	NA	NA	0	Backfilled[a]
ES-0017	C17	00	14-Aug-07	56	Ra-226	1.8428 to 2.5548	104.75	Backfilled[a]

TABLE 3-4

PARCEL G RADIOLOGICAL SCREENING YARD SOIL PROCESSING SUMMARY

ES Identification No.	RSY Screening Pad No.	Associated IR Site	Gamma Scan Performed	Total Soil Samples Collected	Identified ROC	Elevated Sample Results (pCi/g)	Estimated Soil Volume Remediated (cy)	Disposition
ES-0018	C18	00	15-Aug-07	61	Ra-226	1.6607 1.9382 2.2466	60	Backfilled[a]
ES-0019	C23	00	15-Aug-07	104	Ra-226	1.5693 to 3.2289	72.75	Backfilled[a]
ES-0020	C14	00	15-Aug-07	21	NA	NA	0	Backfilled[a]
ES-0021	C24	00	15-Aug-07	46	Ra-226	1.6017 1.8842	22	Backfilled[a]
ES-0022	C25	00	16-Aug-07	28	NA	NA	0	Backfilled[a]
ES-0023	C26	00	16-Aug-07	21	NA	NA	0	Backfilled[a]
ES-0024	C11	00	20-Aug-07	21	NA	NA	0	Backfilled[a]
ES-0025	C27	00	16-Aug-07	21	NA	NA	0	Backfilled[a]
ES-0026	C28	00	16-Aug-07	21	NA	NA	0	Backfilled[a]
ES-0027	C37	00	20-Aug-07	21		NA	12[d]	Backfilled[a]
ES-0028	C36	00	20-Aug-07	46	Cs-137	0.11777	19.25	Backfilled[a]
ES-0029	C35	00	22-Aug-07	28	NA	NA	0	Backfilled[a]
ES-0030	C34	00	22-Aug-07	21	NA	NA	0	Backfilled[a]
ES-0031	C33	00	23-Aug-07	21	NA	NA	0	Backfilled[a]
ES-0032	C32	00/34	23-Aug-07	21	NA	NA	0	Backfilled[a]
ES-0033	C31	34	23-Aug-07	22	NA	NA	0	Backfilled[a]
ES-0034	C30	34	22-Aug-07	21	NA	NA	0	Backfilled[a]
ES-0035	C29	34	24-Aug-07	21	NA	NA	0	Backfilled[a]
ES-0036	C21	34	24-Aug-07	21	NA	NA	0	Backfilled[a]
ES-0037	C03	34	08-Sep-07	18	NA	NA	0	Backfilled[a]

TABLE 3-4

PARCEL G RADIOLOGICAL SCREENING YARD SOIL PROCESSING SUMMARY

ES Identification No.	RSY Screening Pad No.	Associated IR Site	Gamma Scan Performed	Total Soil Samples Collected	Identified ROC	Elevated Sample Results (pCi/g)	Estimated Soil Volume Remediated (cy)	Disposition
ES-0038	C07	00	07-Sep-07	18	NA	NA	0	Backfilled[a]
ES-0039	C27	00	07-Sep-07	18	NA	NA	0	Backfilled[a]
ES-0040	C37	00/09	07-Sep-07	22	NA	NA	0	Non-LLRW[e]
ES-0041	C19	09/66	08-Sep-07	26	NA	NA	0	Non-LLRW[e]
ES-0042	C26	09/66	18-Sep-07	31	NA	NA	0	Non-LLRW[e]
ES-0043	C30	00	21-Nov-07	18	NA	NA	0	Backfilled[a]
ES-0044	C05	00	09-Oct-07	64	Ra-226	1.8159 1.9750	17	Backfilled[a]
ES-0045	C09	00	20-Oct-07	39	NA	NA	0	Backfilled[a]
ES-0046	C10	00	10-Oct-07	62	Ra-226	1.7173	7.5	Backfilled[a]
ES-0047	C13	00	20-Oct-07	31	NA	NA	0	Backfilled[a]
ES-0048	C30	37	05-Feb-08	50	Ra-226	1.7316 1.8773 1.9574 2.2514	45	Non-LLRW[e]
ES-0049	C29	37	26-Nov-07	78	Ra-226	1.4940 to 2.4259	38.25	Non-LLRW[e]
ES-0050	C31	00	21-Nov-07	35	NA	NA	0	Backfilled[a]
ES-0051	C32	00	26-Nov-07	66	Ra-226	1.7172	14.25	Backfilled[a]
ES-0052	C33	00	23-Oct-07	26	NA	NA	0	Backfilled[a]
ES-0053	C22	00	23-Oct-07	29	NA	NA	0	Backfilled[a]
ES-0054	C01	00	30-Oct-07	35	NA	NA	0	Backfilled[a]
ES-0055	C06	00	05-Feb-08	56	Ra-226	2.4792 2.6821	14	Backfilled[a]

TABLE 3-4

PARCEL G RADIOLOGICAL SCREENING YARD SOIL PROCESSING SUMMARY

ES Identification No.	RSY Screening Pad No.	Associated IR Site	Gamma Scan Performed	Total Soil Samples Collected	Identified ROC	Elevated Sample Results (pCi/g)	Estimated Soil Volume Remediated (cy)	Disposition
ES-0056	C14	00	30-Oct-07	52	Ra-226	1.7711 2.2482	8	Backfilled[a]
ES-0057	C35	00	31-Oct-07	37	NA	NA	0	Backfilled[a]
ES-0058	C28	00	30-Oct-07	77	Ra-226	1.7919	6.75	Backfilled[a]
ES-0059	C20	00	01-Nov-07	102	Ra-226	1.5169 1.9125 2.0260	18.25	Backfilled[a]
ES-0060	C21	00	01-Nov-07	49	NA	NA	0	Backfilled[a]
ES-0061	C12	00	31-Oct-07	32	NA	NA	0	Backfilled[a]
ES-0062	C15	00	31-Oct-07	105	Ra-226	1.5331 to 2.0795	91.75	Backfilled[a]
ES-0063	C16	00	01-Nov-07	37	NA	NA	0	Backfilled[a]
ES-0064	C17	00	01-Nov-07	32	NA	NA	0	Backfilled[a]
ES-0065	C25	00	01-Nov-07	45	NA	NA	0	Backfilled[a]
ES-0066	C02	00	26-Nov-07	18	NA	NA	0	Backfilled[a]
ES-0067	C03	00	26-Nov-07	19	NA	NA	0	Backfilled[a]
ES-0068	C07	09	28-Nov-07	35	NA	NA	0	Non-LLRW[e]
ES-0069	C11	09	27-Nov-07	89	Cs-137 Ra-226	0.13415 1.5075 to 2.9158	184	Non-LLRW[e]
ES-0070	C19	09	12-Dec-07	58	Ra-226	1.6756 to 2.8868	200[c]	LLRW[b]
ES-0071	C18	09	12-Dec-07	86	Ra-226	1.5311 to 3.1615	158	Non-LLRW[e]
ES-0072	C17	09	12-Dec-07	112	Ra-226	1.7316 to 3.4727	130	Non-LLRW[e]
ES-0073	C09	09	14-Dec-07	78	Ra-226	1.4971 to 2.9874	198[c]	LLRW[b]
ES-0074	C16	09	12-Dec-07	114	Ra-226	1.7574 to 3.0463	127.5	Non-LLRW[e]

TABLE 3-4

PARCEL G RADIOLOGICAL SCREENING YARD SOIL PROCESSING SUMMARY

ES Identification No.	RSY Screening Pad No.	Associated IR Site	Gamma Scan Performed	Total Soil Samples Collected	Identified ROC	Elevated Sample Results (pCi/g)	Estimated Soil Volume Remediated (cy)	Disposition
ES-0075	C05	09	14-Dec-07	81	Ra-226	1.5826 to 2.6598	67.75	Non-LLRW[d]
ES-0076	C10	09	17-Jan-08	37	Ra-226	1.4946 to 2.3646	91[c]	LLRW[b]
ES-0077	C13	09	28-Feb-08	78	Ra-226	1.6967 to 2.0467	29	Non-LLRW[e]
ES-0078	C12	33	05-Feb-08	66	Ra-226	1.7824 1.8080 1.8637	29.25	Non-LLRW[e]
ES-0079	C21	33	17-Jan-08	59	Ra-226	1.5490 to 3.0494	48.5	Non-LLRW[e]
ES-0080	C22	33	05-Feb-08	67	Ra-226	2.0408 2.1466 2.6204 2.6286	51	Non-LLRW[e]
ES-0081	C23	33	12-Feb-08	37	Ra-226	1.6461 1.9717 2.6296	11	Non-LLRW[e]
ES-0082	C33	33	12-Feb-08	21	NA	NA	0	Non-LLRW[e]
ES-0083	C31	33	12-Feb-08	38	Ra-226	1.6332 to 2.9154	8.5	Non-LLRW[e]
ES-0084	C32	33	12-Feb-08	18	NA	NA	0	Non-LLRW[e]
ES-0085	C35	33	18-Feb-08	52	Ra-226	1.7771 1.8409 2.1749	26	Non-LLRW[e]
ES-0086	C36	33	18-Feb-08	30	NA	NA	0	Non-LLRW[e]
ES-0087	C37	44	18-Feb-08	61	Ra-226	1.8679 1.9597	14	Non-LLRW[e]
ES-0088	C27	44	28-Feb-08	18	NA	NA	0	Non-LLRW[e]

TABLE 3-4

PARCEL G RADIOLOGICAL SCREENING YARD SOIL PROCESSING SUMMARY

ES Identification No.	RSY Screening Pad No.	Associated IR Site	Gamma Scan Performed	Total Soil Samples Collected	Identified ROC	Elevated Sample Results (pCi/g)	Estimated Soil Volume Remediated (cy)	Disposition
ES-0089	C26	44	28-Feb-08	32	Ra-226	1.644	8	Non-LLRW[e]
ES-0090	C25	44	28-Feb-08	20	NA	NA	0	Non-LLRW[e]
ES-0091	C19	09	23-May-08	44	Ra-226	1.4908 to 3.3510	199.5[c]	LLRW[b]
ES-0092	C24	00	23-May-08	25	NA	NA	0	Backfilled[a]
ES-0093	C25	09	31-May-08	55	Ra-226	1.5591 to 2.0333	20	Non-LLRW[e]
ES-0094	C27	09	31-May-08	18	NA	NA	0	Non-LLRW[e]
ES-0095	C33	33	23-May-08	18	NA	NA	0	Non-LLRW[e]
ES-0096	C34	33	31-May-08	35	Ra-226	1.9529 1.9883 2.3566	34.5	Non-LLRW[e]
ES-0097	C36	33	02-Jun-08	35	Ra-226	1.5067 2.0272	15	Non-LLRW[e]
ES-0098	C28	33	02-Jun-08	18	NA	NA	0	Non-LLRW[e]
ES-0099	C06	33	31-May-08	18	NA	NA	0	Non-LLRW[e]
ES-0100	C05	33	02-Jun-08	18	NA	NA	0	Non-LLRW[e]
ES-0101	C04	33	02-Jun-08	18	NA	NA	0	Non-LLRW[e]
ES-0102	C03	33	03-Jun-08	18	NA	NA	0	Non-LLRW[e]
ES-0103	C02	33	03-Jun-08	18	NA	NA	0	Non-LLRW[e]
ES-0104	C01	33	03-Jun-08	18	NA	NA	0	Non-LLRW[e]
ES-0105	C07	33	04-Jun-08	18	NA	NA	0	Non-LLRW[e]
ES-0106	C12	00	04-Jun-08	21	NA	NA	0	Non-LLRW[f]
ES-0107	C20	00	04-Jun-08	18	NA	NA	0	Backfilled[a]
ES-0108	C09	34	01-Jul-08	18	NA	NA	0	Backfilled[a]

TABLE 3-4

PARCEL G RADIOLOGICAL SCREENING YARD SOIL PROCESSING SUMMARY

ES Identification No.	RSY Screening Pad No.	Associated IR Site	Gamma Scan Performed	Total Soil Samples Collected	Identified ROC	Elevated Sample Results (pCi/g)	Estimated Soil Volume Remediated (cy)	Disposition
ES-0109	C15	00	25-Jun-08	19	NA	NA	0	Backfilled[a]
ES-0110	C16	00	25-Jun-08	18	NA	NA	0	Backfilled[a]
ES-0111	C13	36/37	15-Jul-08	27	Ra-226	1.5888	38	Non-LLRW[e]
ES-0112	C14	36/37	14-Jul-08	46	Ra-226	1.9422 to 4.4928	63	Non-LLRW[e]
ES-0113	C17	00	26-Jun-08	45	Ra-226	1.6586 to 2.3327	30	Backfilled[a]
ES-0114	C18	00	25-Jun-08	18	NA	NA	0	Backfilled[a]
ES-0115	C11	00	30-Jun-08	24	NA	NA	0	Backfilled[a]
ES-0116	C21	00	26-Jun-08	18	NA	NA	0	Backfilled[a]
ES-0117	C27	00	01-Jul-08	72	Ra-226	1.4965 to 1.9462	17.5	Backfilled[a]
ES-0118	C28	00	30-Jun-08	48	Ra-226	2.5363	10	Backfilled[a]
ES-0119	C26	00	09-Jul-08	87	Ra-226	1.9373 to 2.9022	50.5	Backfilled[a]
ES-0120	C23	00	03-Jul-08	58	Ra-226	1.9685 to 2.9380	9	Backfilled[a]
ES-0121	C22	00	03-Jul-08	62	Ra-226	1.5881 to 4.4137	34.5	Backfilled[a]
ES-0122	C29	00	09-Jul-08	18	NA	NA	0	Backfilled[a]
ES-0123	C30	00	10-Jul-08	19	NA	NA	0	Backfilled[a]
ES-0124	C31	00	09-Jul-08	47	Ra-226	1.6093	3	Backfilled[a]
ES-0125	C32	00	03-Jul-08	87	Ra-226	1.6157 to 2.8943	52.5	Backfilled[a]
ES-0126	C33	00	09-Jul-08	44	Ra-226	1.8288	9	Backfilled[a]
ES-0127	C35	00	10-Jul-08	111	Ra-226	1.5144 to 2.2399	79.5	Backfilled[a]
ES-0128	C37	00	12-Jul-08	20	NA	NA	0	Backfilled[a]
ES-0129	C12	00	14-Jul-08	53	Ra-226	1.9896	2.5	Backfilled[a]
ES-0130	C03	00	14-Jul-08	118	Ra-226	1.4882 to 2.5164	198.5[c]	LLRW[b]

TABLE 3-4

PARCEL G RADIOLOGICAL SCREENING YARD SOIL PROCESSING SUMMARY

ES Identification No.	RSY Screening Pad No.	Associated IR Site	Gamma Scan Performed	Total Soil Samples Collected	Identified ROC	Elevated Sample Results (pCi/g)	Estimated Soil Volume Remediated (cy)	Disposition
ES-0131	C02	00	15-Jul-08	116	Ra-226	1.5610 to 2.1578	76	Backfilled[a]
ES-0132	C05	00	14-Jul-08	36	NA	NA	0	Backfilled[a]
ES-0133	C06	33/34	23-Jul-08	35	Ra-226	1.5299 3.1916	17.5	Non-LLRW[e]
ES-0134	C10	33	21-Jul-08	57	Ra-226	2.2764	5	Non-LLRW[e]
ES-0135	C11	33	24-Jul-08	35	NA	NA	0	Non-LLRW[e]
ES-0136	C18	33/44	30-Jul-08	18	NA	NA	0	Non-LLRW[e]
ES-0137	C24	44	07-Aug-08	27	NA	NA	0	Non-LLRW[e]
ES-0138	C17	44	06-Aug-08	28	NA	NA	0	Non-LLRW[e]
ES-0139	C16	44	08-Aug-08	43	Ra-226	1.8863	4.5	Non-LLRW[e]
ES-0140	C15	44	14-Aug-08	0	Ra-226	1.5369 to 2.5753	41[c]	LLRW[b]
ES-0141	C09	44	14-Aug-08	41	NA	NA	0	Non-LLRW[e]
ES-0142	C29	00	13-Aug-08	154	Ra-226	1.7034 to 2.3014	107	Backfilled[a]
ES-0143	C30	00	13-Aug-08	68	Ra-226	1.5369 to 2.5753	33	Backfilled[a]
ES-0144	C20	00	15-Aug-08	36	NA	NA	0	Backfilled[a]
ES-0145	C21	00	14-Aug-08	39	NA	NA	0	Backfilled[a]
ES-0146	C07	00	19-Aug-08	23	NA	NA	0	Backfilled[a]
ES-0147	C01	00/71	19-Aug-08	45	NA	NA	0	Non-LLRW[f]
ES-0148	C19	00	20-Aug-08	31	NA	NA	0	Backfilled[a]
ES-0149	C14	00	02-Sep-08	77	Ra-226	1.5079 to 2.6479	62.75	Non-LLRW[e]
ES-0150	C13	00	02-Sep-08	28	Ra-226	1.6264 to 3.2367	200[c]	LLRW[b]
ES-0151	C04	00	02-Sep-08	139	Ra-226	1.5148 to 2.9758	198[c]	LLRW[b]

TABLE 3-4

PARCEL G RADIOLOGICAL SCREENING YARD SOIL PROCESSING SUMMARY

ES Identification No.	RSY Screening Pad No.	Associated IR Site	Gamma Scan Performed	Total Soil Samples Collected	Identified ROC	Elevated Sample Results (pCi/g)	Estimated Soil Volume Remediated (cy)	Disposition
ES-0152	C18	00	24-Sep-08	49	NA	NA	0	Backfilled[a]
ES-0153	C37	34	30-Oct-08	31	Ra-226	1.6421 to 3.4533	155[c]	LLRW[b]
ES-0154	C15	00	24-Sep-08	102	Ra-226	1.5109 to 2.1758	54.5	Backfilled[a]
ES-0155	C17	00	24-Sep-08	33	NA	NA	0	Backfilled[a]
ES-0156	C10	00	24-Sep-08	126	Ra-226	1.5347 to 3.1757	199.5[c]	LLRW[b]
ES-0157	C11	33/36	01-Oct-08	38	Ra-226	1.5434 to 2.1325	52	Non-LLRW[e]
ES-0158	C24	00	02-Oct-08	54	Ra-226	1.9649 to 2.8130	14.5	Backfilled[a]
ES-0159	C01	67	01-Oct-08	22	Ra-226	1.7135 to 2.6208	16[c]	LLRW[b]
ES-0160	C21	00	30-Oct-08	2	NA	NA	0	Non-LLRW[e]
ES-0161	C22	44	30-Oct-08	56	Ra-226	1.5193 2.1331 2.9167	7	Non-LLRW[e]
ES-0162	C07	00	11-Dec-08	22	NA	NA	0	Backfilled[a]
ES-0163	C36	44	28-Oct-08	2	NA	NA	0	Non-LLRW[e]
ES-0164	C36	33	05-Dec-08	37	Ra-226	1.9008	2	Non-LLRW[e]
ES-0165	C33A	00	09-Dec-08	76	Ra-226	1.5173 to 3.0352	200[c]	LLRW[b]
ES-0166	C33B	00	09-Dec-08	38	NA	NA	0	Backfilled[a]
ES-0167	C28	00	11-Dec-08	21	Ra-226	2.1058	36	LLRW[b]
ES-0168	C30	34	11-Dec-08	22	Ra-226	1.8091 to 2.5222	20	LLRW[b]
ES-0169	C35	37	13-Mar-09	51	Ra-226	1.5003 to 2.1916	90	Non-LLRW[e]
ES-0174	C17	00	13-Mar-09	77	Ra-226	1.5366 to 2.1246	198[c]	LLRW[b]
ES-0175	C18	00	30-Apr-09	53	Cs-137	0.53132	25.5	Backfilled[a]

TABLE 3-4

PARCEL G RADIOLOGICAL SCREENING YARD SOIL PROCESSING SUMMARY

ES Identification No.	RSY Screening Pad No.	Associated IR Site	Gamma Scan Performed	Total Soil Samples Collected	Identified ROC	Elevated Sample Results (pCi/g)	Estimated Soil Volume Remediated (cy)	Disposition
ES-0223	C34	33	18-Jun-09	21	NA	NA	0	Non-LLRW[e]
ES-0225	C29	00	23-Jun-09	20	NA	NA	0	Backfilled[a]
ES-0368	C30	32	12-Apr-11	20	NA	NA	0	Non-LLRW[e]
ES-0466	E04	00	12-Apr-11	20	NA	NA	0	Backfilled[a]
ES-0470	E03	00	22-Apr-11	20	NA	NA	0	Backfilled[a]
ES-0471	E09	00	27-Apr-11	21	NA	NA	0	Backfilled[a]
ES-0472	E08	00	28-Apr-11	21	NA	NA	0	Backfilled[a]
ES-0473	E14	44	26-Apr-11	18	NA	NA	0	Non-LLRW[e]
ES-0474	E13	00	26-Apr-11	18	NA	NA	0	Backfilled[a]
ES-0509	E19	00	22-Jun-11	34	NA	NA	0	Backfilled[a]

Notes:

[a] Radiologically surveyed, released, and backfilled into one or more trench survey units.

[b] Radiologically surveyed and designated as LLRW for off-site disposal by the DON's radiological waste contractor at either the U.S. Ecology facility in Idaho or the Energy Solutions facility in Clive, Utah.

[c] Based on survey and sample result data, entire volume of excavated soil on screening pad was placed in LLRW bins for off-site disposal at either the U.S. Ecology facility in Idaho or the Energy Solutions facility in Clive, Utah.

[d] Remediation performed due to equipment hydraulic spill on August 9, 2007.

[e] Radiologically surveyed and released excavated soil disposed of off-site by the DON's non-radiological waste contractor.

[f] Radiologically surveyed, released, and used as grading material on HPNS with the concurrence of the RASO.

Abbreviations and Acronyms:

Cs-137 – cesium-137
cy – cubic yard
DON – Department of the Navy
ES – Excavated Soil Survey Unit
HPNS – Hunters Point Naval Shipyard
IR – Installation Restoration
LLRW – low-level radioactive waste
NA – not applicable
Non-LLRW – non-low-level radioactive waste
pCi/g – picocuries per gram
Ra-226 – radium-226
RASO – Radiological Affairs Support Office
ROC – radionuclide of concern
RSY – Radiological Screening Yard

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-C17-00-2C	01	23-Jul-07	3.5	10	Concrete	06-Aug-07	HPS-PDPIPE-080607-150	NA	0	NA	15-Sep-07	Non-LLRW[b]	NA
70-C17-00-2C	02	23-Jul-07	3.5	10	Concrete	07-Aug-07	HPS-PDPIPE-080707-151	NA	0	NA	15-Sep-07	Non-LLRW[b]	NA
70-C17-00-2P	01	09-Aug-07	12.33	12	Concrete	22-Aug-07	HPS-PDPIPE-082207-162	NA	0	NA	11-Sep-08	Non-LLRW[b]	NA
70-C17-00-2P	02	09-Aug-07	2.33	12	Concrete	27-Aug-07	HPS-PDPIPE-082707-166	NA	0	NA	25-Sep-07	Non-LLRW[b]	NA
70-C17-00-2P	03	09-Aug-07	4	12	Concrete	27-Aug-07	HPS-PDPIPE-082707-166	NA	0	NA	25-Sep-07	Non-LLRW[b]	NA
70-C17-00-3E	01	23-Jul-07	7	10	Cast Iron	02-Aug-07	HPS-PDPIPE-080207-147	NA	0	NA	13-Aug-07	Non-LLRW[b]	NA
70-C17-00-3E	02	23-Jul-07	4	10	Cast Iron	02-Aug-07	HPS-PDPIPE-080207-147	NA	0	NA	01-Aug-07	Non-LLRW[b]	NA
70-D17-00-1G	01	07-Aug-07	3	15	Concrete	14-Aug-07	HPS-PDPIPE-081407-158	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1G	02	07-Aug-07	3	15	Concrete	15-Aug-07	HPS-PDPIPE-081507-160	NA	0	NA	14-Sep-07	Non-LLRW[b]	NA
70-D17-00-1G	03	07-Aug-07	3	15	Concrete	10-Aug-07	HPS-PDPIPE-081007-155	NA	0	NA	14-Sep-07	Non-LLRW[b]	NA
70-D17-00-1G	04	07-Aug-07	3	15	Concrete	13-Aug-07	HPS-PDPIPE-081307-156	NA	0	NA	14-Sep-07	Non-LLRW[b]	NA
70-D17-00-1G	05	07-Aug-07	3	15	Concrete	13-Aug-07	HPS-PDPIPE-081307-156	NA	0	NA	14-Sep-07	Non-LLRW[b]	NA
70-D17-00-1G	06	07-Aug-07	3	15	Concrete	13-Aug-07	HPS-PDPIPE-081307-156	NA	0	NA	14-Sep-07	Non-LLRW[b]	NA
70-D17-00-1G	07	07-Aug-07	3	15	Concrete	13-Aug-07	HPS-PDPIPE-081307-156	NA	0	NA	14-Sep-07	Non-LLRW[b]	NA
70-D17-00-1G	08	07-Aug-07	3	15	Concrete	13-Aug-07	HPS-PDPIPE-081307-156	NA	0	NA	14-Sep-07	Non-LLRW[b]	NA
70-D17-00-1G	09	07-Aug-07	3	15	Concrete	13-Aug-07	HPS-PDPIPE-081307-156	NA	0	NA	14-Sep-07	Non-LLRW[b]	NA
70-D17-00-1G	10	07-Aug-07	3	15	Concrete	13-Aug-07	HPS-PDPIPE-081307-156	NA	0	NA	14-Sep-07	Non-LLRW[b]	NA
70-D17-00-1G	11	07-Aug-07	3	15	Concrete	10-Aug-07	HPS-PDPIPE-081007-155	NA	0	NA	14-Sep-07	Non-LLRW[b]	NA
70-D17-00-1G	12	07-Aug-07	3	15	Concrete	13-Aug-07	HPS-PDPIPE-081307-156	NA	0	NA	14-Sep-07	Non-LLRW[b]	NA
70-D17-00-1G	13	07-Aug-07	3	15	Concrete	13-Aug-07	HPS-PDPIPE-081307-156	NA	0	NA	14-Sep-07	Non-LLRW[b]	NA
70-D17-00-1G	14	07-Aug-07	3	15	Concrete	13-Aug-07	HPS-PDPIPE-081307-156	NA	0	NA	14-Sep-07	Non-LLRW[b]	NA
70-D17-00-1G	15	07-Aug-07	3	15	Concrete	13-Aug-07	HPS-PDPIPE-081307-156	NA	0	NA	14-Sep-07	Non-LLRW[b]	NA
70-D17-00-1G	16	07-Aug-07	3	15	Concrete	13-Aug-07	HPS-PDPIPE-081307-156	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1G	17	07-Aug-07	3	15	Concrete	13-Aug-07	HPS-PDPIPE-081307-156	NA	0	NA	14-Sep-07	Non-LLRW[b]	NA
70-D17-00-1G	18	07-Aug-07	2	15	Concrete	09-Aug-07	HPS-PDPIPE-080907-154	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1G	19	07-Aug-07	3	15	Concrete	10-Aug-07	HPS-PDPIPE-081007-155	NA	0	NA	14-Sep-07	Non-LLRW[b]	NA
70-D17-00-1G	20	07-Aug-07	3	15	Concrete	10-Aug-07	HPS-PDPIPE-081007-155	NA	0	NA	14-Sep-07	Non-LLRW[b]	NA
70-D17-00-1G	21	07-Aug-07	3	15	Concrete	10-Aug-07	HPS-PDPIPE-081007-155	NA	0	NA	14-Sep-07	Non-LLRW[b]	NA
70-D17-00-1G	22	07-Aug-07	3	15	Concrete	10-Aug-07	HPS-PDPIPE-081007-155	NA	0	NA	14-Sep-07	Non-LLRW[b]	NA
70-D17-00-1G	23	07-Aug-07	3	15	Concrete	10-Aug-07	HPS-PDPIPE-081007-155	NA	0	NA	14-Sep-07	Non-LLRW[b]	NA
70-D17-00-1G	24	07-Aug-07	3	15	Concrete	10-Aug-07	HPS-PDPIPE-081007-155	NA	0	NA	14-Sep-07	Non-LLRW[b]	NA
70-D17-00-1G	25	07-Aug-07	3	15	Concrete	09-Aug-07	HPS-PDPIPE-080907-154	NA	0	NA	14-Sep-07	Non-LLRW[b]	NA
70-D17-00-1G	26	07-Aug-07	3	15	Concrete	10-Aug-07	HPS-PDPIPE-081007-155	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1G	27	08-Aug-07	3	15	Concrete	22-Aug-07	HPS-PDPIPE-082207-162	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1G	28	08-Aug-07	3	15	Concrete	22-Aug-07	HPS-PDPIPE-082207-162	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1G	29	08-Aug-07	3	15	Concrete	22-Aug-07	HPS-PDPIPE-082207-162	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D17-00-1G	30	08-Aug-07	3	15	Concrete	22-Aug-07	HPS-PDPIPE-082207-162	29-Nov-07	1	70-PDPI-0033-01	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1G	31	08-Aug-07	3	15	Concrete	22-Aug-07	HPS-PDPIPE-082207-162	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1G	32	08-Aug-07	3	15	Concrete	22-Aug-07	HPS-PDPIPE-082207-162	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1G	33	08-Aug-07	3	15	Concrete	22-Aug-07	HPS-PDPIPE-082207-162	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1G	34	08-Aug-07	3	15	Concrete	22-Aug-07	HPS-PDPIPE-082207-162	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1G	35	08-Aug-07	3	15	Concrete	22-Aug-07	HPS-PDPIPE-082207-162	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1G	36	08-Aug-07	3	15	Concrete	22-Aug-07	HPS-PDPIPE-082207-162	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1G	37	08-Aug-07	3	15	Concrete	22-Aug-07	HPS-PDPIPE-082207-162	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1G	38	08-Aug-07	3	15	Concrete	22-Aug-07	HPS-PDPIPE-082207-162	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1G	39	08-Aug-07	3	15	Concrete	22-Aug-07	HPS-PDPIPE-082207-162	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1G	40	08-Aug-07	3	15	Concrete	22-Aug-07	HPS-PDPIPE-082207-162	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1G	41	08-Aug-07	3	15	Concrete	22-Aug-07	HPS-PDPIPE-082207-162	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1G	42	08-Aug-07	3	15	Concrete	22-Aug-07	HPS-PDPIPE-082207-162	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1G	43	08-Aug-07	2	15	Concrete	22-Aug-07	HPS-PDPIPE-082207-162	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1G	45	04-Apr-11	3	15	Concrete	02-Aug-11	HPS-PGPIPE-080211-005	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-1G	46	04-Apr-11	3	15	Concrete	02-Aug-11	HPS-PGPIPE-080211-005	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-1G	47	04-Apr-11	3	15	Concrete	02-Aug-11	HPS-PGPIPE-080211-005	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-1G	48	04-Apr-11	3	15	Concrete	02-Aug-11	HPS-PGPIPE-080211-005	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-1G	49	04-Apr-11	3	15	Concrete	02-Aug-11	HPS-PGPIPE-080211-005	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-1G	50	04-Apr-11	3	15	Concrete	02-Aug-11	HPS-PGPIPE-080211-005	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-1G	51	04-Apr-11	3	15	Concrete	02-Aug-11	HPS-PGPIPE-080211-005	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-1G	52	04-Apr-11	3	15	Concrete	02-Aug-11	HPS-PGPIPE-080211-005	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-1G	53	04-Apr-11	3	15	Concrete	02-Aug-11	HPS-PGPIPE-080211-005	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-1G	54	04-Apr-11	3	15	Concrete	02-Aug-11	HPS-PGPIPE-080211-005	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-1G	55	04-Apr-11	3	15	Concrete	02-Aug-11	HPS-PGPIPE-080211-005	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-1G	56	04-Apr-11	3	15	Concrete	02-Aug-11	HPS-PGPIPE-080211-005	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-1G	57	04-Apr-11	3	15	Concrete	02-Aug-11	HPS-PGPIPE-080211-005	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-1G	58	04-Apr-11	3	15	Concrete	02-Aug-11	HPS-PGPIPE-080211-005	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-1G	59	04-Apr-11	3	15	Concrete	02-Aug-11	HPS-PGPIPE-080211-005	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-1G	60	05-Apr-11	3	15	Concrete	02-Aug-11	HPS-PGPIPE-080211-005	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-1G	61	05-Apr-11	3	15	Concrete	02-Aug-11	HPS-PGPIPE-080211-005	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-1G	62	05-Apr-11	3	15	Concrete	02-Aug-11	HPS-PGPIPE-080211-005	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-1G	63	05-Apr-11	3	15	Concrete	02-Aug-11	HPS-PGPIPE-080211-006	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-1G	64	05-Apr-11	3	15	Concrete	02-Aug-11	HPS-PGPIPE-080211-006	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-1G	65	05-Apr-11	3	15	Concrete	02-Aug-11	HPS-PGPIPE-080211-006	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-1G	66	05-Apr-11	3	15	Concrete	02-Aug-11	HPS-PGPIPE-080211-006	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA

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PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D17-00-1G	67	05-Apr-11	3	15	Concrete	02-Aug-11	HPS-PGPIPE-080211-006	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-1G	68	05-Apr-11	3	15	Concrete	02-Aug-11	HPS-PGPIPE-080211-006	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-1G	69	05-Apr-11	3	15	Concrete	02-Aug-11	HPS-PGPIPE-080211-006	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-1G	MH307	07-Aug-07	NA	NA	Concrete	14-Aug-07	HPS-PDPIPE-081407-158	NA	0	NA	14-Sep-07	Non-LLRW[b]	NA
70-D17-00-1G	MH308	07-Aug-07	NA	NA	Concrete	14-Aug-07	HPS-PDPIPE-081407-158	NA	0	NA	14-Sep-07	Non-LLRW[b]	NA
70-D17-00-1L	01	26-Jul-07	4.25	15	Concrete	07-Aug-07	HPS-PDPIPE-080707-151	NA	0	NA	14-Sep-07	Non-LLRW[b]	NA
70-D17-00-1L	02	26-Jul-07	6.67	15	Concrete	07-Aug-07	HPS-PDPIPE-080707-151	NA	0	NA	15-Sep-07	Non-LLRW[b]	NA
70-D17-00-1L	03	26-Jul-07	2	15	Concrete	08-Aug-07	HPS-PDPIPE-080807-153	NA	0	NA	15-Sep-07	Non-LLRW[b]	NA
70-D17-00-1L	04	26-Jul-07	2.83	15	Concrete	07-Aug-07	HPS-PDPIPE-080707-151	NA	0	NA	15-Sep-07	Non-LLRW[b]	NA
70-D17-00-1L	05	26-Jul-07	4	15	Concrete	07-Aug-07	HPS-PDPIPE-080707-151	NA	0	NA	15-Sep-07	Non-LLRW[b]	NA
70-D17-00-1L	06	26-Jul-07	2.67	15	Concrete	07-Aug-07	HPS-PDPIPE-080707-151	NA	0	NA	15-Sep-07	Non-LLRW[b]	NA
70-D17-00-1L	07	27-Jul-07	2	15	Concrete	07-Aug-07	HPS-PDPIPE-080707-151	NA	0	NA	15-Sep-07	Non-LLRW[b]	NA
70-D17-00-1L	08	27-Jul-07	2.5	15	Concrete	06-Aug-07	HPS-PDPIPE-080607-150	NA	0	NA	15-Sep-07	Non-LLRW[b]	NA
70-D17-00-1L	09	27-Jul-07	6	15	Concrete	07-Aug-07	HPS-PDPIPE-080707-151	NA	0	NA	15-Sep-07	Non-LLRW[b]	NA
70-D17-00-1L	10	27-Jul-07	5	15	Concrete	07-Aug-07	HPS-PDPIPE-080707-151	NA	0	NA	15-Sep-07	Non-LLRW[b]	NA
70-D17-00-1L	11	27-Jul-07	3	15	Concrete	06-Aug-07	HPS-PDPIPE-080607-150	NA	0	NA	15-Sep-07	Non-LLRW[b]	NA
70-D17-00-1L	12	27-Jul-07	4	15	Concrete	06-Aug-07	HPS-PDPIPE-080607-150	NA	0	NA	15-Sep-07	Non-LLRW[b]	NA
70-D17-00-1L	13	27-Jul-07	6	15	Concrete	06-Aug-07	HPS-PDPIPE-080607-150	NA	0	NA	15-Sep-07	Non-LLRW[b]	NA
70-D17-00-1L	14	27-Jul-07	5.5	15	Concrete	06-Aug-07	HPS-PDPIPE-080607-150	NA	0	NA	15-Sep-07	Non-LLRW[b]	NA
70-D17-00-1L	15	27-Jul-07	4.5	15	Concrete	06-Aug-07	HPS-PDPIPE-080607-150	NA	0	NA	15-Sep-07	Non-LLRW[b]	NA
70-D17-00-1L	16	27-Jul-07	4.5	15	Concrete	06-Aug-07	HPS-PDPIPE-080607-150	NA	0	NA	15-Sep-07	Non-LLRW[b]	NA
70-D17-00-1L	17	30-Jul-07	4	21	Concrete	06-Aug-07	HPS-PDPIPE-080607-150	NA	0	NA	15-Sep-07	Non-LLRW[b]	NA
70-D17-00-1L	18	30-Jul-07	3	21	Concrete	06-Aug-07	HPS-PDPIPE-080607-150	NA	0	NA	15-Sep-07	Non-LLRW[b]	NA
70-D17-00-1L	19	30-Jul-07	7	21	Concrete	10-Aug-07	HPS-PDPIPE-081007-155	NA	0	NA	15-Sep-07	Non-LLRW[b]	NA
70-D17-00-1L	20	30-Jul-07	3.5	21	Concrete	10-Aug-07	HPS-PDPIPE-081007-155	NA	0	NA	07-Sep-07	Non-LLRW[b]	NA
70-D17-00-1L	21	30-Jul-07	6	21	Concrete	06-Aug-07	HPS-PDPIPE-080607-150	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-1L	22	30-Jul-07	7.5	21	Concrete	07-Aug-07	HPS-PDPIPE-080707-151	NA	0	NA	13-Nov-07	Non-LLRW[b]	NA
70-D17-00-1L	23	30-Jul-07	4	24	Concrete	07-Aug-07	HPS-PDPIPE-080707-151	NA	0	NA	13-Nov-07	Non-LLRW[b]	NA
70-D17-00-1L	24	30-Jul-07	5	21	Concrete	08-Aug-07	HPS-PDPIPE-080807-153	NA	0	NA	13-Nov-07	Non-LLRW[b]	NA
70-D17-00-1L	25	30-Jul-07	9.5	21	Concrete	09-Aug-07	HPS-PDPIPE-080907-154	NA	0	NA	13-Nov-07	Non-LLRW[b]	NA
70-D17-00-1L	26	30-Jul-07	2	21	Concrete	07-Aug-07	HPS-PDPIPE-080707-151	NA	0	NA	13-Nov-07	Non-LLRW[b]	NA
70-D17-00-1L	27	30-Jul-07	4	21	Concrete	08-Aug-07	HPS-PDPIPE-080807-153	NA	0	NA	13-Nov-07	Non-LLRW[b]	NA
70-D17-00-1L	28	30-Jul-07	11	21	Concrete	09-Aug-07	HPS-PDPIPE-080907-154	NA	0	NA	13-Nov-07	Non-LLRW[b]	NA
70-D17-00-1L	29	31-Jul-07	2.42	15	Concrete	09-Aug-07	HPS-PDPIPE-080907-154	NA	0	NA	13-Nov-07	Non-LLRW[b]	NA
70-D17-00-1L	30	31-Jul-07	4	15	Concrete	09-Aug-07	HPS-PDPIPE-080907-154	NA	0	NA	13-Nov-07	Non-LLRW[b]	NA
70-D17-00-1L	31	31-Jul-07	6	15	Concrete	09-Aug-07	HPS-PDPIPE-080907-154	NA	0	NA	13-Nov-07	Non-LLRW[b]	NA

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D17-00-1L	32	31-Jul-07	4	15	Concrete	09-Aug-07	HPS-PDPIPE-080907-154	NA	0	NA	13-Nov-07	Non-LLRW[b]	NA
70-D17-00-1L	33	31-Jul-07	6	15	Concrete	09-Aug-07	HPS-PDPIPE-080907-154	NA	0	NA	13-Nov-07	Non-LLRW[b]	NA
70-D17-00-1L	34	31-Jul-07	2	15	Concrete	09-Aug-07	HPS-PDPIPE-080907-154	NA	0	NA	13-Nov-07	Non-LLRW[b]	NA
70-D17-00-1L	35	31-Jul-07	1.5	15	Concrete	09-Aug-07	HPS-PDPIPE-080907-154	NA	0	NA	13-Nov-07	Non-LLRW[b]	NA
70-D17-00-1L	36	01-Aug-07	5	15	Concrete	08-Aug-07	HPS-PDPIPE-080807-153	NA	0	NA	13-Nov-07	Non-LLRW[b]	NA
70-D17-00-1L	37	01-Aug-07	5	15	Concrete	08-Aug-07	HPS-PDPIPE-080807-153	NA	0	NA	13-Nov-07	Non-LLRW[b]	NA
70-D17-00-1M	01	03-Aug-07	3.5	6	VCP	09-Aug-07	HPS-PDPIPE-080907-154	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1M	02	03-Aug-07	2	6	VCP	15-Aug-07	HPS-PDPIPE-081507-160	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1M	03	03-Aug-07	3.5	6	VCP	14-Aug-07	HPS-PDPIPE-081407-158	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1O	01	01-Aug-07	3.5	24	VCP	08-Aug-07	HPS-PDPIPE-080807-153	NA	0	NA	13-Nov-07	Non-LLRW[b]	NA
70-D17-00-1O	02	01-Aug-07	4	24	VCP	08-Aug-07	HPS-PDPIPE-080807-153	29-Nov-07	1	70-PDPI-0032-01	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1O	MH297	01-Aug-07	NA	NA	Brick	10-Aug-07	HPS-PDPIPE-080807-153	NA	0	NA	07-Sep-07	Non-LLRW[b]	NA
70-D17-00-1O	MH302	02-Aug-07	NA	NA	Brick	10-Aug-07	HPS-PDPIPE-081007-155	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1R	01	31-Jul-07	3	24	VCP	08-Aug-07	HPS-PDPIPE-080807-153	29-Nov-07	1	70-PDPI-0029-01	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1R	02	31-Jul-07	3	24	Concrete	08-Aug-07	HPS-PDPIPE-080807-153	NA	0	NA	13-Nov-07	Non-LLRW[b]	NA
70-D17-00-1R	03	31-Jul-07	3	24	Concrete	09-Aug-07	HPS-PDPIPE-080907-154	NA	0	NA	13-Nov-07	Non-LLRW[b]	NA
70-D17-00-1R	04	31-Jul-07	3	24	Concrete/VCP	08-Aug-07	HPS-PDPIPE-080807-153	NA	0	NA	07-Sep-07	Non-LLRW[b]	NA
70-D17-00-1R	MH295	30-Jul-07	NA	NA	Brick	09-Aug-07	HPS-PDPIPE-080907-154	NA	0	NA	13-Nov-07	Non-LLRW[b]	NA
70-D17-00-1R	MH296	30-Jul-07	NA	NA	Brick	09-Aug-07	HPS-PDPIPE-080907-154	NA	0	NA	13-Nov-07	Non-LLRW[b]	NA
70-D17-00-1U	01	26-Jul-07	2.33	24	Concrete	07-Aug-07	HPS-PDPIPE-080707-151	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1U	02	26-Jul-07	3.25	24	Concrete	07-Aug-07	HPS-PDPIPE-080707-151	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1U	03	26-Jul-07	3	24	Concrete	07-Aug-07	HPS-PDPIPE-080707-151	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1U	04	26-Jul-07	4	24	Concrete	07-Aug-07	HPS-PDPIPE-080707-151	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1U	05	26-Jul-07	6.33	24	Concrete	07-Aug-07	HPS-PDPIPE-080707-151	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1U	06	27-Jul-07	2.5	24	Concrete	07-Aug-07	HPS-PDPIPE-080707-151	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1U	07	27-Jul-07	3	24	Concrete	06-Aug-07	HPS-PDPIPE-080607-150	NA	0	NA	07-Sep-07	Non-LLRW[b]	NA
70-D17-00-1U	08	30-Jul-07	2	24	Concrete	09-Aug-07	HPS-PDPIPE-080907-154	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-1U	09	30-Jul-07	3	24	Concrete	09-Aug-07	HPS-PDPIPE-080907-154	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-1U	10	30-Jul-07	3	24	Concrete	08-Aug-07	HPS-PDPIPE-080807-153	NA	0	NA	13-Nov-07	Non-LLRW[b]	NA
70-D17-00-1W	MH292	13-Aug-07	NA	NA	Brick	27-Aug-07	HPS-PDPIPE-082707-166	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-1X	MH301	02-Aug-07	NA	NA	Brick	09-Aug-07	HPS-PDPIPE-080907-154	29-Nov-07	1	70-PDMH301-013-01	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-2F	02	06-Apr-11	12	15	Concrete	01-Aug-11	HPS-PGPIPE-080111-004	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-2F	03	06-Apr-11	12	15	Concrete	01-Aug-11	HPS-PGPIPE-080111-004	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-2F	04	07-Apr-11	12	15	Concrete	01-Aug-11	HPS-PGPIPE-080111-004	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-2F	05	07-Apr-11	12	15	Concrete	01-Aug-11	HPS-PGPIPE-080111-004	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-2F	MH309	07-Apr-11	NA	NA	Concrete	01-Aug-11	HPS-PGPIPE-080111-003	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D17-00-2G	01	06-Aug-07	8	15	Concrete	14-Aug-07	HPS-PDPIPE-081407-158	NA	0	NA	07-Sep-07	Non-LLRW[b]	NA
70-D17-00-2G	02	07-Aug-07	4	15	Concrete	14-Aug-07	HPS-PDPIPE-081407-158	NA	0	NA	07-Sep-07	Non-LLRW[b]	NA
70-D17-00-2G	04	07-Aug-07	9	15	Concrete	14-Aug-07	HPS-PDPIPE-081407-158	NA	0	NA	07-Sep-07	Non-LLRW[b]	NA
70-D17-00-2G	05	07-Aug-07	4	15	Concrete	27-Aug-07	HPS-PDPIPE-082707-166	NA	0	NA	25-Sep-07	Non-LLRW[b]	NA
70-D17-00-2G	06	07-Aug-07	4	15	Concrete	13-Aug-07	HPS-PDPIPE-081307-156	NA	0	NA	07-Sep-07	Non-LLRW[b]	NA
70-D17-00-2G	07	07-Aug-07	6	15	Concrete	13-Aug-07	HPS-PDPIPE-081307-156	NA	0	NA	07-Sep-07	Non-LLRW[b]	NA
70-D17-00-2G	08	07-Aug-07	7	15	Concrete	22-Aug-07	HPS-PDPIPE-082207-162	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-2G	09	07-Aug-07	4	15	Concrete	10-Aug-07	HPS-PDPIPE-081007-155	NA	0	NA	07-Sep-07	Non-LLRW[b]	NA
70-D17-00-2G	10	07-Aug-07	6.42	15	Concrete	13-Aug-07	HPS-PDPIPE-081307-156	NA	0	NA	07-Sep-07	Non-LLRW[b]	NA
70-D17-00-2G	11	07-Aug-07	11	15	Concrete	09-Aug-07	HPS-PDPIPE-080907-154	NA	0	NA	07-Sep-07	Non-LLRW[b]	NA
70-D17-00-2G	12	07-Aug-07	8	15	Concrete	09-Aug-07	HPS-PDPIPE-080907-154	NA	0	NA	07-Sep-07	Non-LLRW[b]	NA
70-D17-00-2G	13	08-Aug-07	9	15	Concrete	23-Aug-07	HPS-PDPIPE-082307-163	NA	0	NA	25-Oct-07	Non-LLRW[b]	NA
70-D17-00-2G	14	08-Aug-07	7	15	Concrete	23-Aug-07	HPS-PDPIPE-082307-163	NA	0	NA	25-Oct-07	Non-LLRW[b]	NA
70-D17-00-2G	15	08-Aug-07	9	15	Concrete	23-Aug-07	HPS-PDPIPE-082307-163	NA	0	NA	25-Oct-07	Non-LLRW[b]	NA
70-D17-00-2G	16	08-Aug-07	7	15	Concrete	23-Aug-07	HPS-PDPIPE-082307-163	NA	0	NA	25-Oct-07	Non-LLRW[b]	NA
70-D17-00-2G	17	08-Aug-07	6.42	15	Concrete	23-Aug-07	HPS-PDPIPE-082307-163	NA	0	NA	25-Oct-07	Non-LLRW[b]	NA
70-D17-00-2G	18	08-Aug-07	6	15	Concrete	23-Aug-07	HPS-PDPIPE-082307-163	NA	0	NA	25-Oct-07	Non-LLRW[b]	NA
70-D17-00-2G	19	08-Aug-07	6	15	Concrete	23-Aug-07	HPS-PDPIPE-082307-163	NA	0	NA	25-Oct-07	Non-LLRW[b]	NA
70-D17-00-2G	20	07-Apr-11	12	15	Concrete	01-Aug-11	HPS-PGPIPE-080111-004	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-2G	21	07-Apr-11	12	15	Concrete	01-Aug-11	HPS-PGPIPE-080111-004	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-2H	01	01-Aug-07	5	15	Concrete	08-Aug-07	HPS-PDPIPE-080807-153	NA	0	NA	13-Nov-07	Non-LLRW[b]	NA
70-D17-00-2H	03	01-Aug-07	NA	15	Concrete	08-Aug-07	HPS-PDPIPE-080807-153	NA	0	NA	13-Nov-07	Non-LLRW[b]	NA
70-D17-00-2H	04	01-Aug-07	6.5	15	Concrete	08-Aug-07	HPS-PDPIPE-080807-153	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	05	01-Aug-07	6.5	15	Concrete	08-Aug-07	HPS-PDPIPE-080807-153	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	06	01-Aug-07	4.5	15	Concrete	08-Aug-07	HPS-PDPIPE-080807-153	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	07	02-Aug-07	4.5	15	Concrete	10-Aug-07	HPS-PDPIPE-081007-155	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	08	02-Aug-07	5	15	Concrete	10-Aug-07	HPS-PDPIPE-081007-155	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	09	02-Aug-07	6	15	Concrete	10-Aug-07	HPS-PDPIPE-081007-155	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	10	02-Aug-07	9	15	Concrete	10-Aug-07	HPS-PDPIPE-081007-155	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	11	02-Aug-07	6	15	Concrete	10-Aug-07	HPS-PDPIPE-081007-155	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	12	02-Aug-07	4	15	Concrete	10-Aug-07	HPS-PDPIPE-081007-155	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	13	02-Aug-07	6	15	Concrete	13-Aug-07	HPS-PDPIPE-081307-156	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	14	03-Aug-07	4.42	15	Concrete	14-Aug-07	HPS-PDPIPE-081407-158	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	15	03-Aug-07	4	15	Concrete	14-Aug-07	HPS-PDPIPE-081407-158	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	16	03-Aug-07	8	15	Concrete	14-Aug-07	HPS-PDPIPE-081407-158	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	17	03-Aug-07	7	15	Concrete	14-Aug-07	HPS-PDPIPE-081407-159	29-Nov-07	1	70-PDPI-0031-01	10-Sep-08	Non-LLRW[b]	NA

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D17-00-2H	18	03-Aug-07	7	15	Concrete	15-Aug-07	HPS-PDPIPE-081407-159	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	19	03-Aug-07	6	15	Concrete	15-Aug-07	HPS-PDPIPE-081407-159	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-2H	20	03-Aug-07	6	15	Concrete	15-Aug-07	HPS-PDPIPE-081407-159	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-2H	21	03-Aug-07	5	15	Concrete	15-Aug-07	HPS-PDPIPE-081407-159	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-2H	22	03-Aug-07	9	15	Concrete	15-Aug-07	HPS-PDPIPE-081507-160	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	23	03-Aug-07	4.42	15	Concrete	15-Aug-07	HPS-PDPIPE-081407-159	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-2H	24	03-Aug-07	4	15	Concrete	14-Aug-07	HPS-PDPIPE-081407-158	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	25	03-Aug-07	9	15	Concrete	15-Aug-07	HPS-PDPIPE-081507-160	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	26	03-Aug-07	10	15	Concrete	15-Aug-07	HPS-PDPIPE-081507-160	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	27	03-Aug-07	4	15	Concrete	15-Aug-07	HPS-PDPIPE-081507-160	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	28	03-Aug-07	6	15	Concrete	15-Aug-07	HPS-PDPIPE-081507-160	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	29	03-Aug-07	5	15	Concrete	15-Aug-07	HPS-PDPIPE-081507-160	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	30	03-Aug-07	5.42	15	Concrete	15-Aug-07	HPS-PDPIPE-081507-160	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	31	03-Aug-07	6.42	15	Concrete	15-Aug-07	HPS-PDPIPE-081507-160	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	32	06-Aug-07	5	15	Concrete	14-Aug-07	HPS-PDPIPE-081407-158	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	33	06-Aug-07	6	15	Concrete	23-Aug-07	HPS-PDPIPE-082307-163	NA	0	NA	25-Oct-07	Non-LLRW[b]	NA
70-D17-00-2H	34	06-Aug-07	4	15	Concrete	13-Aug-07	HPS-PDPIPE-081307-156	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	35	06-Aug-07	5	15	Concrete	14-Aug-07	HPS-PDPIPE-081407-158	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	36	06-Aug-07	5	15	Concrete	14-Aug-07	HPS-PDPIPE-081407-158	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	37	06-Aug-07	8	15	Concrete	23-Aug-07	HPS-PDPIPE-082307-163	NA	0	NA	25-Oct-07	Non-LLRW[b]	NA
70-D17-00-2H	38	06-Aug-07	5	15	Concrete	14-Aug-07	HPS-PDPIPE-081407-158	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	39	06-Aug-07	12	15	Concrete	14-Aug-07	HPS-PDPIPE-081407-158	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	40	06-Aug-07	10	15	Concrete	14-Aug-07	HPS-PDPIPE-081407-158	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	41	06-Aug-07	7	15	Concrete	23-Aug-07	HPS-PDPIPE-082307-163	NA	0	NA	25-Oct-07	Non-LLRW[b]	NA
70-D17-00-2H	42	06-Aug-07	3	15	Concrete	13-Aug-07	HPS-PDPIPE-081307-156	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	MH298	01-Aug-07	NA	NA	Concrete	08-Aug-07	HPS-PDPIPE-080807-153	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2H	MH306	06-Aug-07	NA	NA	Concrete	14-Aug-07	HPS-PDPIPE-081407-158	NA	0	NA	06-Sep-07	Non-LLRW[b]	NA
70-D17-00-2L	01	20-Jul-07	3.16	24	Concrete	02-Aug-07	HPS-PDPIPE-080207-147	NA	0	NA	11-Sep-08	Non-LLRW[b]	NA
70-D17-00-2L	02	20-Jul-07	5	24	Concrete	02-Aug-07	HPS-PDPIPE-080207-147	NA	0	NA	10-Aug-07	Non-LLRW[b]	NA
70-D17-00-2L	03	20-Jul-07	4	24	Concrete	02-Aug-07	HPS-PDPIPE-080207-147	NA	0	NA	10-Aug-07	Non-LLRW[b]	NA
70-D17-00-2L	04	20-Jul-07	4	24	Concrete	02-Aug-07	HPS-PDPIPE-080207-147	NA	0	NA	11-Sep-08	Non-LLRW[b]	NA
70-D17-00-2L	MH282	20-Jul-07	NA	NA	Concrete	02-Aug-07	HPS-PDPIPE-080207-147	NA	0	NA	10-Aug-07	Non-LLRW[b]	NA
70-D17-00-2M	01	30-Jul-07	2	6	VCP	25-Oct-07	HPS-PDPIPE-102507-209	NA	0	NA	30-Nov-07	Non-LLRW[b]	NA
70-D17-00-2N	01	14-Aug-07	3	8	VCP	23-Aug-07	HPS-PDPIPE-082307-163	NA	0	NA	25-Oct-07	Non-LLRW[b]	NA
70-D17-00-2N	02	14-Aug-07	3	8	VCP	23-Aug-07	HPS-PDPIPE-082307-163	NA	0	NA	25-Oct-07	Non-LLRW[b]	NA
70-D17-00-2N	03	14-Aug-07	2	8	VCP	27-Aug-07	HPS-PDPIPE-082707-166	31-Jul-08	1	70-PDPI-0061-01	28-Aug-08	LLRW	BKRU026026G5

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D17-00-2N	MH288	14-Aug-07	NA	NA	Concrete	27-Aug-07	HPS-PDPIPE-082707-166	NA	0	NA	25-Sep-07	Non-LLRW[b]	NA
70-D17-00-2N	MH289	14-Aug-07	NA	NA	Concrete	27-Aug-07	HPS-PDPIPE-082707-166	NA	0	NA	25-Sep-07	Non-LLRW[b]	NA
70-D17-00-2P	01	09-Aug-07	2.67	12	Concrete	27-Aug-07	HPS-PDPIPE-082707-166	NA	0	NA	25-Sep-07	Non-LLRW[b]	NA
70-D17-00-2P	02	09-Aug-07	4	12	Concrete	27-Aug-07	HPS-PDPIPE-082707-166	NA	0	NA	25-Sep-07	Non-LLRW[b]	NA
70-D17-00-2P	03	09-Aug-07	4	12	Concrete	27-Aug-07	HPS-PDPIPE-082707-166	NA	0	NA	25-Sep-07	Non-LLRW[b]	NA
70-D17-00-2P	04	09-Aug-07	12.33	12	Concrete	27-Aug-07	HPS-PDPIPE-082707-166	NA	0	NA	25-Sep-07	Non-LLRW[b]	NA
70-D17-00-2P	05	09-Aug-07	3.58	12	Concrete	27-Aug-07	HPS-PDPIPE-082707-166	NA	0	NA	25-Sep-07	Non-LLRW[b]	NA
70-D17-00-3C	MH281	19-Jul-07	NA	NA	Concrete	02-Aug-07	HPS-PDPIPE-080207-147	NA	0	NA	23-Sep-08	Non-LLRW[b]	NA
70-D17-00-3D	02	20-Jul-07	7	24	Concrete	02-Aug-07	HPS-PDPIPE-080207-147	NA	0	NA	10-Aug-07	Non-LLRW[b]	NA
70-D17-00-3D	04	20-Jul-07	6	21	Concrete	02-Aug-07	HPS-PDPIPE-080207-147	NA	0	NA	10-Aug-07	Non-LLRW[b]	NA
70-D17-00-3D	06	20-Jul-07	5	21	Concrete	02-Aug-07	HPS-PDPIPE-080207-147	NA	0	NA	10-Aug-07	Non-LLRW[b]	NA
70-D17-00-3D	07	20-Jul-07	5	21	Concrete	02-Aug-07	HPS-PDPIPE-080207-147	NA	0	NA	10-Aug-07	Non-LLRW[b]	NA
70-D17-00-3D	08	20-Jul-07	6	21	Concrete	02-Aug-07	HPS-PDPIPE-080207-147	NA	0	NA	10-Aug-07	Non-LLRW[b]	NA
70-D17-00-3D	09	23-Jul-07	4	21	Concrete/Brick	02-Aug-07	HPS-PDPIPE-080207-147	NA	0	NA	10-Aug-07	Non-LLRW[b]	NA
70-D17-00-3D	10	23-Jul-07	5	21	Concrete	02-Aug-07	HPS-PDPIPE-080207-147	NA	0	NA	10-Aug-07	Non-LLRW[b]	NA
70-D17-00-3D	11	23-Jul-07	6	21	Concrete	02-Aug-07	HPS-PDPIPE-080207-147	NA	0	NA	10-Aug-07	Non-LLRW[b]	NA
70-D17-00-3E	01	23-Jul-07	12	10	Cast Iron	02-Aug-07	HPS-PDPIPE-080207-147	NA	0	NA	13-Aug-07	Non-LLRW[b]	NA
70-D17-00-3F	01	23-Jul-07	4	24	Concrete	02-Aug-07	HPS-PDPIPE-080207-148	NA	0	NA	13-Aug-07	Non-LLRW[b]	NA
70-D17-00-3F	02	23-Jul-07	5.5	24	Concrete	02-Aug-07	HPS-PDPIPE-080207-148	NA	0	NA	13-Aug-07	Non-LLRW[b]	NA
70-D17-00-3F	03	24-Jul-07	3.5	24	Concrete	02-Aug-07	HPS-PDPIPE-080207-148	NA	0	NA	13-Aug-07	Non-LLRW[b]	NA
70-D17-00-3F	04	24-Jul-07	3.5	24	Concrete	02-Aug-07	HPS-PDPIPE-080207-148	NA	0	NA	13-Aug-07	Non-LLRW[b]	NA
70-D17-00-3F	05	24-Jul-07	3.5	24	Concrete	02-Aug-07	HPS-PDPIPE-080207-148	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-3F	06	24-Jul-07	3.5	24	Concrete	02-Aug-07	HPS-PDPIPE-080207-148	NA	0	NA	13-Aug-07	Non-LLRW[b]	NA
70-D17-00-3F	07	24-Jul-07	3.5	24	Concrete	02-Aug-07	HPS-PDPIPE-080207-148	NA	0	NA	13-Aug-07	Non-LLRW[b]	NA
70-D17-00-3F	08	24-Jul-07	3.5	24	Concrete	02-Aug-07	HPS-PDPIPE-080207-148	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-3F	09	24-Jul-07	3.5	24	Concrete	02-Aug-07	HPS-PDPIPE-080207-148	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-3F	10	24-Jul-07	7	24	Concrete	02-Aug-07	HPS-PDPIPE-080207-148	NA	0	NA	13-Aug-07	Non-LLRW[b]	NA
70-D17-00-3F	11	24-Jul-07	7	24	Concrete	02-Aug-07	HPS-PDPIPE-080207-148	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-3F	MH291	13-Aug-07	NA	NA	Brick	27-Aug-07	HPS-PDPIPE-082707-166	29-Nov-07	1	70-PDMH291-012-01	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-3G	01	25-Jul-07	1.5	12	Steel	02-Aug-07	HPS-PDPIPE-080207-148	NA	0	NA	13-Aug-07	Non-LLRW[b]	NA
70-D17-00-3G	02	25-Jul-07	1.5	5	Steel	02-Aug-07	HPS-PDPIPE-080207-148	NA	0	NA	13-Aug-07	Non-LLRW[b]	NA
70-D17-00-3G	03	25-Jul-07	1.5	3	Steel	02-Aug-07	HPS-PDPIPE-080207-148	NA	0	NA	13-Aug-07	Non-LLRW[b]	NA
70-D17-00-3H	01	24-Jul-07	3	10	Concrete	02-Aug-07	HPS-PDPIPE-080207-148	NA	0	NA	23-Sep-08	Non-LLRW[b]	NA
70-D17-00-3H	02	24-Jul-07	2.5	10	Concrete	02-Aug-07	HPS-PDPIPE-080207-148	NA	0	NA	23-Sep-08	Non-LLRW[b]	NA
70-D17-00-3H	03	24-Jul-07	2.5	10	VCP	02-Aug-07	HPS-PDPIPE-080207-148	NA	0	NA	23-Sep-08	Non-LLRW[b]	NA
70-D17-00-3H	04	24-Jul-07	3	10	VCP	02-Aug-07	HPS-PDPIPE-080207-148	NA	0	NA	23-Sep-08	Non-LLRW[b]	NA

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D17-00-3H	05	25-Jul-07	3	10	VCP	02-Aug-07	HPS-PDPIPE-080207-148	NA	0	NA	23-Sep-08	Non-LLRW[b]	NA
70-D17-00-3H	06	25-Jul-07	3	10	VCP	02-Aug-07	HPS-PDPIPE-080207-148	NA	0	NA	23-Sep-08	Non-LLRW[b]	NA
70-D17-00-3H	07	25-Jul-07	2	10	VCP	03-Aug-07	HPS-PDPIPE-080307-149	29-Nov-07	1	70-PDPI-0026-01	23-Sep-08	Non-LLRW[b]	NA
70-D17-00-3H	08	25-Jul-07	3	10	VCP	03-Aug-07	HPS-PDPIPE-080307-149	NA	0	NA	23-Sep-08	Non-LLRW[b]	NA
70-D17-00-3H	09	25-Jul-07	3	10	VCP	03-Aug-07	HPS-PDPIPE-080307-149	NA	0	NA	23-Sep-08	Non-LLRW[b]	NA
70-D17-00-3H	10	25-Jul-07	2.5	10	VCP	03-Aug-07	HPS-PDPIPE-080307-149	NA	0	NA	23-Sep-08	Non-LLRW[b]	NA
70-D17-00-3H	11	25-Jul-07	2.5	10	VCP	03-Aug-07	HPS-PDPIPE-080307-149	NA	0	NA	23-Sep-08	Non-LLRW[b]	NA
70-D17-00-3I	01	23-Jul-07	3	21	Concrete	03-Aug-07	HPS-PDPIPE-080307-149	NA	0	NA	13-Aug-07	Non-LLRW[b]	NA
70-D17-00-3I	02	24-Jul-07	12	21	Concrete	03-Aug-07	HPS-PDPIPE-080307-149	NA	0	NA	13-Aug-07	Non-LLRW[b]	NA
70-D17-00-3I	03	24-Jul-07	12	21	Concrete	08-Aug-07	HPS-PDPIPE-080807-153	NA	0	NA	08-Sep-07	Non-LLRW[b]	NA
70-D17-00-3I	04	24-Jul-07	5.5	21	Concrete	07-Aug-07	HPS-PDPIPE-080707-151	NA	0	NA	08-Sep-07	Non-LLRW[b]	NA
70-D17-00-3I	05	24-Jul-07	5	21	Concrete	03-Aug-07	HPS-PDPIPE-080307-149	NA	0	NA	13-Aug-07	Non-LLRW[b]	NA
70-D17-00-3I	06	24-Jul-07	5	21	Concrete	03-Aug-07	HPS-PDPIPE-080307-149	NA	0	NA	13-Aug-07	Non-LLRW[b]	NA
70-D17-00-3I	08	25-Jul-07	6.5	21	Concrete	07-Aug-07	HPS-PDPIPE-080707-151	NA	0	NA	08-Sep-07	Non-LLRW[b]	NA
70-D17-00-3I	09	25-Jul-07	3	21	Concrete	03-Aug-07	HPS-PDPIPE-080307-149	NA	0	NA	13-Aug-07	Non-LLRW[b]	NA
70-D17-00-3I	10	25-Jul-07	8.5	21	Concrete	06-Aug-07	HPS-PDPIPE-080607-150	NA	0	NA	08-Sep-07	Non-LLRW[b]	NA
70-D17-00-3I	MH283	23-Jul-07	NA	NA	Concrete	02-Aug-07	HPS-PDPIPE-080207-147	NA	0	NA	10-Aug-07	Non-LLRW[b]	NA
70-D17-00-3I	MH290	13-Aug-07	NA	NA	Concrete	27-Aug-07	HPS-PDPIPE-082707-166	NA	0	NA	25-Sep-07	Non-LLRW[b]	NA
70-D17-00-8A	01	25-Jul-07	6	6	CMP	06-Aug-07	HPS-PDPIPE-080607-150	NA	0	NA	15-Sep-07	Non-LLRW[b]	NA
70-D17-00-8A	02	25-Jul-07	7.5	6	CMP	06-Aug-07	HPS-PDPIPE-080607-150	NA	0	NA	15-Sep-07	Non-LLRW[b]	NA
70-D17-00-8A	03	25-Jul-07	5.33	6	CMP	06-Aug-07	HPS-PDPIPE-080607-150	NA	0	NA	15-Sep-07	Non-LLRW[b]	NA
70-D17-00-8A	04	25-Jul-07	3	6	CMP	06-Aug-07	HPS-PDPIPE-080607-150	NA	0	NA	15-Sep-07	Non-LLRW[b]	NA
70-D17-00-8A	05	25-Jul-07	3.5	6	CMP	06-Aug-07	HPS-PDPIPE-080607-150	NA	0	NA	15-Sep-07	Non-LLRW[b]	NA
70-D17-00-8A	06	25-Jul-07	3	6	CMP	06-Aug-07	HPS-PDPIPE-080607-150	NA	0	NA	15-Sep-07	Non-LLRW[b]	NA
70-D17-00-8A	07	25-Jul-07	3	6	CMP	06-Aug-07	HPS-PDPIPE-080607-150	NA	0	NA	15-Sep-07	Non-LLRW[b]	NA
70-D17-00-8B	01	01-Aug-07	3	4	VCP	08-Aug-07	HPS-PDPIPE-080807-153	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-8B	02	01-Aug-07	1	4	VCP	08-Aug-07	HPS-PDPIPE-080807-153	NA	0	NA	11-Sep-08	Non-LLRW[b]	NA
70-D17-00-8C	01	02-Aug-07	10.42	10	VCP	13-Aug-07	HPS-PDPIPE-081307-156	NA	0	NA	11-Sep-08	Non-LLRW[b]	NA
70-D17-00-8C	02	27-Aug-07	3	10	VCP	13-Sep-07	HPS-PDPIPE-091307-196	NA	0	NA	28-Sep-07	Non-LLRW[b]	NA
70-D17-00-8E	01	06-Aug-07	1	6	VCP	14-Aug-07	HPS-PDPIPE-081407-158	NA	0	NA	11-Sep-08	Non-LLRW[b]	NA
70-D17-00-8F	01	06-Aug-07	3	15	VCP	14-Aug-07	HPS-PDPIPE-081407-158	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-00-8H	01	19-Aug-08	3.5	10	Steel	12-Sep-08	HPS-PDPIPE-091208-297	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D17-00-8I	01	19-Aug-08	7	10	Steel	12-Sep-08	HPS-PDPIPE-091208-297	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D17-00-8I	02	19-Aug-08	11.5	10	Steel	12-Sep-08	HPS-PDPIPE-091208-297	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D17-00-8I	03	19-Aug-08	5	10	Steel	12-Sep-08	HPS-PDPIPE-091208-297	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D17-00-8I	04	19-Aug-08	12	10	Steel	12-Sep-08	HPS-PDPIPE-091208-297	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA

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PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D17-00-8I	05	19-Aug-08	5	10	Steel	12-Sep-08	HPS-PDPIPE-091208-297	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D17-00-8I	06	19-Aug-08	8	10	Steel	03-Oct-08	HPS-PDPIPE-100308-308	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D17-00-8I	07	19-Aug-08	4	10	Steel	03-Oct-08	HPS-PDPIPE-100308-308	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D17-00-8I	08	19-Aug-08	7	10	Steel	12-Sep-08	HPS-PDPIPE-091208-297	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D17-00-8I	09	19-Aug-08	5	10	Steel	12-Sep-08	HPS-PDPIPE-091208-297	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D17-00-8I	10	19-Aug-08	3	10	Steel	12-Sep-08	HPS-PDPIPE-091208-297	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D17-00-8I	11	19-Aug-08	2	10	Steel	12-Sep-08	HPS-PDPIPE-091208-297	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D17-00-8I	12	19-Aug-08	7.5	10	Steel	12-Sep-08	HPS-PDPIPE-091208-297	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D17-00-8I	13	19-Aug-08	10	10	Steel	12-Sep-08	HPS-PDPIPE-091208-297	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D17-00-8I	14	19-Aug-08	5	10	Steel	12-Sep-08	HPS-PDPIPE-091208-297	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D17-00-8I	15	19-Aug-08	9	10	Steel	12-Sep-08	HPS-PDPIPE-091208-297	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D17-00-8I	16	19-Aug-08	6	10	Steel	12-Sep-08	HPS-PDPIPE-091208-297	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D17-00-8K	MH481	04-Apr-11	NA	NA	Brick	01-Aug-11	HPS-PGPIPE-080111-003	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-00-8L	MH482	05-Apr-11	NA	NA	Concrete	01-Aug-11	HPS-PGPIPE-080111-003	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D17-34-1P	01	23-Aug-07	7	10	CIP	13-Sep-07	HPS-PDPIPE-091307-196	NA	0	NA	28-Sep-07	Non-LLRW[b]	NA
70-D17-34-1P	02	24-Aug-07	12	10	CIP	13-Sep-07	HPS-PDPIPE-091307-196	NA	0	NA	28-Sep-07	Non-LLRW[b]	NA
70-D17-34-1P	03	24-Aug-07	6.5	10	CIP	13-Sep-07	HPS-PDPIPE-091307-196	NA	0	NA	28-Sep-07	Non-LLRW[b]	NA
70-D17-34-1Q	01	20-Aug-07	2.5	6	CIP	13-Sep-07	HPS-PDPIPE-091307-196	NA	0	NA	28-Sep-07	Non-LLRW[b]	NA
70-D17-34-1Q	02	21-Aug-07	2.67	10	VCP	13-Sep-07	HPS-PDPIPE-091307-196	NA	0	NA	28-Sep-07	Non-LLRW[b]	NA
70-D17-34-1Q	03	21-Aug-07	2	4	CIP	13-Sep-07	HPS-PDPIPE-091307-196	NA	0	NA	28-Sep-07	Non-LLRW[b]	NA
70-D17-34-1Q	04	21-Aug-07	3.25	4	CIP	13-Sep-07	HPS-PDPIPE-091307-196	NA	0	NA	28-Sep-07	Non-LLRW[b]	NA
70-D17-34-1S	01	15-Aug-07	5	6	CIP	27-Aug-07	HPS-PDPIPE-082707-166	NA	0	NA	24-Sep-07	Non-LLRW[b]	NA
70-D17-34-1S	05	15-Aug-07	5	6	CIP	27-Aug-07	HPS-PDPIPE-082707-166	NA	0	NA	24-Sep-07	Non-LLRW[b]	NA
70-D17-34-1S	06	15-Aug-07	2.42	4	CIP	27-Aug-07	HPS-PDPIPE-082707-166	NA	0	NA	05-Dec-07	Non-LLRW[b]	NA
70-D17-34-1S	07	15-Aug-07	4	4	CIP	27-Aug-07	HPS-PDPIPE-082707-166	NA	0	NA	24-Sep-07	Non-LLRW[b]	NA
70-D17-34-1S	08	15-Aug-07	3	6	VCP	27-Aug-07	HPS-PDPIPE-082707-166	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-34-1S	09	15-Aug-07	3	6	VCP	29-Aug-07	HPS-PDPIPE-082907-168	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-34-1S	10	15-Aug-07	3	6	VCP	29-Aug-07	HPS-PDPIPE-082907-168	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-34-1S	11	16-Aug-07	3	8	VCP	29-Aug-07	HPS-PDPIPE-082907-168	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-34-1S	12	15-Aug-07	3	8	VCP	29-Aug-07	HPS-PDPIPE-082907-168	29-Nov-07	1	70-PDPI-0030-01	10-Sep-08	Non-LLRW[b]	NA
70-D17-34-1S	MH294	16-Aug-07	NA	NA	Brick	29-Aug-07	HPS-PDPIPE-082907-169	NA	0	NA	25-Oct-07	Non-LLRW[b]	NA
70-D17-34-2I	01	23-Aug-07	20	15	CIP	13-Sep-07	HPS-PDPIPE-091307-196	NA	0	NA	03-Oct-07	Non-LLRW[b]	NA
70-D17-34-2I	MH299	24-Aug-07	NA	NA	Concrete	13-Sep-07	HPS-PDPIPE-091307-196	NA	0	NA	03-Oct-07	Non-LLRW[b]	NA
70-D17-34-2J	01	24-Aug-07	3	6	VCP	13-Sep-07	HPS-PDPIPE-091307-196	NA	0	NA	28-Sep-07	Non-LLRW[b]	NA
70-D17-34-2K	01	20-Aug-07	3.5	4	CIP	13-Sep-07	HPS-PDPIPE-091307-196	NA	0	NA	28-Sep-07	Non-LLRW[b]	NA
70-D17-34-2K	02	21-Aug-07	3	8	VCP	19-Sep-07	HPS-PDPIPE-091907-201	NA	0	NA	28-Sep-07	Non-LLRW[b]	NA

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PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D17-34-2K	03	21-Aug-07	2	4	CIP	13-Sep-07	HPS-PDPIPE-091307-196	NA	0	NA	28-Sep-07	Non-LLRW[b]	NA
70-D17-34-2K	04	21-Aug-07	5.16	8	VCP	13-Sep-07	HPS-PDPIPE-091307-196	NA	0	NA	28-Sep-07	Non-LLRW[b]	NA
70-D17-34-8A	01	15-Aug-07	1.5	4	CIP	29-Aug-07	HPS-PDPIPE-082907-168	NA	0	NA	24-Sep-07	Non-LLRW[b]	NA
70-D17-34-8A	02	15-Aug-07	1.5	4	CIP	29-Aug-07	HPS-PDPIPE-082907-168	NA	0	NA	24-Sep-07	Non-LLRW[b]	NA
70-D17-34-8B	01	15-Aug-07	9	6	CIP	29-Aug-07	HPS-PDPIPE-082907-168	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-34-8C	01	15-Aug-07	8	6	CIP	29-Aug-07	HPS-PDPIPE-082907-168	NA	0	NA	24-Sep-07	Non-LLRW[b]	NA
70-D17-34-8D	01	16-Aug-07	5.5	6	CIP	29-Aug-07	HPS-PDPIPE-082907-168	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-34-8D	02	16-Aug-07	3	6	CIP	29-Aug-07	HPS-PDPIPE-082907-168	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-34-8E	01	16-Aug-07	2.75	6	CIP	29-Aug-07	HPS-PDPIPE-082907-168	NA	0	NA	24-Sep-07	Non-LLRW[b]	NA
70-D17-34-8E	02	16-Aug-07	3.67	6	CIP	29-Aug-07	HPS-PDPIPE-082907-168	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-34-8E	03	16-Aug-07	3	6	CIP	29-Aug-07	HPS-PDPIPE-082907-168	NA	0	NA	24-Sep-07	Non-LLRW[b]	NA
70-D17-34-8F	03	16-Aug-07	4	6	CIP	29-Aug-07	HPS-PDPIPE-082907-168	NA	0	NA	24-Sep-07	Non-LLRW[b]	NA
70-D17-34-8F	04	16-Aug-07	5	6	CIP	29-Aug-07	HPS-PDPIPE-082907-168	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-34-8G	01	16-Aug-07	10	6	CIP	29-Aug-07	HPS-PDPIPE-082907-168	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-34-8H	01	22-Aug-07	10	6	CIP	13-Sep-07	HPS-PDPIPE-091307-196	NA	0	NA	28-Sep-07	Non-LLRW[b]	NA
70-D17-34-8I	01	15-Aug-07	3.5	3	CIP	29-Aug-07	HPS-PDPIPE-082907-168	NA	0	NA	24-Sep-07	Non-LLRW[b]	NA
70-D17-34-8I	02	16-Aug-07	2	4	CIP	29-Aug-07	HPS-PDPIPE-082907-169	NA	0	NA	24-Sep-07	Non-LLRW[b]	NA
70-D17-34-8I	03	16-Aug-07	1.5	4	VCP	29-Aug-07	HPS-PDPIPE-082907-169	NA	0	NA	10-Sep-08	Non-LLRW[b]	NA
70-D17-34-8I	04	16-Aug-07	5	4	CIP	29-Aug-07	HPS-PDPIPE-082907-169	NA	0	NA	24-Sep-07	Non-LLRW[b]	NA
70-D17-34-8K	01	16-Aug-07	5.25	4	CIP	29-Aug-07	HPS-PDPIPE-082907-169	NA	0	NA	24-Sep-07	Non-LLRW[b]	NA
70-D17-34-8L	01	16-Aug-07	5	4	CIP	29-Aug-07	HPS-PDPIPE-082907-169	NA	0	NA	24-Sep-07	Non-LLRW[b]	NA
70-D17-34-8M	01	16-Aug-07	4.5	4	CIP	29-Aug-07	HPS-PDPIPE-082907-169	NA	0	NA	14-Oct-08	LLRW	GFLU001016G6
70-D17-34-8M	02	16-Aug-07	1.16	4	CIP	29-Aug-07	HPS-PDPIPE-082907-169	NA	0	NA	24-Sep-07	Non-LLRW[b]	NA
70-D17-34-8M	03	16-Aug-07	1	4	CIP	29-Aug-07	HPS-PDPIPE-082907-169	NA	0	NA	24-Sep-07	Non-LLRW[b]	NA
70-D17-34-8N	01	16-Aug-07	2.42	4	CIP	29-Aug-07	HPS-PDPIPE-082907-169	NA	0	NA	24-Sep-07	Non-LLRW[b]	NA
70-D17-34-8O	01	16-Aug-07	2.42	4	CIP	29-Aug-07	HPS-PDPIPE-082907-169	NA	0	NA	24-Sep-07	Non-LLRW[b]	NA
70-D17-34-8P	01	16-Aug-07	2.5	4	CIP	29-Aug-07	HPS-PDPIPE-082907-169	NA	0	NA	24-Sep-07	Non-LLRW[b]	NA
70-D17-34-8R	01	20-Aug-07	5.5	6	CIP	13-Sep-07	HPS-PDPIPE-091307-196	NA	0	NA	28-Sep-07	Non-LLRW[b]	NA
70-D17-34-8S	01	20-Aug-07	11	6	CIP	13-Sep-07	HPS-PDPIPE-091307-196	NA	0	NA	28-Sep-07	Non-LLRW[b]	NA
70-D17-34-8T	01	21-Aug-07	4.5	6	CIP	13-Sep-07	HPS-PDPIPE-091307-196	NA	0	NA	28-Sep-07	Non-LLRW[b]	NA
70-D17-34-8T	02	21-Aug-07	5.33	6	CIP	13-Sep-07	HPS-PDPIPE-091307-196	NA	0	NA	28-Sep-07	Non-LLRW[b]	NA
70-D17-34-8U	01	21-Aug-07	5.25	6	CIP	13-Sep-07	HPS-PDPIPE-091307-196	NA	0	NA	28-Sep-07	Non-LLRW[b]	NA
70-D17-34-8U	02	21-Aug-07	4.25	6	CIP	13-Sep-07	HPS-PDPIPE-091307-197	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D17-34-8V	01	21-Aug-07	10	6	CIP	13-Sep-07	HPS-PDPIPE-091307-197	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D17-34-8W	01	21-Aug-07	10	6	CIP	13-Sep-07	HPS-PDPIPE-091307-197	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D17-34-8X	01	21-Aug-07	4.5	4	CIP	13-Sep-07	HPS-PDPIPE-091307-197	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D17-34-8Y	01	21-Aug-07	3	4	CIP	13-Sep-07	HPS-PDPIPE-091307-197	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D17-34-8Y	02	21-Aug-07	2	4	CIP	14-Sep-07	HPS-PDPIPE-091407-198	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D17-34-8Z	01	21-Aug-07	5	4	CIP	14-Sep-07	HPS-PDPIPE-091407-198	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D17-34-8Z	02	21-Aug-07	1.33	4	CIP	14-Sep-07	HPS-PDPIPE-091407-198	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D17-34-8Z	03	21-Aug-07	2	4	CIP	14-Sep-07	HPS-PDPIPE-091407-198	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D17-34-9A	01	21-Aug-07	4	4	CIP	14-Sep-07	HPS-PDPIPE-091407-198	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D18-00-1A	MH360	15-Aug-08	NA	NA	Brick/Concrete	21-Aug-08	HPS-PDPIPE-082108-288	NA	0	NA	04-Dec-08	Non-LLRW[b]	NA
70-D18-00-1A	MH477	18-Aug-08	NA	NA	Brick	13-Sep-08	HPS-PDPIPE-091308-298	NA	0	NA	04-Dec-08	Non-LLRW[b]	NA
70-D18-00-1B	MH361	15-Aug-08	NA	NA	Concrete	21-Aug-08	HPS-PDPIPE-082108-289	NA	0	NA	05-Dec-08	Non-LLRW[b]	NA
70-D18-00-1F	MH359	15-Jun-09	NA	NA	Brick/Concrete	NA	NA	NA	0	NA	17-Jun-09	LLRW[c]	GFLU001049G10
70-D18-00-1G	01	17-May-08	3	24	Concrete	21-May-08	HPS-PDPIPE-052108-269	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
70-D18-00-1G	03	17-May-08	3	24	Concrete	21-May-08	HPS-PDPIPE-052108-269	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
70-D18-00-1G	04	17-May-08	3	24	Concrete	21-May-08	HPS-PDPIPE-052108-269	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
70-D18-00-1G	05	17-May-08	3	24	Concrete	21-May-08	HPS-PDPIPE-052108-269	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
70-D18-00-1G	06	17-May-08	3	24	Concrete	21-May-08	HPS-PDPIPE-052108-269	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
70-D18-00-1G	07	17-May-08	3	24	Concrete	21-May-08	HPS-PDPIPE-052108-269	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
70-D18-00-1G	08	17-May-08	3	24	Concrete	21-May-08	HPS-PDPIPE-052108-269	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
70-D18-00-1G	09	17-May-08	3	24	Concrete	21-May-08	HPS-PDPIPE-052108-269	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
70-D18-00-1G	10	17-May-08	3	24	Concrete	21-May-08	HPS-PDPIPE-052108-269	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
70-D18-00-1G	11	17-May-08	3	24	Concrete	21-May-08	HPS-PDPIPE-052108-269	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
70-D18-00-1G	12	17-May-08	3	24	Concrete	21-May-08	HPS-PDPIPE-052108-269	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
70-D18-00-1H	01	13-Aug-08	3	24	Concrete	22-Aug-08	HPS-PDPIPE-082208-290	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D18-00-1H	02	13-Aug-08	3	24	Concrete	22-Aug-08	HPS-PDPIPE-082208-290	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D18-00-1H	03	13-Aug-08	3	24	Concrete	22-Aug-08	HPS-PDPIPE-082208-290	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D18-00-1H	04	13-Aug-08	3	24	Concrete	22-Aug-08	HPS-PDPIPE-082208-290	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D18-00-1H	05	13-Aug-08	3	24	Concrete	23-Aug-08	HPS-PDPIPE-082208-290	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D18-00-1H	06	13-Aug-08	3	24	Concrete	22-Aug-08	HPS-PDPIPE-082208-290	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D18-00-1H	08	13-Aug-08	3	24	Concrete	22-Aug-08	HPS-PDPIPE-082208-290	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D18-00-1H	09	13-Aug-08	3	24	Concrete	22-Aug-08	HPS-PDPIPE-082208-290	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D18-00-1H	11	13-Aug-08	3	24	Concrete	22-Aug-08	HPS-PDPIPE-082208-290	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D18-00-1H	12	13-Aug-08	3	24	Concrete	22-Aug-08	HPS-PDPIPE-082208-290	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D18-00-1H	13	13-Aug-08	3	24	Concrete	22-Aug-08	HPS-PDPIPE-082208-290	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D18-00-1H	14	13-Aug-08	3	24	Concrete	22-Aug-08	HPS-PDPIPE-082208-290	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D18-00-1H	15	13-Aug-08	3	24	Concrete	22-Aug-08	HPS-PDPIPE-082208-290	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D18-00-1H	16	13-Aug-08	3	24	Concrete	22-Aug-08	HPS-PDPIPE-082208-290	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D18-00-1H	18	13-Aug-08	3	24	Concrete	22-Aug-08	HPS-PDPIPE-082208-290	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA

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PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D18-00-1H	19	13-Aug-08	3	24	Concrete	22-Aug-08	HPS-PDPIPE-082208-290	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D18-00-1H	20	13-Aug-08	3	24	Concrete	22-Aug-08	HPS-PDPIPE-082208-290	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D18-00-1H	22	13-Aug-08	6	24	Concrete	22-Aug-08	HPS-PDPIPE-082208-290	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D18-00-1H	23	13-Aug-08	3	24	Concrete	22-Aug-08	HPS-PDPIPE-082208-290	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D18-00-1H	24	13-Aug-08	3	24	Concrete	22-Aug-08	HPS-PDPIPE-082208-290	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D18-00-1H	25	13-Aug-08	3	24	Concrete	22-Aug-08	HPS-PDPIPE-082208-290	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D18-00-1H	26	13-Aug-08	3	24	Concrete	22-Aug-08	HPS-PDPIPE-082208-290	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D18-00-1H	27	13-Aug-08	3	24	Concrete	22-Aug-08	HPS-PDPIPE-082208-290	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D18-00-1H	28	13-Aug-08	3	24	Concrete	22-Aug-08	HPS-PDPIPE-082208-290	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D18-00-1H	29	13-Aug-08	3	12	Concrete	22-Aug-08	HPS-PDPIPE-082208-290	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D18-00-1H	30	13-Aug-08	3	12	Concrete	23-Aug-08	HPS-PDPIPE-082308-291	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D18-00-1H	31	13-Aug-08	3	12	Concrete	23-Aug-08	HPS-PDPIPE-082308-291	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D18-00-1H	32	14-Aug-08	3	24	Concrete	23-Aug-08	HPS-PDPIPE-082308-291	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D18-00-1I	MH364	13-Aug-08	NA	NA	Brick	21-Aug-08	HPS-PDPIPE-082108-287	NA	0	NA	02-Dec-08	Non-LLRW[b]	NA
70-D18-00-1J	02	14-Aug-08	3	24	Concrete	23-Aug-08	HPS-PDPIPE-082308-291	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D18-00-1J	03	14-Aug-08	3	24	Concrete	23-Aug-08	HPS-PDPIPE-082308-291	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D18-00-1J	05	14-Aug-08	3	24	Concrete	23-Aug-08	HPS-PDPIPE-082308-291	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D18-00-1J	06	14-Aug-08	3	24	Concrete	23-Aug-08	HPS-PDPIPE-082308-291	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D18-00-1J	07	14-Aug-08	3	24	Concrete	23-Aug-08	HPS-PDPIPE-082308-291	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D18-00-1J	10	14-Aug-08	3	24	Concrete	23-Aug-08	HPS-PDPIPE-082308-291	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D18-00-1J	11	14-Aug-08	3	24	Concrete	23-Aug-08	HPS-PDPIPE-082308-291	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D18-00-1J	12	14-Aug-08	3	24	Concrete	23-Aug-08	HPS-PDPIPE-082308-291	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D18-00-1J	13	14-Aug-08	3	24	Concrete	23-Aug-08	HPS-PDPIPE-082308-291	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D18-00-1J	14	14-Aug-08	3	24	Concrete	23-Aug-08	HPS-PDPIPE-082308-291	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D18-00-1J	15	14-Aug-08	3	24	Concrete	23-Aug-08	HPS-PDPIPE-082308-291	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D18-00-1J	16	14-Aug-08	3	24	Concrete	23-Aug-08	HPS-PDPIPE-082308-291	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D18-00-1J	17	14-Aug-08	3	24	Concrete	23-Aug-08	HPS-PDPIPE-082308-291	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D18-00-1J	18	14-Aug-08	3	24	Concrete	23-Aug-08	HPS-PDPIPE-082308-291	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D18-00-1J	19	07-Apr-11	3	24	Concrete	28-Jul-11	HPS-PGPIPE-072811-002	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D18-00-1J	20	07-Apr-11	3	24	Concrete	28-Jul-11	HPS-PGPIPE-072811-002	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D18-00-1J	21	07-Apr-11	3	24	Concrete	28-Jul-11	HPS-PGPIPE-072811-002	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D18-00-1J	22	07-Apr-11	3	24	Concrete	28-Jul-11	HPS-PGPIPE-072811-002	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D18-00-1J	23	07-Apr-11	3	24	Concrete	28-Jul-11	HPS-PGPIPE-072811-002	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D18-00-1J	24	07-Apr-11	3	24	Concrete	28-Jul-11	HPS-PGPIPE-072811-002	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D18-00-1J	25	07-Apr-11	3	24	Concrete	28-Jul-11	HPS-PGPIPE-072811-002	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D18-00-1J	26	07-Apr-11	3	24	Concrete	28-Jul-11	HPS-PGPIPE-072811-002	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D18-00-1J	27	07-Apr-11	3	24	Concrete	28-Jul-11	HPS-PGPIPE-072811-002	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D18-00-1J	28	07-Apr-11	3	24	Concrete	28-Jul-11	HPS-PGPIPE-072811-002	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D18-00-1J	29	07-Apr-11	3	24	Concrete	28-Jul-11	HPS-PGPIPE-072811-002	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D18-00-1J	MH366	14-Aug-08	NA	NA	Brick	21-Aug-08	HPS-PDPIPE-082108-287	NA	0	NA	03-Dec-04	Non-LLRW[b]	NA
70-D18-00-1K	01	13-Aug-08	1	NA	CMP	25-Aug-08	HPS-PDPIPE-082508-292	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-00-1K	MH365	13-Aug-08	NA	NA	Brick	21-Aug-08	HPS-PDPIPE-082108-287	NA	0	NA	03-Dec-08	Non-LLRW[b]	NA
70-D18-00-1L	01	13-Aug-08	3	12	CMP	25-Aug-08	HPS-PDPIPE-082508-292	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-00-1L	02	13-Aug-08	4	12	CMP	25-Aug-08	HPS-PDPIPE-082508-292	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-00-1L	03	13-Aug-08	14	12	CMP	25-Aug-08	HPS-PDPIPE-082508-292	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-00-1L	04	13-Aug-08	2	12	CMP	25-Aug-08	HPS-PDPIPE-082508-292	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-00-1L	05	13-Aug-08	2	12	CMP	25-Aug-08	HPS-PDPIPE-082508-292	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-00-1L	06	13-Aug-08	5	12	CMP	25-Aug-08	HPS-PDPIPE-082508-292	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-00-1L	07	14-Aug-08	2	12	CMP	25-Aug-08	HPS-PDPIPE-082508-292	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-00-1L	08	14-Aug-08	2	12	CMP	25-Aug-08	HPS-PDPIPE-082508-292	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-00-1L	09	14-Aug-08	2	12	CMP	25-Aug-08	HPS-PDPIPE-082508-292	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-00-2K	01	17-May-08	3.5	10	CMP	22-May-08	HPS-PDPIPE-052208-271	NA	0	NA	19-Jun-08	Non-LLRW[b]	NA
70-D18-00-2K	02	17-May-08	4	10	CMP	22-May-08	HPS-PDPIPE-052208-271	NA	0	NA	19-Jun-08	Non-LLRW[b]	NA
70-D18-00-2K	03	17-May-08	2.5	10	CMP	22-May-08	HPS-PDPIPE-052208-271	NA	0	NA	19-Jun-08	Non-LLRW[b]	NA
70-D18-00-2K	04	17-May-08	4.5	10	CMP	22-May-08	HPS-PDPIPE-052208-271	NA	0	NA	19-Jun-08	Non-LLRW[b]	NA
70-D18-00-2K	05	17-May-08	2.5	10	CMP	22-May-08	HPS-PDPIPE-052208-271	NA	0	NA	19-Jun-08	Non-LLRW[b]	NA
70-D18-00-2K	06	17-May-08	4	10	CMP	22-May-08	HPS-PDPIPE-052208-271	NA	0	NA	19-Jun-08	Non-LLRW[b]	NA
70-D18-00-2K	07	17-May-08	6.5	10	CMP	22-May-08	HPS-PDPIPE-052208-271	NA	0	NA	19-Jun-08	Non-LLRW[b]	NA
70-D18-00-2K	08	17-May-08	3	10	CMP	22-May-08	HPS-PDPIPE-052208-271	NA	0	NA	19-Jun-08	Non-LLRW[b]	NA
70-D18-00-2K	09	23-Jul-08	3	10	CMP	07-Aug-08	HPS-PDPIPE-080708-284	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D18-00-2K	10	23-Jul-08	2.5	10	CMP	07-Aug-08	HPS-PDPIPE-080708-284	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D18-00-2K	11	23-Jul-08	3	10	CMP	07-Aug-08	HPS-PDPIPE-080708-284	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D18-00-2K	MH363	17-May-08	NA	NA	Brick	22-May-08	HPS-PDPIPE-052208-270	NA	0	NA	03-Jun-08	Non-LLRW[b]	NA
70-D18-00-4G	MH317	06-Sep-08	NA	NA	Concrete	13-Sep-08	HPS-PDPIPE-091308-299	NA	0	NA	05-Dec-08	Non-LLRW[b]	NA
70-D18-00-4K	01	04-Sep-08	3	21	Concrete	15-Sep-08	HPS-PDPIPE-091508-301	NA	0	NA	25-Nov-08	Non-LLRW[b]	NA
70-D18-00-4K	02	04-Sep-08	3	21	Concrete	15-Sep-08	HPS-PDPIPE-091508-301	NA	0	NA	25-Nov-08	Non-LLRW[b]	NA
70-D18-00-4K	03	04-Sep-08	3	21	Concrete	15-Sep-08	HPS-PDPIPE-091508-301	NA	0	NA	25-Nov-08	Non-LLRW[b]	NA
70-D18-00-4K	04	04-Sep-08	3	21	Concrete	15-Sep-08	HPS-PDPIPE-091508-301	NA	0	NA	25-Nov-08	Non-LLRW[b]	NA
70-D18-00-4K	05	04-Sep-08	3	21	Concrete	15-Sep-08	HPS-PDPIPE-091508-301	NA	0	NA	25-Nov-08	Non-LLRW[b]	NA
70-D18-00-4S	MH325	17-Sep-08	NA	NA	Brick	03-Oct-08	HPS-PDPIPE-100308-307	NA	0	NA	26-Nov-08	Non-LLRW[b]	NA
70-D18-00-4V	01	06-Sep-08	20	18	Steel/VCP	17-Sep-08	HPS-PDPIPE-091708-303	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-00-4X	01	05-Sep-08	8	8	CIP	17-Sep-08	HPS-PDPIPE-091708-304	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D18-00-4X	02	05-Sep-08	13	8	CIP	17-Sep-08	HPS-PDPIPE-091708-304	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-00-4X	03	05-Sep-08	18.5	8	CIP	17-Sep-08	HPS-PDPIPE-091708-304	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-00-4X	MH316	06-Sep-08	NA	NA	Brick/Concrete	13-Sep-08	HPS-PDPIPE-091308-300	NA	0	NA	05-Dec-08	Non-LLRW[b]	NA
70-D18-00-8E	01	05-Sep-08	9	8	CMP	16-Sep-08	HPS-PDPIPE-091608-302	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-00-8E	02	05-Sep-08	16	8	CMP	16-Sep-08	HPS-PDPIPE-091608-302	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-00-8H	MH479	17-Jun-09	NA	NA	Concrete	NA	NA	NA	0	NA	16-Jun-10	LLRW[c]	BFLU00139G19
70-D18-00-8I	MH480	17-Jun-09	NA	NA	Concrete	NA	NA	NA	0	NA	16-Jun-10	LLRW[c]	BFLU00139G19
70-D18-09-3A	01	08-May-08	3	15	Concrete	12-May-08	HPS-PDPIPE-051208-255	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-09-3A	02	08-May-08	3	15	Concrete	12-May-08	HPS-PDPIPE-051208-255	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-09-3A	03	08-May-08	3	15	Concrete	12-May-08	HPS-PDPIPE-051208-255	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-09-3A	04	08-May-08	3	15	Concrete	12-May-08	HPS-PDPIPE-051208-255	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-09-3A	05	08-May-08	3	15	Concrete	12-May-08	HPS-PDPIPE-051208-255	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-09-3A	06	08-May-08	3	15	Concrete	12-May-08	HPS-PDPIPE-051208-255	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-09-3A	07	08-May-08	3	15	Concrete	12-May-08	HPS-PDPIPE-051208-255	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-09-3A	08	08-May-08	3	15	Concrete	12-May-08	HPS-PDPIPE-051208-255	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-09-3A	09	08-May-08	3	15	Concrete	12-May-08	HPS-PDPIPE-051208-255	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-09-3A	10	08-May-08	3	15	Concrete	12-May-08	HPS-PDPIPE-051208-255	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-09-3A	11	08-May-08	2.25	15	Concrete	12-May-08	HPS-PDPIPE-051208-255	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-09-3B	01	12-Dec-07	3	15	Concrete	14-Jan-08	HPS-PDPIPE-011408-222	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3B	02	12-Dec-07	3	15	Concrete	14-Jan-08	HPS-PDPIPE-011408-222	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3B	03	12-Dec-07	3	15	Concrete	14-Jan-08	HPS-PDPIPE-011408-222	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3B	04	08-May-08	2.25	15	Concrete	12-May-08	HPS-PDPIPE-051208-255	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-09-3B	05	08-May-08	1.3	15	Concrete	12-May-08	HPS-PDPIPE-051208-255	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-09-3B	06	08-May-08	3	15	Concrete	12-May-08	HPS-PDPIPE-051208-255	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-09-3B	07	08-May-08	2	15	Concrete	13-May-08	HPS-PDPIPE-051308-256	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-09-3B	08	08-May-08	3	15	Concrete	13-May-08	HPS-PDPIPE-051308-256	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-09-3B	09	08-May-08	3	15	Concrete	13-May-08	HPS-PDPIPE-051308-256	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-09-3B	10	08-May-08	3	15	Concrete	13-May-08	HPS-PDPIPE-051308-256	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-09-3B	MH342	08-May-08	NA	NA	Brick	14-May-08	HPS-PDPIPE-051408-259	NA	0	NA	07-Nov-08	LLRW	GFLU001299G6
70-D18-09-3C	01	11-Dec-07	3.5	8	CMP	14-Jan-08	HPS-PDPIPE-011408-222	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3C	02	11-Dec-07	4	8	CMP	14-Jan-08	HPS-PDPIPE-011408-222	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3C	MH345	11-Dec-07	NA	NA	Brick	14-Jan-08	HPS-PDPIPE-011408-222	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3C	MH468	11-Dec-07	NA	NA	Concrete	14-Jan-08	HPS-PDPIPE-011408-222	NA	0	NA	29-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	01	11-Dec-07	2.5	10	Concrete	14-Jan-08	HPS-PDPIPE-011408-222	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	02	11-Dec-07	2.5	10	Concrete	14-Jan-08	HPS-PDPIPE-011408-222	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	03	11-Dec-07	2	10	Concrete	14-Jan-08	HPS-PDPIPE-011408-222	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA

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PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D18-09-3D	04	11-Dec-07	3	10	Concrete	14-Jan-08	HPS-PDPIPE-011408-222	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	05	11-Dec-07	3	10	Concrete	14-Jan-08	HPS-PDPIPE-011408-222	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	06	11-Dec-07	2	10	Concrete	14-Jan-08	HPS-PDPIPE-011408-222	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	07	11-Dec-07	2.5	10	Concrete	14-Jan-08	HPS-PDPIPE-011408-222	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	08	11-Dec-07	2	10	Concrete	14-Jan-08	HPS-PDPIPE-011408-222	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	09	11-Dec-07	3	10	Concrete	14-Jan-08	HPS-PDPIPE-011408-222	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	10	11-Dec-07	3	10	Concrete	14-Jan-08	HPS-PDPIPE-011408-222	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	11	11-Dec-07	3	10	Concrete	14-Jan-08	HPS-PDPIPE-011408-222	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	12	11-Dec-07	3	10	Concrete	14-Jan-08	HPS-PDPIPE-011408-222	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	13	11-Dec-07	3	10	Concrete	14-Jan-08	HPS-PDPIPE-011408-222	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	14	11-Dec-07	3	10	Concrete	14-Jan-08	HPS-PDPIPE-011408-222	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	15	11-Dec-07	3	10	Concrete	14-Jan-08	HPS-PDPIPE-011408-222	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	16	11-Dec-07	3	10	Concrete	14-Jan-08	HPS-PDPIPE-011408-222	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	17	11-Dec-07	3	10	Concrete	14-Jan-08	HPS-PDPIPE-011408-222	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	18	11-Dec-07	3	10	Concrete	14-Jan-08	HPS-PDPIPE-011408-222	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	19	11-Dec-07	3	10	Concrete	15-Jan-08	HPS-PDPIPE-011508-223	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	20	11-Dec-07	3	10	Concrete	15-Jan-08	HPS-PDPIPE-011508-223	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	21	11-Dec-07	3	10	Concrete	15-Jan-08	HPS-PDPIPE-011508-223	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	22	11-Dec-07	3	10	Concrete	15-Jan-08	HPS-PDPIPE-011508-223	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	23	11-Dec-07	3	10	Concrete	15-Jan-08	HPS-PDPIPE-011508-223	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	24	11-Dec-07	3	10	Concrete	15-Jan-08	HPS-PDPIPE-011508-223	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	25	11-Dec-07	3	10	Concrete	15-Jan-08	HPS-PDPIPE-011508-223	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	26	11-Dec-07	3	10	Concrete	15-Jan-08	HPS-PDPIPE-011508-223	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	27	11-Dec-07	3	10	Concrete	15-Jan-08	HPS-PDPIPE-011508-223	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	28	11-Dec-07	3	10	Concrete	15-Jan-08	HPS-PDPIPE-011508-223	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	29	11-Dec-07	3	10	Concrete	15-Jan-08	HPS-PDPIPE-011508-223	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	30	12-Dec-07	3	10	Concrete	15-Jan-08	HPS-PDPIPE-011508-223	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	31	12-Dec-07	3	10	Concrete	15-Jan-08	HPS-PDPIPE-011508-223	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	32	12-Dec-07	3	10	Concrete	15-Jan-08	HPS-PDPIPE-011508-223	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	33	12-Dec-07	2	10	Concrete	15-Jan-08	HPS-PDPIPE-011508-223	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	34	12-Dec-07	2.5	10	Concrete	15-Jan-08	HPS-PDPIPE-011508-223	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3D	MH344	11-Dec-07	NA	NA	Brick	15-Jan-08	HPS-PDPIPE-011508-223	NA	0	NA	29-Jan-08	Non-LLRW[b]	NA
70-D18-09-3E	01	11-Dec-07	15	8	CMP	15-Jan-08	HPS-PDPIPE-011508-223	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3E	MH469	11-Dec-07	NA	NA	Concrete	15-Jan-08	HPS-PDPIPE-011508-223	NA	0	NA	29-Jan-08	Non-LLRW[b]	NA
70-D18-09-3F	MH343	11-Dec-07	NA	NA	Brick	15-Jan-08	HPS-PDPIPE-011508-223	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3G	01	12-Dec-07	20	8	CMP	17-Jan-08	HPS-PDPIPE-011708-225	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D18-09-3G	MH339	12-Dec-07	NA	NA	Concrete	17-Jan-08	HPS-PDPIPE-011708-225	NA	0	NA	29-Jan-08	Non-LLRW[b]	NA
70-D18-09-3H	MH340	12-Dec-07	NA	NA	Brick	16-Jan-08	HPS-PDPIPE-011608-224	NA	0	NA	10-Sep-08	LLRW	GFLU001043G7
70-D18-09-3I	01	11-Dec-07	3	12	Concrete	17-Jan-08	HPS-PDPIPE-011708-225	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3I	02	11-Dec-07	3	12	Concrete	17-Jan-08	HPS-PDPIPE-011708-225	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3I	03	11-Dec-07	2.5	12	Concrete	17-Jan-08	HPS-PDPIPE-011708-225	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3I	04	11-Dec-07	3	12	Concrete	17-Jan-08	HPS-PDPIPE-011708-225	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3I	05	11-Dec-07	3	12	Concrete	17-Jan-08	HPS-PDPIPE-011708-225	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3I	06	11-Dec-07	3	12	Concrete	17-Jan-08	HPS-PDPIPE-011708-225	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3I	07	11-Dec-07	2	12	Concrete	17-Jan-08	HPS-PDPIPE-011708-225	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3I	08	11-Dec-07	3	12	Concrete	17-Jan-08	HPS-PDPIPE-011708-225	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3I	09	12-Dec-07	2	12	Concrete	17-Jan-08	HPS-PDPIPE-011708-225	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3I	10	12-Dec-07	3	12	Concrete	17-Jan-08	HPS-PDPIPE-011708-225	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3I	11	12-Dec-07	3	12	Concrete	17-Jan-08	HPS-PDPIPE-011708-225	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3I	12	12-Dec-07	3	12	Concrete	17-Jan-08	HPS-PDPIPE-011708-225	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3I	13	12-Dec-07	3	12	Concrete	17-Jan-08	HPS-PDPIPE-011708-225	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3I	14	12-Dec-07	2	12	Concrete	17-Jan-08	HPS-PDPIPE-011708-225	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3I	15	12-Dec-07	3	12	Concrete	17-Jan-08	HPS-PDPIPE-011708-225	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3I	16	12-Dec-07	3	12	Concrete	17-Jan-08	HPS-PDPIPE-011708-225	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3I	17	12-Dec-07	3	12	Concrete	17-Jan-08	HPS-PDPIPE-011708-225	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3I	18	12-Dec-07	3	12	Concrete	17-Jan-08	HPS-PDPIPE-011708-225	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3I	19	12-Dec-07	3	12	Concrete	17-Jan-08	HPS-PDPIPE-011708-225	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3I	20	12-Dec-07	2.5	12	Concrete	17-Jan-08	HPS-PDPIPE-011708-225	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3I	21	12-Dec-07	3	12	Concrete	17-Jan-08	HPS-PDPIPE-011708-225	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3I	22	12-Dec-07	3	12	Concrete	17-Jan-08	HPS-PDPIPE-011708-225	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3I	23	12-Dec-07	4	12	Concrete	17-Jan-08	HPS-PDPIPE-011708-225	NA	0	NA	28-Jan-08	Non-LLRW[b]	NA
70-D18-09-3I	24	12-Dec-07	2.5	12	Concrete	30-Jan-08	HPS-PDPIPE-013008-226	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3I	25	12-Dec-07	2.5	12	Concrete	30-Jan-08	HPS-PDPIPE-013008-226	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3I	26	12-Dec-07	3	12	Concrete	30-Jan-08	HPS-PDPIPE-013008-226	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3I	MH341	12-Dec-07	NA	NA	Brick	16-Jan-08	HPS-PDPIPE-011608-224	NA	0	NA	06-Mar-08	Non-LLRW[b]	NA
70-D18-09-3J	01	12-Dec-07	18	8	CMP	05-Feb-08	HPS-PDPIPE-020508-232	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-09-3J	02	12-Dec-07	12	8	CMP	05-Feb-08	HPS-PDPIPE-020508-232	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-09-3J	MH333	12-Dec-07	NA	NA	Brick	05-Feb-08	HPS-PDPIPE-020508-231	NA	0	NA	13-Feb-08	Non-LLRW[b]	NA
70-D18-09-3J	MH334	12-Dec-07	NA	NA	Concrete	13-Sep-08	HPS-PDPIPE-091308-299	NA	0	NA	04-Dec-08	Non-LLRW[b]	NA
70-D18-09-3L	01	11-Dec-07	16	8	CMP	05-Feb-08	HPS-PDPIPE-020508-232	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-09-3L	02	11-Dec-07	5	8	CMP	05-Feb-08	HPS-PDPIPE-020508-232	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-09-3L	03	11-Dec-07	4	8	CMP	05-Feb-08	HPS-PDPIPE-020508-232	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D18-09-3L	MH467	11-Dec-07	NA	NA	Concrete	05-Feb-08	HPS-PDPIPE-020508-231	NA	0	NA	13-Feb-08	Non-LLRW[b]	NA
70-D18-09-3N	01	10-Dec-07	4	8	CMP	05-Feb-08	HPS-PDPIPE-020508-232	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-09-3N	02	10-Dec-07	5	8	CMP	05-Feb-08	HPS-PDPIPE-020508-232	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-09-3N	03	10-Dec-07	7	8	CMP	05-Feb-08	HPS-PDPIPE-020508-232	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-09-3N	MH466	10-Dec-07	NA	NA	Concrete	06-Feb-08	HPS-PDPIPE-020608-236	NA	0	NA	13-Feb-08	Non-LLRW[b]	NA
70-D18-09-3O	01	10-Dec-07	3	10	Concrete	30-Jan-08	HPS-PDPIPE-013008-226	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3O	02	10-Dec-07	3	10	Concrete	30-Jan-08	HPS-PDPIPE-013008-226	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3O	03	10-Dec-07	3	10	Concrete	30-Jan-08	HPS-PDPIPE-013008-226	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3O	04	10-Dec-07	3	10	Concrete	30-Jan-08	HPS-PDPIPE-013008-226	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3O	05	10-Dec-07	3	10	Concrete	30-Jan-08	HPS-PDPIPE-013008-226	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3O	06	10-Dec-07	3	10	Concrete	30-Jan-08	HPS-PDPIPE-013008-226	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3O	07	10-Dec-07	3	10	Concrete	30-Jan-08	HPS-PDPIPE-013008-226	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3O	08	10-Dec-07	3	10	Concrete	31-Jan-08	HPS-PDPIPE-013108-227	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3O	09	10-Dec-07	3	10	Concrete	31-Jan-08	HPS-PDPIPE-013108-227	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3O	10	10-Dec-07	3	10	Concrete	31-Jan-08	HPS-PDPIPE-013108-227	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3O	11	10-Dec-07	3	10	Concrete	31-Jan-08	HPS-PDPIPE-013108-227	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3O	12	10-Dec-07	3	10	Concrete	31-Jan-08	HPS-PDPIPE-013108-227	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3O	13	10-Dec-07	3	10	Concrete	31-Jan-08	HPS-PDPIPE-013108-227	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3O	14	10-Dec-07	6	10	Concrete	31-Jan-08	HPS-PDPIPE-013108-227	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3O	15	10-Dec-07	3	10	Concrete	31-Jan-08	HPS-PDPIPE-013108-227	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3O	16	10-Dec-07	3	10	Concrete	31-Jan-08	HPS-PDPIPE-013108-227	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3O	17	10-Dec-07	5	10	Concrete	31-Jan-08	HPS-PDPIPE-013108-227	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3O	18	10-Dec-07	2.5	10	Concrete	31-Jan-08	HPS-PDPIPE-013108-227	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3O	19	10-Dec-07	6	10	Concrete	31-Jan-08	HPS-PDPIPE-013108-227	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3O	20	10-Dec-07	3	10	Concrete	31-Jan-08	HPS-PDPIPE-013108-227	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3O	21	10-Dec-07	3	10	Concrete	31-Jan-08	HPS-PDPIPE-013108-227	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3O	22	10-Dec-07	3	10	Concrete	31-Jan-08	HPS-PDPIPE-013108-227	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3O	23	11-Dec-07	3	10	Concrete	31-Jan-08	HPS-PDPIPE-013108-227	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3O	24	11-Dec-07	3	10	Concrete	31-Jan-08	HPS-PDPIPE-013108-227	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	01	27-Nov-07	2.83	12	Concrete	05-Dec-07	HPS-PDPIPE-120507-217	NA	0	NA	29-Jan-08	Non-LLRW[b]	NA
70-D18-09-3P	02	28-Nov-07	4	12	Concrete	05-Dec-07	HPS-PDPIPE-120507-217	NA	0	NA	29-Jan-08	Non-LLRW[b]	NA
70-D18-09-3P	03	28-Nov-07	7	12	Concrete	05-Dec-07	HPS-PDPIPE-120507-217	NA	0	NA	29-Jan-08	Non-LLRW[b]	NA
70-D18-09-3P	04	28-Nov-07	3	12	Concrete	05-Dec-07	HPS-PDPIPE-120507-217	NA	0	NA	29-Jan-08	Non-LLRW[b]	NA
70-D18-09-3P	05	28-Nov-07	3	12	Concrete	05-Dec-07	HPS-PDPIPE-120507-217	NA	0	NA	29-Jan-08	Non-LLRW[b]	NA
70-D18-09-3P	06	29-Nov-07	3	12	Concrete	05-Dec-07	HPS-PDPIPE-120507-217	NA	0	NA	29-Jan-08	Non-LLRW[b]	NA
70-D18-09-3P	07	29-Nov-07	2.5	12	Concrete	05-Dec-07	HPS-PDPIPE-120507-217	NA	0	NA	29-Jan-08	Non-LLRW[b]	NA

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PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D18-09-3P	08	29-Nov-07	3	12	Concrete	05-Dec-07	HPS-PDPIPE-120507-217	NA	0	NA	29-Jan-08	Non-LLRW[b]	NA
70-D18-09-3P	09	07-Dec-07	3	12	Concrete	30-Jan-08	HPS-PDPIPE-013008-227	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	10	07-Dec-07	3	12	Concrete	30-Jan-08	HPS-PDPIPE-013008-227	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	11	07-Dec-07	3	12	Concrete	30-Jan-08	HPS-PDPIPE-013008-227	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	12	07-Dec-07	3	12	Concrete	31-Jan-08	HPS-PDPIPE-013108-228	NA	0	NA	10-Sep-08	LLRW	GFLU001043G7
70-D18-09-3P	13	07-Dec-07	3	12	Concrete	30-Jan-08	HPS-PDPIPE-013008-227	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	14	07-Dec-07	3	12	Concrete	30-Jan-08	HPS-PDPIPE-013008-227	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	15	07-Dec-07	3	12	Concrete	30-Jan-08	HPS-PDPIPE-013008-227	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	16	07-Dec-07	3	12	Concrete	30-Jan-08	HPS-PDPIPE-013008-227	NA	0	NA	05-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	17	10-Dec-07	3	12	Concrete	04-Feb-08	HPS-PDPIPE-020408-229	NA	0	NA	08-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	18	10-Dec-07	3	12	Concrete	04-Feb-08	HPS-PDPIPE-020408-229	NA	0	NA	08-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	19	10-Dec-07	3	12	Concrete	04-Feb-08	HPS-PDPIPE-020408-229	NA	0	NA	08-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	20	10-Dec-07	3	12	Concrete	04-Feb-08	HPS-PDPIPE-020408-229	NA	0	NA	08-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	21	10-Dec-07	3	12	Concrete	04-Feb-08	HPS-PDPIPE-020408-229	NA	0	NA	08-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	22	10-Dec-07	3	12	Concrete	04-Feb-08	HPS-PDPIPE-020408-229	NA	0	NA	08-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	23	10-Dec-07	3	12	Concrete	04-Feb-08	HPS-PDPIPE-020408-229	NA	0	NA	08-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	24	10-Dec-07	2.5	12	Concrete	04-Feb-08	HPS-PDPIPE-020408-229	NA	0	NA	08-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	25	10-Dec-07	2.5	12	Concrete	04-Feb-08	HPS-PDPIPE-020408-229	NA	0	NA	08-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	26	10-Dec-07	3	12	Concrete	04-Feb-08	HPS-PDPIPE-020408-229	NA	0	NA	08-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	27	10-Dec-07	3	12	Concrete	04-Feb-08	HPS-PDPIPE-020408-229	NA	0	NA	08-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	28	10-Dec-07	2.5	12	Concrete	04-Feb-08	HPS-PDPIPE-020408-229	NA	0	NA	08-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	29	10-Dec-07	3	12	Concrete	04-Feb-08	HPS-PDPIPE-020408-229	NA	0	NA	08-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	30	10-Dec-07	3	12	Concrete	04-Feb-08	HPS-PDPIPE-020408-229	NA	0	NA	08-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	31	10-Dec-07	2.5	12	Concrete	04-Feb-08	HPS-PDPIPE-020408-229	NA	0	NA	08-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	32	10-Dec-07	3	12	Concrete	04-Feb-08	HPS-PDPIPE-020408-229	NA	0	NA	08-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	33	10-Dec-07	3	12	Concrete	04-Feb-08	HPS-PDPIPE-020408-229	NA	0	NA	08-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	34	10-Dec-07	3	12	Concrete	04-Feb-08	HPS-PDPIPE-020408-229	NA	0	NA	08-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	35	10-Dec-07	2.5	12	Concrete	04-Feb-08	HPS-PDPIPE-020408-229	NA	0	NA	08-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	36	10-Dec-07	3	12	Concrete	04-Feb-08	HPS-PDPIPE-020408-229	NA	0	NA	08-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	37	10-Dec-07	4	12	Concrete	04-Feb-08	HPS-PDPIPE-020408-229	NA	0	NA	08-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	38	10-Dec-07	3	12	Concrete	04-Feb-08	HPS-PDPIPE-020408-229	NA	0	NA	08-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	39	10-Dec-07	4.5	12	Concrete	04-Feb-08	HPS-PDPIPE-020408-229	NA	0	NA	08-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	40	11-Dec-07	3	12	Concrete	04-Feb-08	HPS-PDPIPE-020408-229	NA	0	NA	08-Feb-08	Non-LLRW[b]	NA
70-D18-09-3P	MH335	11-Dec-07	NA	NA	Brick	12-Mar-08	HPS-PDPIPE-031208-247	NA	0	NA	20-Mar-08	Non-LLRW[b]	NA
70-D18-09-3Q	01	29-Nov-07	2.5	10	Concrete	05-Dec-07	HPS-PDPIPE-120507-217	NA	0	NA	29-Jan-08	Non-LLRW[b]	NA
70-D18-09-3Q	02	29-Nov-07	3	10	Concrete	05-Dec-07	HPS-PDPIPE-120507-217	NA	0	NA	29-Jan-08	Non-LLRW[b]	NA

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PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D18-09-3Q	03	29-Nov-07	2	10	Concrete	05-Dec-07	HPS-PDPIPE-120507-217	NA	0	NA	29-Jan-08	Non-LLRW[b]	NA
70-D18-09-3Q	MH332	29-Nov-07	NA	NA	Brick	05-Dec-07	HPS-PDPIPE-120507-217	NA	0	NA	29-Jan-08	Non-LLRW[b]	NA
70-D18-09-3R	01	29-Nov-07	6	10	Concrete/VCP	05-Dec-07	HPS-PDPIPE-120507-217	NA	0	NA	29-Jan-08	Non-LLRW[b]	NA
70-D18-09-3R	MH330	29-Nov-07	NA	NA	Brick	05-Dec-07	HPS-PDPIPE-120507-217	NA	0	NA	29-Jan-08	Non-LLRW[b]	NA
70-D18-09-3S	01	29-Nov-07	3	10	Concrete	05-Dec-07	HPS-PDPIPE-120507-217	NA	0	NA	29-Jan-08	Non-LLRW[b]	NA
70-D18-09-3S	02	29-Nov-07	6	10	Concrete	05-Dec-07	HPS-PDPIPE-120507-217	NA	0	NA	29-Jan-08	Non-LLRW[b]	NA
70-D18-09-3S	03	29-Nov-07	3	10	Concrete	05-Dec-07	HPS-PDPIPE-120507-217	NA	0	NA	29-Jan-08	Non-LLRW[b]	NA
70-D18-09-3S	04	29-Nov-07	3	12	Concrete	05-Dec-07	HPS-PDPIPE-120507-217	NA	0	NA	29-Jan-08	Non-LLRW[b]	NA
70-D18-09-3S	05	29-Nov-07	3	12	Concrete	05-Dec-07	HPS-PDPIPE-120507-217	NA	0	NA	29-Jan-08	Non-LLRW[b]	NA
70-D18-09-3S	06	29-Nov-07	3	12	Concrete	05-Dec-07	HPS-PDPIPE-120507-217	NA	0	NA	29-Jan-08	Non-LLRW[b]	NA
70-D18-09-3S	07	29-Nov-07	3	12	Concrete	07-Dec-07	HPS-PDPIPE-120707-218	NA	0	NA	14-Mar-08	Non-LLRW[b]	NA
70-D18-09-3S	08	29-Nov-07	3	12	Concrete	07-Dec-07	HPS-PDPIPE-120707-218	NA	0	NA	14-Mar-08	Non-LLRW[b]	NA
70-D18-09-3S	09	29-Nov-07	3	12	Concrete	07-Dec-07	HPS-PDPIPE-120707-218	NA	0	NA	14-Mar-08	Non-LLRW[b]	NA
70-D18-09-3S	10	29-Nov-07	3	12	Concrete	07-Dec-07	HPS-PDPIPE-120707-218	NA	0	NA	14-Mar-08	Non-LLRW[b]	NA
70-D18-09-3S	11	29-Nov-07	3	12	Concrete	07-Dec-07	HPS-PDPIPE-120707-218	NA	0	NA	14-Mar-08	Non-LLRW[b]	NA
70-D18-09-3S	12	29-Nov-07	3	10	Concrete	07-Dec-07	HPS-PDPIPE-120707-218	NA	0	NA	14-Mar-08	Non-LLRW[b]	NA
70-D18-09-3S	13	29-Nov-07	3	10	Concrete	07-Dec-07	HPS-PDPIPE-120707-218	NA	0	NA	14-Mar-08	Non-LLRW[b]	NA
70-D18-09-3S	14	29-Nov-07	3	10	Concrete	07-Dec-07	HPS-PDPIPE-120707-218	NA	0	NA	14-Mar-08	Non-LLRW[b]	NA
70-D18-09-3S	15	29-Nov-07	3	10	Concrete	07-Dec-07	HPS-PDPIPE-120707-218	NA	0	NA	14-Mar-08	Non-LLRW[b]	NA
70-D18-09-3S	16	29-Nov-07	3	10	Concrete	07-Dec-07	HPS-PDPIPE-120707-218	NA	0	NA	14-Mar-08	Non-LLRW[b]	NA
70-D18-09-3S	17	29-Nov-07	3	10	Concrete	07-Dec-07	HPS-PDPIPE-120707-218	NA	0	NA	03-Jan-08	Non-LLRW[b]	NA
70-D18-09-3S	18	30-Nov-07	3	10	Concrete	07-Dec-07	HPS-PDPIPE-120707-218	NA	0	NA	03-Jan-08	Non-LLRW[b]	NA
70-D18-09-3S	19	30-Nov-07	3	10	Concrete	07-Dec-07	HPS-PDPIPE-120707-218	NA	0	NA	03-Jan-08	Non-LLRW[b]	NA
70-D18-09-3S	20	30-Nov-07	3	10	Concrete	07-Dec-07	HPS-PDPIPE-120707-218	NA	0	NA	03-Jan-08	Non-LLRW[b]	NA
70-D18-09-3S	21	30-Nov-07	3	10	Concrete	07-Dec-07	HPS-PDPIPE-120707-218	NA	0	NA	03-Jan-08	Non-LLRW[b]	NA
70-D18-09-3S	22	30-Nov-07	3	10	Concrete	07-Dec-07	HPS-PDPIPE-120707-218	NA	0	NA	03-Jan-08	Non-LLRW[b]	NA
70-D18-09-3S	23	30-Nov-07	3	10	Concrete	07-Dec-07	HPS-PDPIPE-120707-218	NA	0	NA	03-Jan-08	Non-LLRW[b]	NA
70-D18-09-3S	24	30-Nov-07	3	10	Concrete	07-Dec-07	HPS-PDPIPE-120707-218	NA	0	NA	03-Jan-08	Non-LLRW[b]	NA
70-D18-09-3S	25	30-Nov-07	3	10	Concrete	07-Dec-07	HPS-PDPIPE-120707-218	NA	0	NA	03-Jan-08	Non-LLRW[b]	NA
70-D18-09-3S	26	30-Nov-07	3	10	Concrete	07-Dec-07	HPS-PDPIPE-120707-218	NA	0	NA	03-Jan-08	Non-LLRW[b]	NA
70-D18-09-3S	27	30-Nov-07	3	10	Concrete	10-Dec-07	HPS-PDPIPE-121007-219	NA	0	NA	06-Mar-08	Non-LLRW[b]	NA
70-D18-09-3S	28	30-Nov-07	3	10	Concrete	10-Dec-07	HPS-PDPIPE-121007-219	NA	0	NA	06-Mar-08	Non-LLRW[b]	NA
70-D18-09-3S	29	30-Nov-07	3	10	Concrete	10-Dec-07	HPS-PDPIPE-121007-219	NA	0	NA	06-Mar-08	Non-LLRW[b]	NA
70-D18-09-3S	30	30-Nov-07	3	10	Concrete	10-Dec-07	HPS-PDPIPE-121007-219	NA	0	NA	06-Mar-08	Non-LLRW[b]	NA
70-D18-09-3S	31	30-Nov-07	3	10	Concrete	10-Dec-07	HPS-PDPIPE-121007-219	NA	0	NA	06-Mar-08	Non-LLRW[b]	NA
70-D18-09-3S	32	30-Nov-07	3	10	Concrete	10-Dec-07	HPS-PDPIPE-121007-219	NA	0	NA	06-Mar-08	Non-LLRW[b]	NA

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D18-09-3S	33	30-Nov-07	3	10	Concrete	10-Dec-07	HPS-PDPIPE-121007-219	NA	0	NA	06-Mar-08	Non-LLRW[b]	NA
70-D18-09-3S	34	30-Nov-07	3	10	Concrete	10-Dec-07	HPS-PDPIPE-121007-219	NA	0	NA	06-Mar-08	Non-LLRW[b]	NA
70-D18-09-3S	35	30-Nov-07	3	10	Concrete	10-Dec-07	HPS-PDPIPE-121007-219	NA	0	NA	06-Mar-08	Non-LLRW[b]	NA
70-D18-09-3S	36	30-Nov-07	3	10	Concrete	10-Dec-07	HPS-PDPIPE-121007-219	NA	0	NA	06-Mar-08	Non-LLRW[b]	NA
70-D18-09-3S	MH331	29-Nov-07	NA	NA	Brick	10-Dec-07	HPS-PDPIPE-121007-219	NA	0	NA	06-Mar-08	Non-LLRW[b]	NA
70-D18-09-3T	MH328	30-Nov-07	NA	NA	Brick	10-Dec-07	HPS-PDPIPE-121007-219	NA	0	NA	06-Mar-08	Non-LLRW[b]	NA
70-D18-09-3U	01	03-Dec-07	3	10	Concrete	10-Dec-07	HPS-PDPIPE-121007-219	NA	0	NA	06-Mar-08	Non-LLRW[b]	NA
70-D18-09-3U	02	03-Dec-07	4	10	Concrete	10-Dec-07	HPS-PDPIPE-121007-219	NA	0	NA	06-Mar-08	Non-LLRW[b]	NA
70-D18-09-3U	03	03-Dec-07	5	10	Concrete	10-Dec-07	HPS-PDPIPE-121007-219	NA	0	NA	06-Mar-08	Non-LLRW[b]	NA
70-D18-09-3U	04	03-Dec-07	3	10	Concrete	10-Dec-07	HPS-PDPIPE-121007-219	NA	0	NA	06-Mar-08	Non-LLRW[b]	NA
70-D18-09-3U	05	03-Dec-07	6	10	Concrete	10-Dec-07	HPS-PDPIPE-121007-219	NA	0	NA	06-Mar-08	Non-LLRW[b]	NA
70-D18-09-3U	06	03-Dec-07	3	10	Concrete	10-Dec-07	HPS-PDPIPE-121007-219	NA	0	NA	06-Mar-08	Non-LLRW[b]	NA
70-D18-09-3U	07	03-Dec-07	3	10	VCP	10-Dec-07	HPS-PDPIPE-121007-219	NA	0	NA	06-Mar-08	Non-LLRW[b]	NA
70-D18-09-3U	MH329	30-Nov-07	NA	NA	Brick	10-Dec-07	HPS-PDPIPE-121007-219	NA	0	NA	06-Mar-08	Non-LLRW[b]	NA
70-D18-09-3V	MH336	10-Dec-07	NA	NA	Brick	06-Feb-08	HPS-PDPIPE-020608-235	NA	0	NA	13-Feb-08	Non-LLRW[b]	NA
70-D18-09-3W	01	08-May-08	5	4	CIP	14-May-08	HPS-PDPIPE-051408-257	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-09-8A	01	05-Dec-07	3	8	VCP	05-Feb-08	HPS-PDPIPE-020508-234	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-09-8B	01	30-Nov-07	3	8	VCP	11-Dec-07	HPS-PDPIPE-121107-220	NA	0	NA	03-Jan-08	Non-LLRW[b]	NA
70-D18-09-8B	02	30-Nov-07	2	8	VCP	11-Dec-07	HPS-PDPIPE-121107-220	NA	0	NA	03-Jan-08	Non-LLRW[b]	NA
70-D18-09-8B	03	30-Nov-07	3	8	VCP	11-Dec-07	HPS-PDPIPE-121107-220	NA	0	NA	03-Jan-08	Non-LLRW[b]	NA
70-D18-09-8B	04	30-Nov-07	3	8	VCP	11-Dec-07	HPS-PDPIPE-121107-220	NA	0	NA	03-Jan-08	Non-LLRW[b]	NA
70-D18-09-8B	05	05-Dec-07	3	8	VCP	05-Feb-08	HPS-PDPIPE-020508-234	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-09-8B	06	05-Dec-07	3	8	VCP	05-Feb-08	HPS-PDPIPE-020508-234	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-09-8B	07	05-Dec-07	3	8	VCP	05-Feb-08	HPS-PDPIPE-020508-234	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-09-8B	08	05-Dec-07	3	8	VCP	05-Feb-08	HPS-PDPIPE-020508-234	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-09-8B	09	05-Dec-07	2.5	8	VCP	05-Feb-08	HPS-PDPIPE-020508-234	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-09-8B	10	06-Dec-07	3	8	VCP	05-Feb-08	HPS-PDPIPE-020508-234	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-09-8B	11	06-Dec-07	3	8	VCP	05-Feb-08	HPS-PDPIPE-020508-234	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-09-8C	01	03-Dec-07	2	8	VCP	11-Dec-07	HPS-PDPIPE-121107-220	NA	0	NA	03-Jan-08	Non-LLRW[b]	NA
70-D18-09-8D	MH464	29-Nov-07	NA	NA	Brick	11-Dec-07	HPS-PDPIPE-121107-220	NA	0	NA	07-Jan-08	Non-LLRW[b]	NA
70-D18-09-8E	01	28-Nov-07	7	4	CIP	11-Dec-07	HPS-PDPIPE-121107-220	NA	0	NA	03-Jan-08	Non-LLRW[b]	NA
70-D18-09-8E	02	28-Nov-07	4.5	4	CIP	11-Dec-07	HPS-PDPIPE-121107-220	NA	0	NA	03-Jan-08	Non-LLRW[b]	NA
70-D18-09-8F	01	30-Nov-07	3	4	CIP	11-Dec-07	HPS-PDPIPE-121107-220	NA	0	NA	03-Jan-08	Non-LLRW[b]	NA
70-D18-09-8F	02	30-Nov-07	2	4	CIP	11-Dec-07	HPS-PDPIPE-121107-220	NA	0	NA	03-Jan-08	Non-LLRW[b]	NA
70-D18-09-8F	03	30-Nov-07	2	4	CIP	12-Dec-07	HPS-PDPIPE-121207-221	NA	0	NA	14-Mar-08	Non-LLRW[b]	NA
70-D18-09-8F	04	30-Nov-07	2	4	CIP	12-Dec-07	HPS-PDPIPE-121207-221	NA	0	NA	14-Mar-08	Non-LLRW[b]	NA

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PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D18-09-8F	05	30-Nov-07	2.5	4	CIP	12-Dec-07	HPS-PDPIPE-121207-221	NA	0	NA	14-Mar-08	Non-LLRW[b]	NA
70-D18-09-8F	06	30-Nov-07	4	4	CIP	12-Dec-07	HPS-PDPIPE-121207-221	NA	0	NA	14-Mar-08	Non-LLRW[b]	NA
70-D18-09-8G	01	30-Nov-07	3	12	Concrete	12-Dec-07	HPS-PDPIPE-121207-221	NA	0	NA	14-Mar-08	Non-LLRW[b]	NA
70-D18-09-8G	02	30-Nov-07	2.5	12	Concrete	12-Dec-07	HPS-PDPIPE-121207-221	NA	0	NA	14-Mar-08	Non-LLRW[b]	NA
70-D18-09-8G	03	30-Nov-07	3	12	Concrete	12-Dec-07	HPS-PDPIPE-121207-221	NA	0	NA	14-Mar-08	Non-LLRW[b]	NA
70-D18-09-8G	04	03-Dec-07	3	12	Concrete	12-Dec-07	HPS-PDPIPE-121207-221	NA	0	NA	14-Mar-08	Non-LLRW[b]	NA
70-D18-09-8G	MH465	30-Nov-07	NA	NA	Brick	12-Dec-07	HPS-PDPIPE-121207-221	NA	0	NA	14-Mar-08	Non-LLRW[b]	NA
70-D18-09-8H	01	10-Dec-07	12	2	PVC	12-Mar-08	HPS-PDPIPE-031208-248	NA	0	NA	20-Mar-08	Non-LLRW[b]	NA
70-D18-33-1F	01	16-May-08	4	10	VCP	20-May-08	HPS-PDPIPE-052008-268	NA	0	NA	03-Jun-08	Non-LLRW[b]	NA
70-D18-33-1G	01	16-May-08	3	24	Concrete	21-May-08	HPS-PDPIPE-052108-269	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
70-D18-33-1G	02	16-May-08	3	24	Concrete	21-May-08	HPS-PDPIPE-052108-269	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
70-D18-33-1G	03	16-May-08	3	24	Concrete	21-May-08	HPS-PDPIPE-052108-269	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
70-D18-33-1G	04	16-May-08	3	24	Concrete	21-May-08	HPS-PDPIPE-052108-269	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
70-D18-33-1G	05	16-May-08	3	24	Concrete	21-May-08	HPS-PDPIPE-052108-269	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
70-D18-33-1G	06	16-May-08	3	24	Concrete	21-May-08	HPS-PDPIPE-052108-269	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
70-D18-33-1G	07	16-May-08	3	24	Concrete	21-May-08	HPS-PDPIPE-052108-269	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
70-D18-33-1G	08	16-May-08	3	24	Concrete	21-May-08	HPS-PDPIPE-052108-269	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
70-D18-33-1G	09	16-May-08	3	24	Concrete	21-May-08	HPS-PDPIPE-052108-269	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
70-D18-33-1G	10	16-May-08	3	24	Concrete	21-May-08	HPS-PDPIPE-052108-269	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
70-D18-33-1G	11	16-May-08	3	24	Concrete	21-May-08	HPS-PDPIPE-052108-269	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
70-D18-33-1G	12	16-May-08	3	24	Concrete	21-May-08	HPS-PDPIPE-052108-269	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
70-D18-33-1G	13	16-May-08	3	24	Concrete	21-May-08	HPS-PDPIPE-052108-269	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
70-D18-33-1G	14	16-May-08	3	24	Concrete	21-May-08	HPS-PDPIPE-052108-269	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
70-D18-33-1G	16	17-May-08	3	24	Concrete	22-May-08	HPS-PDPIPE-052208-272	NA	0	NA	03-Jun-08	Non-LLRW[b]	NA
70-D18-33-1G	18	17-May-08	3	24	Concrete	22-May-08	HPS-PDPIPE-052208-272	NA	0	NA	03-Jun-08	Non-LLRW[b]	NA
70-D18-33-1G	19	17-May-08	3	24	Concrete	22-May-08	HPS-PDPIPE-052208-272	NA	0	NA	03-Jun-08	Non-LLRW[b]	NA
70-D18-33-1G	22	17-May-08	3	24	Concrete	22-May-08	HPS-PDPIPE-052208-272	NA	0	NA	03-Jun-08	Non-LLRW[b]	NA
70-D18-33-1G	23	17-May-08	3	24	Concrete	22-May-08	HPS-PDPIPE-052208-272	NA	0	NA	03-Jun-08	Non-LLRW[b]	NA
70-D18-33-1G	24	17-May-08	3	24	Concrete	22-May-08	HPS-PDPIPE-052208-272	NA	0	NA	03-Jun-08	Non-LLRW[b]	NA
70-D18-33-1G	25	17-May-08	3	24	Concrete	22-May-08	HPS-PDPIPE-052208-272	NA	0	NA	03-Jun-08	Non-LLRW[b]	NA
70-D18-33-1G	26	17-May-08	3	24	Concrete	22-May-08	HPS-PDPIPE-052208-272	NA	0	NA	03-Jun-08	Non-LLRW[b]	NA
70-D18-33-1G	27	17-May-08	3	24	Concrete	22-May-08	HPS-PDPIPE-052208-272	NA	0	NA	03-Jun-08	Non-LLRW[b]	NA
70-D18-33-1G	28	17-May-08	3	24	Concrete	22-May-08	HPS-PDPIPE-052208-272	NA	0	NA	03-Jun-08	Non-LLRW[b]	NA
70-D18-33-1G	29	17-May-08	3	24	Concrete	22-May-08	HPS-PDPIPE-052208-272	NA	0	NA	03-Jun-08	Non-LLRW[b]	NA
70-D18-33-1M	01	09-May-08	3	18	Concrete	13-May-08	HPS-PDPIPE-051308-256	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-33-1M	02	09-May-08	3	18	Concrete	13-May-08	HPS-PDPIPE-051308-256	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA

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PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D18-33-1M	03	10-May-08	3	18	Concrete	13-May-08	HPS-PDPIPE-051308-256	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-33-1M	04	10-May-08	3	18	Concrete	13-May-08	HPS-PDPIPE-051308-256	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-33-1M	05	10-May-08	3	18	Concrete	13-May-08	HPS-PDPIPE-051308-256	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-33-1M	06	10-May-08	3	18	Concrete	13-May-08	HPS-PDPIPE-051308-256	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-33-1M	07	10-May-08	3	18	Concrete	13-May-08	HPS-PDPIPE-051308-256	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-33-1M	08	10-May-08	3	18	Concrete	02-Jun-08	HPS-PDPIPE-060208-273	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
70-D18-33-1M	09	10-May-08	3	18	Concrete	13-May-08	HPS-PDPIPE-051308-256	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-33-1M	10	10-May-08	3	18	Concrete	13-May-08	HPS-PDPIPE-051308-256	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-33-1M	11	10-May-08	3	18	Concrete	13-May-08	HPS-PDPIPE-051308-256	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-33-1M	12	10-May-08	3	18	Concrete	13-May-08	HPS-PDPIPE-051308-256	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-33-1M	13	10-May-08	3	18	Concrete	13-May-08	HPS-PDPIPE-051308-256	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-33-1M	14	10-May-08	2.5	18	Concrete	13-May-08	HPS-PDPIPE-051308-256	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-33-1M	15	10-May-08	3	18	Concrete	13-May-08	HPS-PDPIPE-051308-256	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-33-1M	16	10-May-08	3	18	Concrete	13-May-08	HPS-PDPIPE-051308-256	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-33-1M	17	10-May-08	3	18	Concrete	13-May-08	HPS-PDPIPE-051308-256	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-33-1M	18	10-May-08	3	18	Concrete	13-May-08	HPS-PDPIPE-051308-256	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-33-1M	19	10-May-08	3	18	Concrete	13-May-08	HPS-PDPIPE-051308-256	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-33-1M	20	10-May-08	3	18	Concrete	13-May-08	HPS-PDPIPE-051308-256	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-33-1M	21	10-May-08	3	18	Concrete	13-May-08	HPS-PDPIPE-051308-256	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-33-1M	22	10-May-08	3	18	Concrete	13-May-08	HPS-PDPIPE-051308-256	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-33-1M	23	10-May-08	2.5	18	Concrete	14-May-08	HPS-PDPIPE-051408-260	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-1M	24	10-May-08	3	18	Concrete	14-May-08	HPS-PDPIPE-051408-260	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-1M	25	10-May-08	3	18	Concrete	14-May-08	HPS-PDPIPE-051408-260	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-1M	26	10-May-08	3	18	Concrete	14-May-08	HPS-PDPIPE-051408-260	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-1M	27	17-Jul-08	3	18	Concrete	05-Aug-08	HPS-PDPIPE-080508-283	NA	0	NA	30-Oct-08	Non-LLRW[b]	NA
70-D18-33-1M	28	17-Jul-08	3	18	Concrete	05-Aug-08	HPS-PDPIPE-080508-283	NA	0	NA	30-Oct-08	Non-LLRW[b]	NA
70-D18-33-1M	29	17-Jul-08	3	18	Concrete	05-Aug-08	HPS-PDPIPE-080508-283	NA	0	NA	30-Oct-08	Non-LLRW[b]	NA
70-D18-33-1M	30	17-Jul-08	3	18	Concrete	05-Aug-08	HPS-PDPIPE-080508-283	NA	0	NA	30-Oct-08	Non-LLRW[b]	NA
70-D18-33-1M	31	17-Jul-08	3	18	Concrete	05-Aug-08	HPS-PDPIPE-080508-283	NA	0	NA	30-Oct-08	Non-LLRW[b]	NA
70-D18-33-1M	MH350	09-May-08	NA	NA	Concrete	14-May-08	HPS-PDPIPE-051408-260	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2L	MH358	16-May-08	NA	NA	Concrete	22-May-08	HPS-PDPIPE-052208-272	NA	0	NA	23-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	01	12-May-08	2.4	18	Concrete	16-May-08	HPS-PDPIPE-051608-261	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-33-2N	02	12-May-08	2.4	18	Concrete	16-May-08	HPS-PDPIPE-051608-261	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-33-2N	03	12-May-08	2.4	18	Concrete	16-May-08	HPS-PDPIPE-051608-261	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-33-2N	04	12-May-08	3	18	Concrete	16-May-08	HPS-PDPIPE-051608-261	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-33-2N	05	12-May-08	3	18	Concrete	16-May-08	HPS-PDPIPE-051608-261	NA	0	NA	22-May-08	Non-LLRW[b]	NA

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PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D18-33-2N	06	12-May-08	3	18	Concrete	16-May-08	HPS-PDPIPE-051608-261	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-33-2N	07	13-May-08	6	18	Concrete	16-May-08	HPS-PDPIPE-051608-261	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-33-2N	08	13-May-08	3	18	Concrete	16-May-08	HPS-PDPIPE-051608-261	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-33-2N	09	13-May-08	5	18	Concrete	16-May-08	HPS-PDPIPE-051608-261	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-33-2N	10	13-May-08	3	21	Concrete	16-May-08	HPS-PDPIPE-051608-261	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-33-2N	11	13-May-08	3	21	Concrete	16-May-08	HPS-PDPIPE-051608-261	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-33-2N	12	13-May-08	3	21	Concrete	16-May-08	HPS-PDPIPE-051608-261	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-33-2N	13	13-May-08	3	21	Concrete	16-May-08	HPS-PDPIPE-051608-261	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-33-2N	14	13-May-08	3	21	Concrete	16-May-08	HPS-PDPIPE-051608-261	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-33-2N	15	13-May-08	3	21	Concrete	16-May-08	HPS-PDPIPE-051608-261	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-33-2N	16	13-May-08	3	21	Concrete	16-May-08	HPS-PDPIPE-051608-261	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-33-2N	17	13-May-08	3	21	Concrete	16-May-08	HPS-PDPIPE-051608-261	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-33-2N	18	13-May-08	3	21	Concrete	16-May-08	HPS-PDPIPE-051608-261	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-33-2N	19	13-May-08	3	21	Concrete	16-May-08	HPS-PDPIPE-051608-261	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-33-2N	20	13-May-08	3	21	Concrete	16-May-08	HPS-PDPIPE-051608-261	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-33-2N	21	13-May-08	3	21	Concrete	16-May-08	HPS-PDPIPE-051608-261	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-33-2N	22	13-May-08	3	21	Concrete	16-May-08	HPS-PDPIPE-051608-261	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-33-2N	23	13-May-08	3	21	Concrete	16-May-08	HPS-PDPIPE-051608-261	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-33-2N	24	13-May-08	3	21	Concrete	16-May-08	HPS-PDPIPE-051608-261	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-33-2N	25	13-May-08	3	21	Concrete	16-May-08	HPS-PDPIPE-051608-261	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-33-2N	26	14-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-263	NA	0	NA	04-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	27	14-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-263	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	28	14-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-263	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	29	14-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-263	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	30	14-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-263	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	31	14-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-263	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	32	14-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-263	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	33	14-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-263	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	34	14-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-263	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	35	14-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-263	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	36	14-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-263	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	37	14-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-263	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	38	14-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-263	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	39	14-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-263	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	40	14-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-263	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	41	14-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-263	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D18-33-2N	42	14-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-263	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	43	14-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-263	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	44	15-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-263	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	45	15-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-263	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	47	15-May-08	3	21	Concrete	02-Jun-08	HPS-PDPIPE-060208-273	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
70-D18-33-2N	48	15-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-263	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	49	15-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-263	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	50	15-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-263	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	51	15-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-263	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	52	15-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-263	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	54	15-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-262	NA	0	NA	04-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	55	15-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-262	NA	0	NA	04-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	56	15-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-262	NA	0	NA	04-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	57	15-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-262	NA	0	NA	04-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	58	15-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-262	NA	0	NA	04-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	59	15-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-262	NA	0	NA	04-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	60	15-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-262	NA	0	NA	10-Sep-08	LLRW	GFLU001043G7
70-D18-33-2N	61	15-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-262	NA	0	NA	04-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	62	15-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-262	NA	0	NA	04-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	63	15-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-262	NA	0	NA	04-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	64	15-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-262	NA	0	NA	04-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	65	15-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-262	NA	0	NA	04-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	66	15-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-262	NA	0	NA	14-Oct-08	LLRW	GFLU001016G6
70-D18-33-2N	67	15-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-262	NA	0	NA	10-Sep-08	LLRW	GFLU001043G7
70-D18-33-2N	68	15-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-262	NA	0	NA	04-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	69	15-May-08	3	21	Concrete	17-May-08	HPS-PDPIPE-051708-262	NA	0	NA	04-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	70	16-May-08	3	21	Concrete	22-May-08	HPS-PDPIPE-052208-272	NA	0	NA	03-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	71	16-May-08	3	21	Concrete	22-May-08	HPS-PDPIPE-052208-272	NA	0	NA	03-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	72	16-May-08	3	21	Concrete	22-May-08	HPS-PDPIPE-052208-272	NA	0	NA	03-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	75	02-Dec-08	3	21	Concrete	20-Jan-09	HPS-PDPIPE-012009-317	NA	0	NA	03-Feb-09	Non-LLRW[b]	NA
70-D18-33-2N	MH353	12-May-08	NA	NA	Brick	19-May-08	HPS-PDPIPE-051908-264	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2N	MH356	15-May-08	NA	NA	Concrete	17-May-08	HPS-PDPIPE-051708-262	NA	0	NA	23-Jun-08	Non-LLRW[b]	NA
70-D18-33-2O	01	14-May-08	3	6	VCP	19-May-08	HPS-PDPIPE-051908-265	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2Q	01	14-May-08	3.5	10	VCP	19-May-08	HPS-PDPIPE-051908-265	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2Q	02	14-May-08	2	10	VCP	19-May-08	HPS-PDPIPE-051908-265	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2R	MH355	13-May-08	NA	NA	Brick	19-May-08	HPS-PDPIPE-051908-264	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D18-33-2X	01	07-Feb-08	3	15	Concrete	26-Feb-08	HPS-PDPIPE-022608-238	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-2X	02	07-Feb-08	3	15	Concrete	26-Feb-08	HPS-PDPIPE-022608-238	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-2X	03	07-Feb-08	3	15	Concrete	26-Feb-08	HPS-PDPIPE-022608-238	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-2X	04	07-Feb-08	3	15	Concrete	26-Feb-08	HPS-PDPIPE-022608-238	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-2X	05	08-Feb-08	3	15	Concrete	26-Feb-08	HPS-PDPIPE-022608-238	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-2X	06	08-Feb-08	3	15	Concrete	26-Feb-08	HPS-PDPIPE-022608-238	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-2X	07	08-Feb-08	3	15	Concrete	26-Feb-08	HPS-PDPIPE-022608-238	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-2X	08	08-Feb-08	3	15	Concrete	26-Feb-08	HPS-PDPIPE-022608-238	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-2X	09	08-Feb-08	3	15	Concrete	26-Feb-08	HPS-PDPIPE-022608-238	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-2X	10	08-Feb-08	3	15	Concrete	26-Feb-08	HPS-PDPIPE-022608-238	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-2X	11	08-Feb-08	3	15	Concrete	26-Feb-08	HPS-PDPIPE-022608-238	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-2X	12	08-Feb-08	3	15	Concrete	26-Feb-08	HPS-PDPIPE-022608-238	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-2X	13	08-Feb-08	3	15	Concrete	26-Feb-08	HPS-PDPIPE-022608-238	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-2X	14	08-Feb-08	3	15	Concrete	26-Feb-08	HPS-PDPIPE-022608-238	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-2X	15	08-Feb-08	3	15	Concrete	26-Feb-08	HPS-PDPIPE-022608-238	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-2X	16	08-Feb-08	3	15	Concrete	26-Feb-08	HPS-PDPIPE-022608-238	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-2X	17	08-Feb-08	3	15	Concrete	26-Feb-08	HPS-PDPIPE-022608-238	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-2X	18	08-Feb-08	3	15	Concrete	26-Feb-08	HPS-PDPIPE-022608-238	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-2X	19	08-Feb-08	3	15	Concrete	26-Feb-08	HPS-PDPIPE-022608-238	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-2X	20	08-Feb-08	3	15	Concrete	26-Feb-08	HPS-PDPIPE-022608-238	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-2X	21	08-Feb-08	3	15	Concrete	26-Feb-08	HPS-PDPIPE-022608-238	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-2X	22	08-Feb-08	3	15	Concrete	26-Feb-08	HPS-PDPIPE-022608-238	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-2X	23	08-Feb-08	3	15	Concrete	26-Feb-08	HPS-PDPIPE-022608-238	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-2X	24	08-Feb-08	3	15	Concrete	26-Feb-08	HPS-PDPIPE-022608-238	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-2X	25	08-Feb-08	3	15	Concrete	26-Feb-08	HPS-PDPIPE-022608-238	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-2X	26	08-Feb-08	3	15	Concrete	27-Feb-08	HPS-PDPIPE-022708-240	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-2X	27	08-Feb-08	3	15	Concrete	27-Feb-08	HPS-PDPIPE-022708-240	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-2X	28	09-May-08	3	16	Concrete	14-May-08	HPS-PDPIPE-051408-260	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2X	29	09-May-08	3	16	Concrete	14-May-08	HPS-PDPIPE-051408-260	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2X	30	09-May-08	3	16	Concrete	14-May-08	HPS-PDPIPE-051408-260	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2X	31	09-May-08	3	16	Concrete	14-May-08	HPS-PDPIPE-051408-260	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2X	32	09-May-08	3	16	Concrete	14-May-08	HPS-PDPIPE-051408-260	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2X	33	09-May-08	3	16	Concrete	14-May-08	HPS-PDPIPE-051408-260	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2X	34	09-May-08	3	16	Concrete	14-May-08	HPS-PDPIPE-051408-260	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2X	35	09-May-08	3	16	Concrete	14-May-08	HPS-PDPIPE-051408-260	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2X	36	09-May-08	3	16	Concrete	14-May-08	HPS-PDPIPE-051408-260	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D18-33-2X	37	09-May-08	3	16	Concrete	14-May-08	HPS-PDPIPE-051408-260	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2X	38	09-May-08	3	16	Concrete	14-May-08	HPS-PDPIPE-051408-260	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2X	39	09-May-08	3	16	Concrete	14-May-08	HPS-PDPIPE-051408-260	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2X	40	09-May-08	3	16	Concrete	14-May-08	HPS-PDPIPE-051408-260	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2X	41	09-May-08	3	16	Concrete	14-May-08	HPS-PDPIPE-051408-260	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2X	42	09-May-08	3	16	Concrete	14-May-08	HPS-PDPIPE-051408-260	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2X	43	09-May-08	3	16	Concrete	14-May-08	HPS-PDPIPE-051408-260	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2X	44	09-May-08	3	16	Concrete	14-May-08	HPS-PDPIPE-051408-260	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-2X	45	16-Jul-08	3	15	Concrete	05-Aug-08	HPS-PDPIPE-080508-283	NA	0	NA	30-Oct-08	Non-LLRW[b]	NA
70-D18-33-2X	46	16-Jul-08	3	15	Concrete	05-Aug-08	HPS-PDPIPE-080508-283	NA	0	NA	30-Oct-08	Non-LLRW[b]	NA
70-D18-33-2X	47	16-Jul-08	3	15	Concrete	05-Aug-08	HPS-PDPIPE-080508-283	NA	0	NA	30-Oct-08	Non-LLRW[b]	NA
70-D18-33-2X	48	16-Jul-08	3	15	Concrete	05-Aug-08	HPS-PDPIPE-080508-283	NA	0	NA	30-Oct-08	Non-LLRW[b]	NA
70-D18-33-2X	49	16-Jul-08	3	15	Concrete	05-Aug-08	HPS-PDPIPE-080508-283	NA	0	NA	30-Oct-08	Non-LLRW[b]	NA
70-D18-33-2X	50	16-Jul-08	3	15	Concrete	05-Aug-08	HPS-PDPIPE-080508-283	NA	0	NA	30-Oct-08	Non-LLRW[b]	NA
70-D18-33-2Z	MH349	09-May-08	NA	NA	Concrete	14-May-08	HPS-PDPIPE-051408-260	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-3U	01	18-Jul-08	5.5	10	Concrete	05-Aug-08	HPS-PDPIPE-080508-283	NA	0	NA	30-Oct-08	Non-LLRW[b]	NA
70-D18-33-3U	02	18-Jul-08	2	10	Concrete	05-Aug-08	HPS-PDPIPE-080508-283	NA	0	NA	30-Oct-08	Non-LLRW[b]	NA
70-D18-33-3U	03	18-Jul-08	5.5	10	Concrete	05-Aug-08	HPS-PDPIPE-080508-283	NA	0	NA	30-Oct-08	Non-LLRW[b]	NA
70-D18-33-3U	04	18-Jul-08	6	10	Concrete	05-Aug-08	HPS-PDPIPE-080508-283	NA	0	NA	30-Oct-08	Non-LLRW[b]	NA
70-D18-33-3U	05	18-Jul-08	3.25	10	Concrete	05-Aug-08	HPS-PDPIPE-080508-283	NA	0	NA	30-Oct-08	Non-LLRW[b]	NA
70-D18-33-4B	MH322	21-Jan-08	NA	NA	Firebrick	NA	NA	24-Jan-08	1	70-PDMH322-043-01	29-Feb-08	LLRW[d]	GFLU001279G4
70-D18-33-4C	MH320	16-Jan-08	NA	NA	Brick	05-Feb-08	HPS-PDPIPE-020508-231	NA	0	NA	13-Feb-08	Non-LLRW[b]	NA
70-D18-33-4D	MH319	15-Jan-08	NA	NA	Brick	05-Feb-08	HPS-PDPIPE-020508-231	NA	0	NA	13-Feb-08	Non-LLRW[b]	NA
70-D18-33-4E	MH474	22-Jul-08	NA	NA	Brick/Concrete	21-Aug-08	HPS-PDPIPE-082108-288	NA	0	NA	05-Dec-08	Non-LLRW[b]	NA
70-D18-33-4M	MH354	13-May-08	NA	NA	Concrete	17-May-08	HPS-PDPIPE-051708-262	NA	0	NA	04-Jun-08	Non-LLRW[b]	NA
70-D18-33-4P	01	07-Feb-08	20	NA	Steel	12-Mar-08	HPS-PDPIPE-031208-246	NA	0	NA	20-Mar-08	Non-LLRW[b]	NA
70-D18-33-4P	MH346	07-Feb-08	NA	NA	Concrete	27-Feb-08	HPS-PDPIPE-022708-240	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-4P	MH347	07-Feb-08	NA	NA	Concrete	11-Mar-08	HPS-PDPIPE-031108-244	NA	0	NA	20-Mar-08	Non-LLRW[b]	NA
70-D18-33-4P	MH348	08-Feb-08	NA	NA	Concrete	27-Feb-08	HPS-PDPIPE-022708-240	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-4V	MH321	21-Jan-08	NA	NA	Concrete	05-Feb-08	HPS-PDPIPE-020508-231	NA	0	NA	13-Feb-08	Non-LLRW[b]	NA
70-D18-33-4W	01	14-Jan-08	7.5	8	CIP	05-Feb-08	HPS-PDPIPE-020508-230	NA	0	NA	13-Feb-08	Non-LLRW[b]	NA
70-D18-33-4W	02	14-Jan-08	7.5	8	CIP	05-Feb-08	HPS-PDPIPE-020508-230	NA	0	NA	13-Feb-08	Non-LLRW[b]	NA
70-D18-33-4W	03	14-Jan-08	18.5	8	CIP	05-Feb-08	HPS-PDPIPE-020508-230	NA	0	NA	13-Feb-08	Non-LLRW[b]	NA
70-D18-33-4W	04	16-Jan-08	3	3.5	PVC	05-Feb-08	HPS-PDPIPE-020508-233	NA	0	NA	13-Feb-08	Non-LLRW[b]	NA
70-D18-33-4W	05	16-Jan-08	5	14	CIP	05-Feb-08	HPS-PDPIPE-020508-230	NA	0	NA	13-Feb-08	Non-LLRW[b]	NA
70-D18-33-4W	MH326	05-Feb-08	NA	NA	Brick	27-Feb-08	HPS-PDPIPE-022708-239	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D18-33-6A	MH327	05-Feb-08	NA	NA	Brick	27-Feb-08	HPS-PDPIPE-022708-239	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-8A	01	15-Jan-08	5	6	VCP	05-Feb-08	HPS-PDPIPE-020508-234	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-33-8E	01	08-Feb-08	10	4	CIP	28-Feb-08	HPS-PDPIPE-022808-241	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-33-8H	01	10-May-08	2	6	Concrete/VCP	14-May-08	HPS-PDPIPE-051408-258	NA	0	NA	30-May-08	Non-LLRW[b]	NA
70-D18-33-8I	01	12-May-08	2.8	8	Concrete/VCP	19-May-08	HPS-PDPIPE-051908-265	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-8M	01	15-May-08	3.3	4	CIP	19-May-08	HPS-PDPIPE-051908-266	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-8M	02	15-May-08	3	4	CIP	19-May-08	HPS-PDPIPE-051908-266	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-8M	03	15-May-08	2	4	CIP	19-May-08	HPS-PDPIPE-051908-266	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-8M	04	15-May-08	1.7	4	CIP	19-May-08	HPS-PDPIPE-051908-266	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-8M	05	15-May-08	1.7	4	CIP	19-May-08	HPS-PDPIPE-051908-266	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-8M	06	15-May-08	3	4	CIP	19-May-08	HPS-PDPIPE-051908-266	NA	0	NA	03-Jun-08	Non-LLRW[b]	NA
70-D18-33-8M	07	15-May-08	1.5	4	CIP	19-May-08	HPS-PDPIPE-051908-266	NA	0	NA	03-Jun-08	Non-LLRW[b]	NA
70-D18-33-8M	08	15-May-08	6.5	4	CIP	19-May-08	HPS-PDPIPE-051908-266	NA	0	NA	03-Jun-08	Non-LLRW[b]	NA
70-D18-33-8N	01	15-May-08	3	5	VCP	19-May-08	HPS-PDPIPE-051908-265	NA	0	NA	02-Jun-08	Non-LLRW[b]	NA
70-D18-33-8O	01	15-May-08	23	4	Steel	19-May-08	HPS-PDPIPE-051908-267	NA	0	NA	04-Jun-08	Non-LLRW[b]	NA
70-D18-33-8O	02	15-May-08	6.5	4	Steel	19-May-08	HPS-PDPIPE-051908-267	NA	0	NA	23-Jun-08	Non-LLRW[b]	NA
70-D18-33-8S	01	16-May-08	4.5	6	VCP	20-May-08	HPS-PDPIPE-052008-268	NA	0	NA	03-Jun-08	Non-LLRW[b]	NA
70-D18-33-8S	02	16-May-08	5	6	VCP	20-May-08	HPS-PDPIPE-052008-268	NA	0	NA	03-Jun-08	Non-LLRW[b]	NA
70-D18-44-1L	01	30-Jul-08	3.5	10	CMP	07-Aug-08	HPS-PDPIPE-080708-284	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D18-44-1L	02	30-Jul-08	3	10	CMP	07-Aug-08	HPS-PDPIPE-080708-284	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D18-44-1L	03	01-Aug-08	6	10	CMP	26-Aug-08	HPS-PDPIPE-082608-294	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	04	01-Aug-08	3	10	CMP	26-Aug-08	HPS-PDPIPE-082608-294	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	05	01-Aug-08	4	10	CMP	26-Aug-08	HPS-PDPIPE-082608-294	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	06	01-Aug-08	5	10	CMP	26-Aug-08	HPS-PDPIPE-082608-294	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	07	01-Aug-08	2	10	CMP	26-Aug-08	HPS-PDPIPE-082608-294	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	08	01-Aug-08	6	10	CMP	26-Aug-08	HPS-PDPIPE-082608-294	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	09	01-Aug-08	2	10	CMP	26-Aug-08	HPS-PDPIPE-082608-294	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	10	01-Aug-08	5.5	10	CMP	26-Aug-08	HPS-PDPIPE-082608-294	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-44-1L	11	01-Aug-08	2.5	10	CMP	26-Aug-08	HPS-PDPIPE-082608-294	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	12	01-Aug-08	2	10	CMP	26-Aug-08	HPS-PDPIPE-082608-294	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	13	01-Aug-08	2.5	10	CMP	26-Aug-08	HPS-PDPIPE-082608-294	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	14	01-Aug-08	3	10	CMP	26-Aug-08	HPS-PDPIPE-082608-294	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	15	02-Aug-08	4	10	CMP	29-Aug-08	HPS-PDPIPE-082908-296	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-44-1L	16	02-Aug-08	2	10	CMP	26-Aug-08	HPS-PDPIPE-082608-294	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-44-1L	17	02-Aug-08	2	10	CMP	26-Aug-08	HPS-PDPIPE-082608-294	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-44-1L	18	05-Aug-08	8	10	CMP	26-Aug-08	HPS-PDPIPE-082608-294	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D18-44-1L	19	05-Aug-08	4.5	10	CMP	26-Aug-08	HPS-PDPIPE-082608-294	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-44-1L	20	05-Aug-08	4	10	CMP	26-Aug-08	HPS-PDPIPE-082608-294	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	21	05-Aug-08	16	10	CMP	26-Aug-08	HPS-PDPIPE-082608-294	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	22	05-Aug-08	14	10	CMP	26-Aug-08	HPS-PDPIPE-082608-294	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	23	05-Aug-08	3	10	CMP	26-Aug-08	HPS-PDPIPE-082608-294	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-44-1L	24	05-Aug-08	1.5	10	CMP	26-Aug-08	HPS-PDPIPE-082608-294	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-44-1L	25	05-Aug-08	4	10	CMP	26-Aug-08	HPS-PDPIPE-082608-294	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-44-1L	26	05-Aug-08	4	10	CMP	26-Aug-08	HPS-PDPIPE-082608-294	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	27	06-Aug-08	3.5	12	CMP	26-Aug-08	HPS-PDPIPE-082608-294	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	28	06-Aug-08	5	12	CMP	26-Aug-08	HPS-PDPIPE-082608-294	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-44-1L	29	06-Aug-08	3	12	CMP	27-Aug-08	HPS-PDPIPE-082708-295	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	30	06-Aug-08	4.5	12	CMP	27-Aug-08	HPS-PDPIPE-082708-295	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	31	06-Aug-08	2	12	CMP	27-Aug-08	HPS-PDPIPE-082708-295	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	32	07-Aug-08	3	12	CMP	27-Aug-08	HPS-PDPIPE-082708-295	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	33	07-Aug-08	3	12	CMP	27-Aug-08	HPS-PDPIPE-082708-295	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	34	07-Aug-08	3	12	CMP	27-Aug-08	HPS-PDPIPE-082708-295	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-44-1L	35	07-Aug-08	3	12	CMP	27-Aug-08	HPS-PDPIPE-082708-295	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-44-1L	36	07-Aug-08	1.5	12	CMP	27-Aug-08	HPS-PDPIPE-082708-295	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	37	07-Aug-08	2	12	CMP	27-Aug-08	HPS-PDPIPE-082708-295	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-44-1L	38	07-Aug-08	2	12	CMP	27-Aug-08	HPS-PDPIPE-082708-295	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	39	07-Aug-08	2	12	CMP	27-Aug-08	HPS-PDPIPE-082708-295	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	40	07-Aug-08	3	12	CMP	27-Aug-08	HPS-PDPIPE-082708-295	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-44-1L	41	07-Aug-08	4	12	CMP	27-Aug-08	HPS-PDPIPE-082708-295	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-44-1L	42	07-Aug-08	3.5	12	CMP	27-Aug-08	HPS-PDPIPE-082708-295	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	43	07-Aug-08	3.5	12	CMP	27-Aug-08	HPS-PDPIPE-082708-295	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	44	07-Aug-08	2	12	CMP	27-Aug-08	HPS-PDPIPE-082708-295	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	46	08-Aug-08	3	12	CMP	27-Aug-08	HPS-PDPIPE-082708-295	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	47	08-Aug-08	11	12	CMP	27-Aug-08	HPS-PDPIPE-082708-295	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-44-1L	48	08-Aug-08	7	12	CMP	27-Aug-08	HPS-PDPIPE-082708-295	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	49	08-Aug-08	12	12	CMP	27-Aug-08	HPS-PDPIPE-082708-295	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-44-1L	51	05-Aug-08	1	10	CMP	27-Aug-08	HPS-PDPIPE-082708-295	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	52	30-Sep-08	12	10	CMP	03-Oct-08	HPS-PDPIPE-100308-312	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	53	30-Sep-08	7	10	CMP	03-Oct-08	HPS-PDPIPE-100308-312	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	54	30-Sep-08	3	10	CMP	03-Oct-08	HPS-PDPIPE-100308-312	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	55	30-Sep-08	3	10	CMP	03-Oct-08	HPS-PDPIPE-100308-312	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	56	30-Sep-08	3	10	CMP	03-Oct-08	HPS-PDPIPE-100308-312	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D18-44-1L	57	30-Sep-08	9	10	CMP	03-Oct-08	HPS-PDPIPE-100308-312	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-44-1L	58	30-Sep-08	2	10	CMP	03-Oct-08	HPS-PDPIPE-100308-312	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1L	60	01-Oct-08	8	10	CMP	23-Oct-08	HPS-PDPIPE-102308-315	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-D18-44-1M	01	28-Jul-08	3	10	CMP	07-Aug-08	HPS-PDPIPE-080708-284	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D18-44-1M	02	28-Jul-08	15	10	CMP	07-Aug-08	HPS-PDPIPE-080708-284	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D18-44-1M	03	29-Jul-08	2	10	CMP	07-Aug-08	HPS-PDPIPE-080708-284	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D18-44-1M	04	29-Jul-08	6	10	CMP	07-Aug-08	HPS-PDPIPE-080708-284	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D18-44-1M	05	30-Jul-08	6.5	10	CMP	07-Aug-08	HPS-PDPIPE-080708-284	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D18-44-1M	06	30-Jul-08	8	10	CMP	07-Aug-08	HPS-PDPIPE-080708-284	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D18-44-1M	07	31-Jul-08	2	10	CMP	07-Aug-08	HPS-PDPIPE-080708-284	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D18-44-1M	08	31-Jul-08	8	10	CMP	07-Aug-08	HPS-PDPIPE-080708-284	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D18-44-1M	09	31-Jul-08	2	10	CMP	07-Aug-08	HPS-PDPIPE-080708-284	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D18-44-1M	10	31-Jul-08	4	10	CMP	07-Aug-08	HPS-PDPIPE-080708-284	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D18-44-1M	MH369	31-Jul-08	NA	NA	Brick/Concrete	21-Aug-08	HPS-PDPIPE-082108-288	NA	0	NA	08-Dec-08	Non-LLRW[b]	NA
70-D18-44-1N	MH368	28-Jul-08	NA	NA	Brick/Concrete	21-Aug-08	HPS-PDPIPE-082108-288	NA	0	NA	08-Dec-08	Non-LLRW[b]	NA
70-D18-44-1O	01	23-Jul-08	2	10	CMP	07-Aug-08	HPS-PDPIPE-080708-284	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D18-44-1O	02	23-Jul-08	2	10	CMP	07-Aug-08	HPS-PDPIPE-080708-284	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D18-44-1O	03	23-Jul-08	2.5	10	CMP	07-Aug-08	HPS-PDPIPE-080708-284	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D18-44-1O	04	23-Jul-08	2	10	CMP	07-Aug-08	HPS-PDPIPE-080708-284	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D18-44-1O	05	23-Jul-08	2	10	CMP	07-Aug-08	HPS-PDPIPE-080708-284	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D18-44-1O	06	23-Jul-08	2.5	10	CMP	07-Aug-08	HPS-PDPIPE-080708-284	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D18-44-1O	07	29-Jul-08	5	10	CMP	07-Aug-08	HPS-PDPIPE-080708-284	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D18-44-1O	08	29-Jul-08	2	10	CMP	07-Aug-08	HPS-PDPIPE-080708-284	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D18-44-1O	09	29-Jul-08	2	10	CMP	07-Aug-08	HPS-PDPIPE-080708-284	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D18-44-1O	10	29-Jul-08	2	10	CMP	07-Aug-08	HPS-PDPIPE-080708-284	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D18-44-1O	11	29-Jul-08	4	10	CMP	08-Aug-08	HPS-PDPIPE-080808-285	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1O	12	30-Jul-08	2	10	CMP	08-Aug-08	HPS-PDPIPE-080808-285	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1O	13	30-Jul-08	5	10	CMP	08-Aug-08	HPS-PDPIPE-080808-285	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1O	14	07-Aug-08	5	12	CMP	27-Aug-08	HPS-PDPIPE-082708-295	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1O	15	07-Aug-08	10	12	CMP	27-Aug-08	HPS-PDPIPE-082708-295	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1O	16	07-Aug-08	2	12	CMP	27-Aug-08	HPS-PDPIPE-082708-295	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-44-1O	17	07-Aug-08	2	12	CMP	27-Aug-08	HPS-PDPIPE-082708-295	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-44-1O	MH367	24-Jul-08	NA	NA	Brick/Concrete	21-Aug-08	HPS-PDPIPE-082108-288	NA	0	NA	08-Dec-08	Non-LLRW[b]	NA
70-D18-44-1P	MH476	29-Jul-08	NA	NA	Brick/Concrete	20-Jan-09	HPS-PDPIPE-012009-323	NA	0	NA	03-Feb-09	Non-LLRW[b]	NA
70-D18-44-1Q	01	25-Jul-08	2	10	CMP	08-Aug-08	HPS-PDPIPE-080808-285	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1Q	02	25-Jul-08	4	10	CMP	08-Aug-08	HPS-PDPIPE-080808-285	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D18-44-1Q	03	25-Jul-08	3.5	10	CMP	08-Aug-08	HPS-PDPIPE-080808-285	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1Q	04	25-Jul-08	3.5	10	CMP	08-Aug-08	HPS-PDPIPE-080808-285	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1Q	05	25-Jul-08	5	10	CMP	08-Aug-08	HPS-PDPIPE-080808-285	NA	0	NA	07-Nov-08	LLRW	GFLU001299G6
70-D18-44-1Q	06	25-Jul-08	4.5	10	CMP	08-Aug-08	HPS-PDPIPE-080808-285	NA	0	NA	07-Nov-08	LLRW	GFLU001299G6
70-D18-44-1Q	07	25-Jul-08	2	10	CMP	08-Aug-08	HPS-PDPIPE-080808-285	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1Q	08	31-Jul-08	2	10	CMP	08-Aug-08	HPS-PDPIPE-080808-285	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1Q	09	31-Jul-08	2	10	CMP	08-Aug-08	HPS-PDPIPE-080808-285	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1Q	10	31-Jul-08	13.5	10	CMP	08-Aug-08	HPS-PDPIPE-080808-285	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1Q	MH370	31-Jul-08	NA	NA	Brick/Concrete	21-Aug-08	HPS-PDPIPE-082108-288	NA	0	NA	03-Dec-08	Non-LLRW[b]	NA
70-D18-44-1R	MH371	25-Jul-08	NA	NA	Brick/Concrete	21-Aug-08	HPS-PDPIPE-082108-288	NA	0	NA	03-Dec-04	Non-LLRW[b]	NA
70-D18-44-1S	01	22-Jul-08	4.5	10	CMP	08-Aug-08	HPS-PDPIPE-080808-285	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1S	02	22-Jul-08	3	10	CMP	08-Aug-08	HPS-PDPIPE-080808-285	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1S	03	23-Jul-08	2	10	CMP	08-Aug-08	HPS-PDPIPE-080808-285	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1S	04	23-Jul-08	2.5	10	CMP	08-Aug-08	HPS-PDPIPE-080808-285	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1S	05	23-Jul-08	2	10	CMP	08-Aug-08	HPS-PDPIPE-080808-285	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1S	06	24-Jul-08	4.5	10	CMP	08-Aug-08	HPS-PDPIPE-080808-285	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1S	07	24-Jul-08	4	10	CMP	09-Aug-08	HPS-PDPIPE-080908-286	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1S	08	24-Jul-08	4	10	CMP	09-Aug-08	HPS-PDPIPE-080908-286	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1S	09	24-Jul-08	2.5	10	CMP	09-Aug-08	HPS-PDPIPE-080908-286	NA	0	NA	07-Nov-08	LLRW	GFLU001299G6
70-D18-44-1S	10	24-Jul-08	2	10	CMP	09-Aug-08	HPS-PDPIPE-080908-286	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1S	11	24-Jul-08	2	10	CMP	09-Aug-08	HPS-PDPIPE-080908-286	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1S	12	24-Jul-08	2	10	CMP	09-Aug-08	HPS-PDPIPE-080908-286	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1S	13	24-Jul-08	1.5	10	CMP	09-Aug-08	HPS-PDPIPE-080908-286	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1S	14	24-Jul-08	1	10	CMP	09-Aug-08	HPS-PDPIPE-080908-286	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1S	15	24-Jul-08	2	10	CMP	09-Aug-08	HPS-PDPIPE-080908-286	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1S	16	24-Jul-08	7	10	CMP	09-Aug-08	HPS-PDPIPE-080908-286	NA	0	NA	07-Nov-08	LLRW	GFLU001299G6
70-D18-44-1S	17	24-Jul-08	7	10	CMP	09-Aug-08	HPS-PDPIPE-080908-286	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1S	18	24-Jul-08	0.25	10	CMP	09-Aug-08	HPS-PDPIPE-080908-286	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1S	19	24-Jul-08	2.5	10	CMP	09-Aug-08	HPS-PDPIPE-080908-286	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1S	20	24-Jul-08	10	10	CMP	09-Aug-08	HPS-PDPIPE-080908-286	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1S	21	25-Jul-08	3	10	CMP	09-Aug-08	HPS-PDPIPE-080908-286	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1S	MH372	24-Jul-08	NA	NA	Brick/Concrete	21-Aug-08	HPS-PDPIPE-082108-288	NA	0	NA	08-Dec-08	Non-LLRW[b]	NA
70-D18-44-1T	01	24-Jul-08	2	10	CMP	09-Aug-08	HPS-PDPIPE-080908-286	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1T	02	24-Jul-08	5	10	CMP	09-Aug-08	HPS-PDPIPE-080908-286	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1T	MH475	24-Jul-08	NA	NA	Brick/Concrete	21-Aug-08	HPS-PDPIPE-082108-288	NA	0	NA	03-Dec-04	Non-LLRW[b]	NA
70-D18-44-1U	01	13-Feb-08	5.75	10	CMP	18-Feb-08	HPS-PDPIPE-021808-237	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA

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PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D18-44-1U	02	13-Feb-08	4	10	CMP	12-Mar-08	HPS-PDPIPE-031208-245	NA	0	NA	20-Mar-08	Non-LLRW[b]	NA
70-D18-44-1U	03	13-Feb-08	4	10	CMP	18-Feb-08	HPS-PDPIPE-021808-237	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-44-1U	04	31-Jul-08	2	10	CMP	09-Aug-08	HPS-PDPIPE-080908-286	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1U	05	31-Jul-08	13	10	CMP	09-Aug-08	HPS-PDPIPE-080908-286	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1U	MH376	31-Jul-08	NA	NA	Brick/Concrete	21-Aug-08	HPS-PDPIPE-082108-288	NA	0	NA	03-Dec-08	Non-LLRW[b]	NA
70-D18-44-1V	01	13-Feb-08	4.75	10	CMP	18-Feb-08	HPS-PDPIPE-021808-237	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-44-1V	02	13-Feb-08	2.75	10	CMP	18-Feb-08	HPS-PDPIPE-021808-237	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-44-1V	03	13-Feb-08	3.7	10	CMP	18-Feb-08	HPS-PDPIPE-021808-237	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-44-1V	04	13-Feb-08	3.25	10	CMP	14-Mar-08	HPS-PDPIPE-031408-249	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-1V	05	13-Feb-08	3.3	10	CMP	14-Mar-08	HPS-PDPIPE-031408-249	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-1V	06	13-Feb-08	2.75	10	CMP	14-Mar-08	HPS-PDPIPE-031408-249	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-1V	07	13-Feb-08	2.1	10	CMP	14-Mar-08	HPS-PDPIPE-031408-249	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-1V	08	13-Feb-08	2.5	10	CMP	14-Mar-08	HPS-PDPIPE-031408-249	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-1V	09	13-Feb-08	2.25	10	CMP	17-Mar-08	HPS-PDPIPE-031708-251	NA	0	NA	30-May-08	Non-LLRW[b]	NA
70-D18-44-1V	10	13-Feb-08	2	10	CMP	14-Mar-08	HPS-PDPIPE-031408-249	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-1V	11	13-Feb-08	2.4	10	CMP	14-Mar-08	HPS-PDPIPE-031408-249	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-1V	12	13-Feb-08	1.75	10	CMP	14-Mar-08	HPS-PDPIPE-031408-249	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-1V	13	13-Feb-08	2	10	CMP	14-Mar-08	HPS-PDPIPE-031408-249	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-1V	14	13-Feb-08	2.3	10	CMP	14-Mar-08	HPS-PDPIPE-031408-249	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-1V	15	13-Feb-08	1	10	CMP	14-Mar-08	HPS-PDPIPE-031408-249	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-1V	16	13-Feb-08	2.1	10	CMP	14-Mar-08	HPS-PDPIPE-031408-249	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-1V	17	13-Feb-08	1.8	10	CMP	14-Mar-08	HPS-PDPIPE-031408-249	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-1V	18	13-Feb-08	2.1	10	CMP	14-Mar-08	HPS-PDPIPE-031408-249	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-1V	19	13-Feb-08	1.5	10	CMP	14-Mar-08	HPS-PDPIPE-031408-249	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-1V	20	13-Feb-08	2.6	10	CMP	14-Mar-08	HPS-PDPIPE-031408-249	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-1V	21	13-Feb-08	1.9	10	CMP	17-Mar-08	HPS-PDPIPE-031708-251	NA	0	NA	30-May-08	Non-LLRW[b]	NA
70-D18-44-1V	22	13-Feb-08	1.75	10	CMP	14-Mar-08	HPS-PDPIPE-031408-249	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-1V	23	13-Feb-08	1.75	10	CMP	17-Mar-08	HPS-PDPIPE-031708-251	NA	0	NA	30-May-08	Non-LLRW[b]	NA
70-D18-44-1V	24	13-Feb-08	1.8	10	CMP	17-Mar-08	HPS-PDPIPE-031708-251	NA	0	NA	30-May-08	Non-LLRW[b]	NA
70-D18-44-1V	25	13-Feb-08	3.75	10	CMP	17-Mar-08	HPS-PDPIPE-031708-251	NA	0	NA	30-May-08	Non-LLRW[b]	NA
70-D18-44-1V	MH375	13-Feb-08	NA	NA	Brick	27-Feb-08	HPS-PDPIPE-022708-239	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-44-1W	01	12-Feb-08	4	10	CMP	18-Feb-08	HPS-PDPIPE-021808-237	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-44-1W	02	12-Feb-08	3	10	CMP	18-Feb-08	HPS-PDPIPE-021808-237	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-44-1W	03	12-Feb-08	10	10	CMP	18-Feb-08	HPS-PDPIPE-021808-237	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-44-1W	04	13-Feb-08	3	10	CMP	18-Feb-08	HPS-PDPIPE-021808-237	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-44-1W	05	12-Feb-08	1.75	10	CMP	18-Mar-08	HPS-PDPIPE-031808-253	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA

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PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D18-44-1W	06	12-Feb-08	1.5	10	CMP	18-Mar-08	HPS-PDPIPE-031808-253	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1W	07	12-Feb-08	2.9	10	CMP	18-Mar-08	HPS-PDPIPE-031808-253	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1W	08	12-Feb-08	3	10	CMP	18-Mar-08	HPS-PDPIPE-031808-253	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1W	09	12-Feb-08	1.3	10	CMP	18-Mar-08	HPS-PDPIPE-031808-253	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-1W	10	12-Feb-08	1.75	10	CMP	17-Mar-08	HPS-PDPIPE-031708-251	NA	0	NA	30-May-08	Non-LLRW[b]	NA
70-D18-44-1W	11	12-Feb-08	1.25	10	CMP	14-Mar-08	HPS-PDPIPE-031408-250	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-1W	12	12-Feb-08	1.4	10	CMP	14-Mar-08	HPS-PDPIPE-031408-250	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-1W	13	12-Feb-08	2.3	10	CMP	14-Mar-08	HPS-PDPIPE-031408-250	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-1W	14	12-Feb-08	2.2	10	CMP	14-Mar-08	HPS-PDPIPE-031408-250	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-1W	15	12-Feb-08	2.25	10	CMP	17-Mar-08	HPS-PDPIPE-031708-251	NA	0	NA	30-May-08	Non-LLRW[b]	NA
70-D18-44-1W	16	12-Feb-08	1.1	10	CMP	17-Mar-08	HPS-PDPIPE-031708-251	NA	0	NA	30-May-08	Non-LLRW[b]	NA
70-D18-44-1W	17	12-Feb-08	2.1	10	CMP	17-Mar-08	HPS-PDPIPE-031708-251	NA	0	NA	30-May-08	Non-LLRW[b]	NA
70-D18-44-1W	18	12-Feb-08	1.75	10	CMP	17-Mar-08	HPS-PDPIPE-031708-251	NA	0	NA	30-May-08	Non-LLRW[b]	NA
70-D18-44-1W	19	12-Feb-08	1.8	10	CMP	17-Mar-08	HPS-PDPIPE-031708-251	NA	0	NA	30-May-08	Non-LLRW[b]	NA
70-D18-44-1W	20	12-Feb-08	2.25	10	CMP	17-Mar-08	HPS-PDPIPE-031708-251	NA	0	NA	30-May-08	Non-LLRW[b]	NA
70-D18-44-1W	21	12-Feb-08	2.4	10	CMP	17-Mar-08	HPS-PDPIPE-031708-251	NA	0	NA	30-May-08	Non-LLRW[b]	NA
70-D18-44-1W	22	12-Feb-08	1.9	10	CMP	17-Mar-08	HPS-PDPIPE-031708-251	NA	0	NA	30-May-08	Non-LLRW[b]	NA
70-D18-44-1W	23	12-Feb-08	2.4	10	CMP	17-Mar-08	HPS-PDPIPE-031708-251	NA	0	NA	30-May-08	Non-LLRW[b]	NA
70-D18-44-1W	24	12-Feb-08	2.6	10	CMP	17-Mar-08	HPS-PDPIPE-031708-251	NA	0	NA	30-May-08	Non-LLRW[b]	NA
70-D18-44-1W	25	12-Feb-08	1.8	10	CMP	17-Mar-08	HPS-PDPIPE-031708-251	NA	0	NA	30-May-08	Non-LLRW[b]	NA
70-D18-44-1W	26	12-Feb-08	2.75	10	CMP	17-Mar-08	HPS-PDPIPE-031708-251	NA	0	NA	30-May-08	Non-LLRW[b]	NA
70-D18-44-1W	27	12-Feb-08	2	10	CMP	17-Mar-08	HPS-PDPIPE-031708-251	NA	0	NA	30-May-08	Non-LLRW[b]	NA
70-D18-44-1W	28	12-Feb-08	2.75	10	CMP	17-Mar-08	HPS-PDPIPE-031708-251	NA	0	NA	30-May-08	Non-LLRW[b]	NA
70-D18-44-1W	MH373	12-Feb-08	NA	NA	Brick	27-Feb-08	HPS-PDPIPE-022708-239	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-44-1X	MH374	13-Feb-08	NA	NA	Brick	27-Feb-08	HPS-PDPIPE-022708-239	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-44-1Y	01	06-Aug-08	14	10	CMP	29-Aug-08	HPS-PDPIPE-082908-296	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-44-1Y	02	06-Aug-08	8	12	CMP	29-Aug-08	HPS-PDPIPE-082908-296	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1Y	03	06-Aug-08	8	12	CMP	29-Aug-08	HPS-PDPIPE-082908-296	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1Y	04	06-Aug-08	4	12	CMP	29-Aug-08	HPS-PDPIPE-082908-296	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1Y	05	06-Aug-08	16	12	CMP	29-Aug-08	HPS-PDPIPE-082908-296	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1Y	06	06-Aug-08	4	12	CMP	29-Aug-08	HPS-PDPIPE-082908-296	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-44-1Y	07	06-Aug-08	3	12	CMP	29-Aug-08	HPS-PDPIPE-082908-296	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1Y	08	06-Aug-08	3.5	12	CMP	29-Aug-08	HPS-PDPIPE-082908-296	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-1Y	MH377	06-Aug-08	NA	NA	Brick/Concrete	20-Jan-09	HPS-PDPIPE-012009-323	NA	0	NA	03-Feb-09	Non-LLRW[b]	NA
70-D18-44-1Z	MH378	06-Aug-08	NA	NA	Brick/Concrete	21-Aug-08	HPS-PDPIPE-082108-288	NA	0	NA	08-Dec-08	Non-LLRW[b]	NA
70-D18-44-2A	01	05-Aug-08	0.67	10	CMP	29-Aug-08	HPS-PDPIPE-082908-296	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D18-44-2A	02	05-Aug-08	2	10	CMP	29-Aug-08	HPS-PDPIPE-082908-296	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-2A	03	05-Aug-08	2	10	CMP	29-Aug-08	HPS-PDPIPE-082908-296	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-2A	04	05-Aug-08	16	10	CMP	29-Aug-08	HPS-PDPIPE-082908-296	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-44-2A	05	05-Aug-08	3	10	CMP	29-Aug-08	HPS-PDPIPE-082908-296	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-44-2A	06	05-Aug-08	2	10	CMP	29-Aug-08	HPS-PDPIPE-082908-296	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-2A	07	05-Aug-08	3	10	CMP	29-Aug-08	HPS-PDPIPE-082908-296	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-2A	08	05-Aug-08	6	10	CMP	29-Aug-08	HPS-PDPIPE-082908-296	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-44-2A	09	05-Aug-08	12	10	CMP	29-Aug-08	HPS-PDPIPE-082908-296	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-2A	MH380	06-Aug-08	NA	NA	Brick/Concrete	21-Aug-08	HPS-PDPIPE-082108-288	NA	0	NA	08-Dec-08	Non-LLRW[b]	NA
70-D18-44-2B	01	06-Aug-08	0.92	10	CMP	29-Aug-08	HPS-PDPIPE-082908-296	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-2B	02	06-Aug-08	1	10	CMP	29-Aug-08	HPS-PDPIPE-082908-296	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-2B	03	06-Aug-08	4	10	CMP	29-Aug-08	HPS-PDPIPE-082908-296	NA	0	NA	01-Dec-08	LLRW	BKRU026006G2
70-D18-44-2B	MH379	06-Aug-08	NA	NA	Brick/Concrete	21-Aug-08	HPS-PDPIPE-082108-288	NA	0	NA	08-Dec-08	Non-LLRW[b]	NA
70-D18-44-2C	01	30-Sep-08	10	10	CMP	03-Oct-08	HPS-PDPIPE-100308-312	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-2C	02	30-Sep-08	2	10	CMP	03-Oct-08	HPS-PDPIPE-100308-312	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D18-44-2C	03	01-Oct-08	3.5	10	CMP	23-Oct-08	HPS-PDPIPE-102308-315	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-D18-44-2C	04	01-Oct-08	4	10	CMP	23-Oct-08	HPS-PDPIPE-102308-315	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-D18-44-2C	05	01-Oct-08	7	10	CMP	23-Oct-08	HPS-PDPIPE-102308-315	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-D18-44-2C	06	01-Oct-08	1.5	10	CMP	23-Oct-08	HPS-PDPIPE-102308-315	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-D18-44-2C	07	01-Oct-08	1	10	CMP	23-Oct-08	HPS-PDPIPE-102308-315	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-D18-44-2C	08	01-Oct-08	4	10	CMP	23-Oct-08	HPS-PDPIPE-102308-315	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-D18-44-2C	09	01-Oct-08	3	10	CMP	23-Oct-08	HPS-PDPIPE-102308-315	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-D18-44-2C	10	01-Oct-08	2	10	CMP	23-Oct-08	HPS-PDPIPE-102308-315	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-D18-44-2C	11	01-Oct-08	3.5	10	CMP	23-Oct-08	HPS-PDPIPE-102308-315	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-D18-44-2C	12	01-Oct-08	4	10	CMP	23-Oct-08	HPS-PDPIPE-102308-315	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-D18-44-2C	13	01-Oct-08	5.5	10	CMP	23-Oct-08	HPS-PDPIPE-102308-315	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-D18-44-2C	14	01-Oct-08	2	10	CMP	23-Oct-08	HPS-PDPIPE-102308-315	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-D18-44-2C	15	01-Oct-08	6	10	CMP	23-Oct-08	HPS-PDPIPE-102308-315	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-D18-44-2C	16	01-Oct-08	3	10	CMP	23-Oct-08	HPS-PDPIPE-102308-315	NA	0	NA	22-Nov-08	Non-LLRW[b]	NA
70-D18-44-2C	MH384	30-Sep-08	NA	NA	Brick/Concrete	03-Oct-08	HPS-PDPIPE-100308-309	NA	0	NA	26-Nov-08	Non-LLRW[b]	NA
70-D18-44-2D	01	01-Oct-08	4	10	CMP	23-Oct-08	HPS-PDPIPE-102308-315	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-D18-44-2D	02	01-Oct-08	2	10	CMP	23-Oct-08	HPS-PDPIPE-102308-315	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-D18-44-2D	03	01-Oct-08	1	10	CMP	23-Oct-08	HPS-PDPIPE-102308-315	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-D18-44-2D	MH383	01-Oct-08	NA	NA	Brick	22-Oct-08	HPS-PDPIPE-102208-313	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-D18-44-2E	01	01-Oct-08	3	10	CMP	23-Oct-08	HPS-PDPIPE-102308-315	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-D18-44-2E	02	01-Oct-08	2	10	CMP	23-Oct-08	HPS-PDPIPE-102308-315	NA	0	NA	22-Nov-08	Non-LLRW[b]	NA

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PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D18-44-2E	03	01-Oct-08	1	10	CMP	23-Oct-08	HPS-PDPIPE-102308-315	NA	0	NA	22-Nov-08	Non-LLRW[b]	NA
70-D18-44-2E	MH382	01-Oct-08	NA	NA	Brick	22-Oct-08	HPS-PDPIPE-102208-313	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-D18-44-2F	01	01-Oct-08	2.5	10	CMP	23-Oct-08	HPS-PDPIPE-102308-315	NA	0	NA	22-Nov-08	Non-LLRW[b]	NA
70-D18-44-2F	02	01-Oct-08	2.5	10	CMP	23-Oct-08	HPS-PDPIPE-102308-315	NA	0	NA	22-Nov-08	Non-LLRW[b]	NA
70-D18-44-2F	03	02-Oct-08	2	10	CMP	23-Oct-08	HPS-PDPIPE-102308-315	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-D18-44-2F	04	02-Oct-08	13	10	CMP	23-Oct-08	HPS-PDPIPE-102308-315	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-D18-44-2F	05	02-Oct-08	4	10	CMP	24-Oct-08	HPS-PDPIPE-102408-316	NA	0	NA	22-Nov-08	Non-LLRW[b]	NA
70-D18-44-2F	06	02-Oct-08	10	10	CMP	24-Oct-08	HPS-PDPIPE-102408-316	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-D18-44-2F	07	02-Oct-08	6	10	CMP	24-Oct-08	HPS-PDPIPE-102408-316	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-D18-44-2F	08	02-Oct-08	2	10	CMP	24-Oct-08	HPS-PDPIPE-102408-316	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-D18-44-2F	09	02-Oct-08	16	10	CMP	24-Oct-08	HPS-PDPIPE-102408-316	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-D18-44-2F	MH381	10-Oct-08	NA	NA	Brick	22-Oct-08	HPS-PDPIPE-102208-313	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-D18-44-2G	01	11-Feb-08	5.5	10	CMP	18-Feb-08	HPS-PDPIPE-021808-237	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-44-2G	02	11-Feb-08	3.5	10	CMP	18-Feb-08	HPS-PDPIPE-021808-237	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-44-2G	03	11-Feb-08	4	10	CMP	18-Feb-08	HPS-PDPIPE-021808-237	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-44-2G	04	12-Feb-08	5	10	CMP	18-Feb-08	HPS-PDPIPE-021808-237	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-44-2G	05	12-Feb-08	2.5	10	CMP	18-Feb-08	HPS-PDPIPE-021808-237	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-44-2G	08	12-Feb-08	3	10	CMP	18-Feb-08	HPS-PDPIPE-021808-237	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-44-2G	09	12-Feb-08	2	10	CMP	18-Feb-08	HPS-PDPIPE-021808-237	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-44-2G	MH385	12-Feb-08	NA	NA	Brick	27-Feb-08	HPS-PDPIPE-022708-239	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-44-2I	01	12-Feb-08	6	10	CMP	18-Feb-08	HPS-PDPIPE-021808-237	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-44-2I	02	12-Feb-08	3.5	10	CMP	18-Feb-08	HPS-PDPIPE-021808-237	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-44-2I	03	12-Feb-08	2.5	10	CMP	18-Feb-08	HPS-PDPIPE-021808-237	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-44-2I	04	13-Feb-08	10	10	CMP	18-Feb-08	HPS-PDPIPE-021808-237	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-44-2I	MH386	12-Feb-08	NA	NA	Brick	27-Feb-08	HPS-PDPIPE-022708-239	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-44-2J	01	14-Feb-08	7	10	CMP	18-Feb-08	HPS-PDPIPE-021808-237	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-44-2J	02	14-Feb-08	2	10	CMP	18-Feb-08	HPS-PDPIPE-021808-237	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-44-2J	03	14-Feb-08	2	10	CMP	18-Feb-08	HPS-PDPIPE-021808-237	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-44-2J	04	13-Feb-08	1.9	10	CMP	17-Mar-08	HPS-PDPIPE-031708-251	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-44-2J	05	13-Feb-08	2.9	10	CMP	17-Mar-08	HPS-PDPIPE-031708-251	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-44-2J	06	13-Feb-08	2.9	10	CMP	17-Mar-08	HPS-PDPIPE-031708-251	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-44-2J	07	13-Feb-08	2.25	10	CMP	17-Mar-08	HPS-PDPIPE-031708-251	NA	0	NA	22-May-08	Non-LLRW[b]	NA
70-D18-44-2J	08	13-Feb-08	2.8	10	CMP	18-Mar-08	HPS-PDPIPE-031808-252	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-2J	09	13-Feb-08	2.1	10	CMP	18-Mar-08	HPS-PDPIPE-031808-252	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-2J	10	13-Feb-08	2.1	10	CMP	18-Mar-08	HPS-PDPIPE-031808-252	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-2J	11	13-Feb-08	3	10	CMP	18-Mar-08	HPS-PDPIPE-031808-252	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA

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PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D18-44-2J	12	13-Feb-08	1.3	10	CMP	18-Mar-08	HPS-PDPIPE-031808-252	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-2J	13	13-Feb-08	2.3	10	CMP	18-Mar-08	HPS-PDPIPE-031808-252	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-2J	14	13-Feb-08	2.1	10	CMP	18-Mar-08	HPS-PDPIPE-031808-252	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-2J	15	13-Feb-08	1.9	10	CMP	18-Mar-08	HPS-PDPIPE-031808-252	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-2J	16	13-Feb-08	2.4	10	CMP	18-Mar-08	HPS-PDPIPE-031808-252	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-2J	17	13-Feb-08	1.75	10	CMP	18-Mar-08	HPS-PDPIPE-031808-252	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-2J	18	13-Feb-08	2.25	10	CMP	18-Mar-08	HPS-PDPIPE-031808-252	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-2J	19	13-Feb-08	2.6	10	CMP	18-Mar-08	HPS-PDPIPE-031808-252	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-2J	20	13-Feb-08	2.4	10	CMP	18-Mar-08	HPS-PDPIPE-031808-252	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-2J	21	13-Feb-08	1.75	10	CMP	18-Mar-08	HPS-PDPIPE-031808-252	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-2J	22	13-Feb-08	2.25	10	CMP	18-Mar-08	HPS-PDPIPE-031808-252	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-2J	23	13-Feb-08	1.1	10	CMP	18-Mar-08	HPS-PDPIPE-031808-252	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-2J	24	13-Feb-08	2	10	CMP	18-Mar-08	HPS-PDPIPE-031808-252	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-2J	25	13-Feb-08	1.3	10	CMP	18-Mar-08	HPS-PDPIPE-031808-252	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-2J	26	13-Feb-08	1.8	10	CMP	18-Mar-08	HPS-PDPIPE-031808-252	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-2K	01	14-Feb-08	8	10	CMP	18-Feb-08	HPS-PDPIPE-021808-237	NA	0	NA	28-Feb-08	Non-LLRW[b]	NA
70-D18-44-2K	02	14-Feb-08	6	10	CMP	28-Feb-08	HPS-PDPIPE-022808-242	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-44-2K	03	14-Feb-08	6	10	CMP	28-Feb-08	HPS-PDPIPE-022808-242	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-44-2K	04	14-Feb-08	8	10	CMP	28-Feb-08	HPS-PDPIPE-022808-242	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-44-2K	05	14-Feb-08	5	10	CMP	28-Feb-08	HPS-PDPIPE-022808-242	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-44-2K	06	14-Feb-08	5	10	CMP	28-Feb-08	HPS-PDPIPE-022808-242	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-44-2K	07	15-Feb-08	6	10	CMP	12-Mar-08	HPS-PDPIPE-031208-245	NA	0	NA	20-Mar-08	Non-LLRW[b]	NA
70-D18-44-2K	08	15-Feb-08	6	10	CMP	12-Mar-08	HPS-PDPIPE-031208-245	NA	0	NA	20-Mar-08	Non-LLRW[b]	NA
70-D18-44-2K	09	14-Feb-08	1.9	10	CMP	18-Mar-08	HPS-PDPIPE-031808-252	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-2K	10	14-Feb-08	1.75	10	CMP	18-Mar-08	HPS-PDPIPE-031808-252	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-2K	11	14-Feb-08	2.1	10	CMP	18-Mar-08	HPS-PDPIPE-031808-252	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-2K	12	14-Feb-08	2.3	10	CMP	18-Mar-08	HPS-PDPIPE-031808-252	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-2K	13	14-Feb-08	2.6	10	CMP	18-Mar-08	HPS-PDPIPE-031808-252	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-2K	14	14-Feb-08	2.2	10	CMP	18-Mar-08	HPS-PDPIPE-031808-252	NA	0	NA	26-Mar-08	Non-LLRW[b]	NA
70-D18-44-2K	15	14-Feb-08	2.5	10	CMP	18-Mar-08	HPS-PDPIPE-031808-253	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-2K	16	14-Feb-08	2.2	10	CMP	18-Mar-08	HPS-PDPIPE-031808-253	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-2K	17	14-Feb-08	1.8	10	CMP	18-Mar-08	HPS-PDPIPE-031808-253	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-2K	18	14-Feb-08	2.9	10	CMP	18-Mar-08	HPS-PDPIPE-031808-253	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-2K	19	14-Feb-08	1.75	10	CMP	18-Mar-08	HPS-PDPIPE-031808-253	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-2K	20	14-Feb-08	2.2	10	CMP	18-Mar-08	HPS-PDPIPE-031808-253	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-2K	21	14-Feb-08	2.1	10	CMP	18-Mar-08	HPS-PDPIPE-031808-253	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D18-44-2K	22	14-Feb-08	2.7	10	CMP	18-Mar-08	HPS-PDPIPE-031808-253	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-2K	23	14-Feb-08	1.6	10	CMP	18-Mar-08	HPS-PDPIPE-031808-253	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-2K	24	14-Feb-08	2.1	10	CMP	18-Mar-08	HPS-PDPIPE-031808-253	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-2K	25	14-Feb-08	1.6	10	CMP	18-Mar-08	HPS-PDPIPE-031808-253	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-2K	26	14-Feb-08	1.75	10	CMP	18-Mar-08	HPS-PDPIPE-031808-253	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-2K	27	14-Feb-08	1.9	10	CMP	18-Mar-08	HPS-PDPIPE-031808-253	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-2K	28	14-Feb-08	1.5	10	CMP	18-Mar-08	HPS-PDPIPE-031808-253	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-2K	29	14-Feb-08	2.1	10	CMP	18-Mar-08	HPS-PDPIPE-031808-253	NA	0	NA	06-Nov-08	Non-LLRW[b]	NA
70-D18-44-2K	MH388	14-Feb-08	NA	NA	Brick	27-Feb-08	HPS-PDPIPE-022708-239	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-44-2K	MH470	14-Feb-08	NA	NA	Brick	27-Feb-08	HPS-PDPIPE-022708-239	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-44-8B	01	12-Feb-08	3.5	4	CIP	28-Feb-08	HPS-PDPIPE-022808-241	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-44-8C	01	14-Feb-08	2	4	CIP	28-Feb-08	HPS-PDPIPE-022808-241	NA	0	NA	04-Mar-08	Non-LLRW[b]	NA
70-D18-44-8D	01	15-Feb-08	2.5	4	CIP	11-Mar-08	HPS-PDPIPE-031108-243	NA	0	NA	20-Mar-08	Non-LLRW[b]	NA
70-D18-44-8D	02	15-Feb-08	2	4	CIP	11-Mar-08	HPS-PDPIPE-031108-243	NA	0	NA	20-Mar-08	Non-LLRW[b]	NA
70-D18-44-8D	03	15-Feb-08	2	4	CIP	11-Mar-08	HPS-PDPIPE-031108-243	NA	0	NA	20-Mar-08	Non-LLRW[b]	NA
70-D18-71-1A	MH362	18-Aug-08	NA	NA	Brick	13-Sep-08	HPS-PDPIPE-091308-298	NA	0	NA	03-Dec-08	Non-LLRW[b]	NA
70-D19-00-1J	MH415	18-Oct-07	NA	NA	Concrete	31-Oct-07	HPS-PDPIPE-103107-210	NA	0	NA	20-Nov-07	Non-LLRW[b]	NA
70-D19-00-1M	01	09-Aug-08	3	24	Concrete	23-Aug-08	HPS-PDPIPE-082308-291	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D19-00-1M	02	09-Aug-08	3	24	Concrete	23-Aug-08	HPS-PDPIPE-082308-291	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D19-00-1M	03	09-Aug-08	2	24	Concrete	23-Aug-08	HPS-PDPIPE-082308-291	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D19-00-1M	04	09-Aug-08	3	24	Concrete	23-Aug-08	HPS-PDPIPE-082308-291	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D19-00-1M	05	09-Aug-08	3	24	Concrete	23-Aug-08	HPS-PDPIPE-082308-291	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D19-00-1M	06	09-Aug-08	3	24	Concrete	23-Aug-08	HPS-PDPIPE-082308-291	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D19-00-1M	07	09-Aug-08	3	24	Concrete	23-Aug-08	HPS-PDPIPE-082308-291	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D19-00-1M	09	09-Aug-08	3	24	Concrete	23-Aug-08	HPS-PDPIPE-082308-291	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D19-00-1M	12	09-Aug-08	3	24	Concrete	25-Aug-08	HPS-PDPIPE-082508-293	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D19-00-1M	13	09-Aug-08	3	24	Concrete	25-Aug-08	HPS-PDPIPE-082508-293	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D19-00-1M	14	09-Aug-08	3	24	Concrete	25-Aug-08	HPS-PDPIPE-082508-293	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D19-00-1M	15	09-Aug-08	3	24	Concrete	25-Aug-08	HPS-PDPIPE-082508-293	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D19-00-1M	18	09-Aug-08	3	24	Concrete	25-Aug-08	HPS-PDPIPE-082508-293	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D19-00-1M	19	09-Aug-08	3	24	Concrete	25-Aug-08	HPS-PDPIPE-082508-293	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D19-00-1M	20	09-Aug-08	3	24	Concrete	25-Aug-08	HPS-PDPIPE-082508-293	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D19-00-1M	22	09-Aug-08	3	24	Concrete	25-Aug-08	HPS-PDPIPE-082508-293	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D19-00-1M	23	09-Aug-08	3	24	Concrete	15-Sep-08	HPS-PDPIPE-091508-301	NA	0	NA	26-Nov-08	Non-LLRW[b]	NA
70-D19-00-1M	24	09-Aug-08	3	24	Concrete	25-Aug-08	HPS-PDPIPE-082508-293	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D19-00-1M	25	09-Aug-08	3	24	Concrete	15-Sep-08	HPS-PDPIPE-091508-301	NA	0	NA	26-Nov-08	Non-LLRW[b]	NA

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D19-00-1M	27	09-Aug-08	3	24	Concrete	25-Aug-08	HPS-PDPIPE-082508-293	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D19-00-1M	28	09-Aug-08	3	24	Concrete	25-Aug-08	HPS-PDPIPE-082508-293	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D19-00-1M	29	09-Aug-08	3	24	Concrete	15-Sep-08	HPS-PDPIPE-091508-301	NA	0	NA	26-Nov-08	Non-LLRW[b]	NA
70-D19-00-1M	30	09-Aug-08	3	24	Concrete	25-Aug-08	HPS-PDPIPE-082508-293	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D19-00-1M	31	09-Aug-08	3	24	Concrete	15-Sep-08	HPS-PDPIPE-091508-301	NA	0	NA	26-Nov-08	Non-LLRW[b]	NA
70-D19-00-1M	32	11-Aug-08	3	24	Concrete	25-Aug-08	HPS-PDPIPE-082508-293	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D19-00-1M	MH426	09-Aug-08	NA	NA	Brick	21-Aug-08	HPS-PDPIPE-082108-287	NA	0	NA	05-Nov-08	Non-LLRW[b]	NA
70-D19-00-1O	01	25-Oct-07	6.5	24	CMP	31-Oct-07	HPS-PDPIPE-103107-210	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1O	02	26-Oct-07	1.67	10	CMP	31-Oct-07	HPS-PDPIPE-103107-210	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	01	24-Oct-07	3	24	Concrete	31-Oct-07	HPS-PDPIPE-103107-210	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	02	24-Oct-07	3	24	Concrete	31-Oct-07	HPS-PDPIPE-103107-210	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	03	24-Oct-07	3	24	Concrete	31-Oct-07	HPS-PDPIPE-103107-210	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	04	24-Oct-07	3	24	Concrete	31-Oct-07	HPS-PDPIPE-103107-210	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	05	24-Oct-07	3	24	Concrete	31-Oct-07	HPS-PDPIPE-103107-210	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	06	24-Oct-07	3	24	Concrete	31-Oct-07	HPS-PDPIPE-103107-210	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	07	24-Oct-07	3	24	Concrete	31-Oct-07	HPS-PDPIPE-103107-210	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	08	24-Oct-07	3	24	Concrete	31-Oct-07	HPS-PDPIPE-103107-210	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	09	24-Oct-07	3	24	Concrete	31-Oct-07	HPS-PDPIPE-103107-210	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	10	24-Oct-07	6	24	Concrete/VCP	31-Oct-07	HPS-PDPIPE-103107-210	NA	0	NA	20-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	11	25-Oct-07	3	24	Concrete	31-Oct-07	HPS-PDPIPE-103107-210	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	12	25-Oct-07	3	24	Concrete	31-Oct-07	HPS-PDPIPE-103107-210	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	13	25-Oct-07	3	24	Concrete	31-Oct-07	HPS-PDPIPE-103107-210	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	14	25-Oct-07	3	24	Concrete	31-Oct-07	HPS-PDPIPE-103107-210	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	15	25-Oct-07	3	24	Concrete	31-Oct-07	HPS-PDPIPE-103107-210	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	16	25-Oct-07	3	24	Concrete	31-Oct-07	HPS-PDPIPE-103107-210	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	17	25-Oct-07	3	24	Concrete	31-Oct-07	HPS-PDPIPE-103107-210	NA	0	NA	20-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	18	25-Oct-07	3	24	Concrete	31-Oct-07	HPS-PDPIPE-103107-210	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	19	25-Oct-07	2.5	24	Concrete	31-Oct-07	HPS-PDPIPE-103107-210	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	20	25-Oct-07	3	24	Concrete	31-Oct-07	HPS-PDPIPE-103107-210	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	21	25-Oct-07	3	24	Concrete	31-Oct-07	HPS-PDPIPE-103107-210	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	22	25-Oct-07	3	24	Concrete	31-Oct-07	HPS-PDPIPE-103107-210	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	23	25-Oct-07	3	24	Concrete	01-Nov-07	HPS-PDPIPE-110107-211	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	24	25-Oct-07	2.5	24	Concrete	01-Nov-07	HPS-PDPIPE-110107-211	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	25	25-Oct-07	3	24	Concrete	01-Nov-07	HPS-PDPIPE-110107-211	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	26	25-Oct-07	3	24	Concrete	01-Nov-07	HPS-PDPIPE-110107-211	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	27	25-Oct-07	3	24	Concrete	01-Nov-07	HPS-PDPIPE-110107-211	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA

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PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D19-00-1P	28	25-Oct-07	3	24	Concrete	01-Nov-07	HPS-PDPIPE-110107-211	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	29	25-Oct-07	3	24	Concrete	01-Nov-07	HPS-PDPIPE-110107-211	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	30	25-Oct-07	3	24	Concrete	01-Nov-07	HPS-PDPIPE-110107-211	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	31	25-Oct-07	3	24	Concrete	01-Nov-07	HPS-PDPIPE-110107-211	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	32	25-Oct-07	3	24	Concrete	01-Nov-07	HPS-PDPIPE-110107-211	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	33	25-Oct-07	3	24	Concrete	01-Nov-07	HPS-PDPIPE-110107-211	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	34	25-Oct-07	3	24	Concrete	01-Nov-07	HPS-PDPIPE-110107-211	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	35	25-Oct-07	3	24	Concrete	01-Nov-07	HPS-PDPIPE-110107-211	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	36	25-Oct-07	3	24	Concrete	01-Nov-07	HPS-PDPIPE-110107-211	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	37	25-Oct-07	3	24	Concrete	01-Nov-07	HPS-PDPIPE-110107-211	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	38	25-Oct-07	3	24	Concrete	01-Nov-07	HPS-PDPIPE-110107-211	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	39	25-Oct-07	3	24	Concrete	01-Nov-07	HPS-PDPIPE-110107-211	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	40	25-Oct-07	3	24	Concrete	01-Nov-07	HPS-PDPIPE-110107-211	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	41	25-Oct-07	3	24	Concrete	01-Nov-07	HPS-PDPIPE-110107-211	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	42	26-Oct-07	3	24	Concrete	01-Nov-07	HPS-PDPIPE-110107-211	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	43	26-Oct-07	3	24	Concrete	02-Nov-07	HPS-PDPIPE-110207-212	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	44	26-Oct-07	3	24	Concrete	02-Nov-07	HPS-PDPIPE-110207-212	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	45	26-Oct-07	3	24	Concrete	02-Nov-07	HPS-PDPIPE-110207-212	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	46	26-Oct-07	3	24	Concrete	20-Nov-07	HPS-PDPIPE-112007-216	NA	0	NA	05-Dec-07	Non-LLRW[b]	NA
70-D19-00-1P	47	26-Oct-07	3	24	Concrete	02-Nov-07	HPS-PDPIPE-110207-212	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	48	26-Oct-07	3	24	Concrete	02-Nov-07	HPS-PDPIPE-110207-212	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	49	26-Oct-07	3	24	Concrete	02-Nov-07	HPS-PDPIPE-110207-212	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1P	50	26-Oct-07	3	24	Concrete	20-Nov-07	HPS-PDPIPE-112007-216	NA	0	NA	05-Dec-07	Non-LLRW[b]	NA
70-D19-00-1R	01	24-Oct-07	3.25	8	VCP	02-Nov-07	HPS-PDPIPE-110207-212	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1T	MH422	24-Oct-07	NA	NA	Brick	02-Nov-07	HPS-PDPIPE-110207-212	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1V	01	18-Oct-07	16	4	PVC	02-Nov-07	HPS-PDPIPE-110207-212	NA	0	NA	20-Nov-07	Non-LLRW[b]	NA
70-D19-00-1V	02	18-Oct-07	14	4	PVC	02-Nov-07	HPS-PDPIPE-110207-212	NA	0	NA	20-Nov-07	Non-LLRW[b]	NA
70-D19-00-1W	01	22-Oct-07	5	6	Concrete/VCP	02-Nov-07	HPS-PDPIPE-110207-212	NA	0	NA	20-Nov-07	Non-LLRW[b]	NA
70-D19-00-1W	02	22-Oct-07	5	6	VCP	02-Nov-07	HPS-PDPIPE-110207-212	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-1X	01	20-Oct-07	5	8	Concrete/VCP	02-Nov-07	HPS-PDPIPE-110207-212	NA	0	NA	20-Nov-07	Non-LLRW[b]	NA
70-D19-00-1Y	01	26-Oct-07	3.5	8	Concrete/VCP	02-Nov-07	HPS-PDPIPE-110207-212	NA	0	NA	20-Nov-07	Non-LLRW[b]	NA
70-D19-00-2A	01	19-Oct-07	1.17	8	Fiberglass	02-Nov-07	HPS-PDPIPE-110207-212	NA	0	NA	20-Nov-07	Non-LLRW[b]	NA
70-D19-00-2B	MH416	19-Oct-07	NA	NA	Brick	02-Nov-07	HPS-PDPIPE-110207-212	NA	0	NA	20-Nov-07	Non-LLRW[b]	NA
70-D19-00-2B	MH427	09-Aug-08	NA	NA	Brick	21-Aug-08	HPS-PDPIPE-082108-287	NA	0	NA	03-Dec-08	Non-LLRW[b]	NA
70-D19-00-2E	MH414	17-Oct-07	NA	NA	Brick	24-Oct-07	HPS-PDPIPE-102407-208	NA	0	NA	04-Dec-07	Non-LLRW[b]	NA
70-D19-00-2G	MH413	17-Oct-07	NA	NA	Brick	24-Oct-07	HPS-PDPIPE-102407-208	NA	0	NA	04-Dec-07	Non-LLRW[b]	NA

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D19-00-2H	01	15-Oct-07	3	12	Concrete	24-Oct-07	HPS-PDPIPE-102407-208	NA	0	NA	03-Dec-07	Non-LLRW[b]	NA
70-D19-00-2H	02	15-Oct-07	2	12	Concrete	24-Oct-07	HPS-PDPIPE-102407-208	NA	0	NA	03-Dec-07	Non-LLRW[b]	NA
70-D19-00-2H	03	15-Oct-07	3	12	Concrete	24-Oct-07	HPS-PDPIPE-102407-208	NA	0	NA	13-Nov-07	Non-LLRW[b]	NA
70-D19-00-2H	04	15-Oct-07	2	12	Concrete	24-Oct-07	HPS-PDPIPE-102407-208	NA	0	NA	03-Dec-07	Non-LLRW[b]	NA
70-D19-00-2H	05	15-Oct-07	3	12	Concrete	24-Oct-07	HPS-PDPIPE-102407-208	NA	0	NA	03-Dec-07	Non-LLRW[b]	NA
70-D19-00-2H	06	15-Oct-07	3	12	Concrete	24-Oct-07	HPS-PDPIPE-102407-208	NA	0	NA	03-Dec-07	Non-LLRW[b]	NA
70-D19-00-2H	07	15-Oct-07	3	12	Concrete	24-Oct-07	HPS-PDPIPE-102407-208	NA	0	NA	03-Dec-07	Non-LLRW[b]	NA
70-D19-00-2H	08	15-Oct-07	3	12	Concrete	24-Oct-07	HPS-PDPIPE-102407-208	NA	0	NA	03-Dec-07	Non-LLRW[b]	NA
70-D19-00-2H	09	15-Oct-07	3	12	Concrete	24-Oct-07	HPS-PDPIPE-102407-208	NA	0	NA	03-Dec-07	Non-LLRW[b]	NA
70-D19-00-2H	10	15-Oct-07	3	12	Concrete	24-Oct-07	HPS-PDPIPE-102407-208	NA	0	NA	03-Dec-07	Non-LLRW[b]	NA
70-D19-00-2H	11	15-Oct-07	3	12	Concrete	24-Oct-07	HPS-PDPIPE-102407-208	NA	0	NA	03-Dec-07	Non-LLRW[b]	NA
70-D19-00-2H	12	15-Oct-07	3	12	Concrete	24-Oct-07	HPS-PDPIPE-102407-208	NA	0	NA	03-Dec-07	Non-LLRW[b]	NA
70-D19-00-2H	13	15-Oct-07	3	12	Concrete	24-Oct-07	HPS-PDPIPE-102407-208	NA	0	NA	03-Dec-07	Non-LLRW[b]	NA
70-D19-00-2K	MH412	16-Oct-07	NA	NA	Brick	02-Nov-07	HPS-PDPIPE-110207-212	NA	0	NA	20-Nov-07	Non-LLRW[b]	NA
70-D19-00-2K	MH420	22-Oct-07	NA	NA	Brick	02-Nov-07	HPS-PDPIPE-110207-212	NA	0	NA	19-Nov-07	Non-LLRW[b]	NA
70-D19-00-2O	MH408	15-Oct-07	NA	NA	Brick	24-Oct-07	HPS-PDPIPE-102407-208	NA	0	NA	03-Dec-07	Non-LLRW[b]	NA
70-D19-00-2P	MH405	08-Oct-07	NA	NA	Brick	15-Oct-07	HPS-PDPIPE-101507-203	NA	0	NA	04-Dec-07	Non-LLRW[b]	NA
70-D19-00-2Q	01	08-Oct-07	3	10	Concrete	15-Oct-07	HPS-PDPIPE-101507-203	NA	0	NA	04-Dec-07	Non-LLRW[b]	NA
70-D19-00-2Q	02	08-Oct-07	3	10	Concrete	15-Oct-07	HPS-PDPIPE-101507-203	NA	0	NA	04-Dec-07	Non-LLRW[b]	NA
70-D19-00-2Q	03	08-Oct-07	3	10	Concrete	15-Oct-07	HPS-PDPIPE-101507-203	NA	0	NA	04-Dec-07	Non-LLRW[b]	NA
70-D19-00-2Q	MH407	08-Oct-07	NA	NA	Brick	24-Oct-07	HPS-PDPIPE-102407-208	NA	0	NA	04-Dec-07	Non-LLRW[b]	NA
70-D19-00-2R	MH406	09-Oct-07	NA	NA	CIP	24-Oct-07	HPS-PDPIPE-102407-208	NA	0	NA	04-Dec-07	Non-LLRW[b]	NA
70-D19-00-2V	MH390	03-Sep-08	NA	NA	Brick	22-Oct-08	HPS-PDPIPE-102208-313	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-D19-00-2W	01	02-Sep-08	23	6	CMP	16-Sep-08	HPS-PDPIPE-091608-302	NA	0	NA	25-Nov-08	Non-LLRW[b]	NA
70-D19-00-2W	02	02-Sep-08	2	6	CMP	16-Sep-08	HPS-PDPIPE-091608-302	NA	0	NA	25-Nov-08	Non-LLRW[b]	NA
70-D19-00-2X	01	02-Sep-08	21	6	CMP	16-Sep-08	HPS-PDPIPE-091608-302	NA	0	NA	25-Nov-08	Non-LLRW[b]	NA
70-D19-00-2Y	01	02-Sep-08	18	10	CMP	16-Sep-08	HPS-PDPIPE-091608-302	NA	0	NA	25-Nov-08	Non-LLRW[b]	NA
70-D19-00-2Y	02	02-Sep-08	6	10	CMP	16-Sep-08	HPS-PDPIPE-091608-302	NA	0	NA	25-Nov-08	Non-LLRW[b]	NA
70-D19-00-2Y	03	02-Sep-08	2	10	CMP	16-Sep-08	HPS-PDPIPE-091608-302	NA	0	NA	25-Nov-08	Non-LLRW[b]	NA
70-D19-00-2Y	04	02-Sep-08	2	10	CMP	16-Sep-08	HPS-PDPIPE-091608-302	NA	0	NA	25-Nov-08	Non-LLRW[b]	NA
70-D19-00-2Y	05	02-Sep-08	2	10	CMP	16-Sep-08	HPS-PDPIPE-091608-302	NA	0	NA	25-Nov-08	Non-LLRW[b]	NA
70-D19-00-2Y	06	02-Sep-08	2	10	CMP	16-Sep-08	HPS-PDPIPE-091608-302	NA	0	NA	25-Nov-08	Non-LLRW[b]	NA
70-D19-00-2Z	01	04-Dec-08	20	21	Steel	20-Jan-09	HPS-PDPIPE-012009-318	NA	0	NA	03-Feb-09	Non-LLRW[b]	NA
70-D19-00-2Z	02	04-Dec-08	2	10	Concrete/VCP	20-Jan-09	HPS-PDPIPE-012009-319	NA	0	NA	03-Feb-09	Non-LLRW[b]	NA
70-D19-00-2Z	MH393	29-Aug-08	NA	NA	Brick/Concrete	13-Sep-08	HPS-PDPIPE-091308-300	NA	0	NA	03-Dec-08	Non-LLRW[b]	NA
70-D19-00-3A	01	29-Aug-08	3	10	Concrete	15-Sep-08	HPS-PDPIPE-091508-301	NA	0	NA	25-Nov-08	Non-LLRW[b]	NA

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D19-00-3A	02	29-Aug-08	3	10	Concrete	15-Sep-08	HPS-PDPIPE-091508-301	NA	0	NA	25-Nov-08	Non-LLRW[b]	NA
70-D19-00-3A	03	29-Aug-08	3	10	Concrete	15-Sep-08	HPS-PDPIPE-091508-301	NA	0	NA	25-Nov-08	Non-LLRW[b]	NA
70-D19-00-3B	MH396	28-Aug-08	NA	NA	Brick/Concrete	13-Sep-08	HPS-PDPIPE-091308-300	NA	0	NA	03-Dec-08	Non-LLRW[b]	NA
70-D19-00-3E	MH399	27-Aug-08	NA	NA	Brick	13-Sep-08	HPS-PDPIPE-091308-298	NA	0	NA	03-Dec-08	Non-LLRW[b]	NA
70-D19-00-3G	MH400	16-Nov-07	NA	NA	Brick	12-Dec-07	HPS-PDPIPE-121207-221	NA	0	NA	19-Mar-08	Non-LLRW[b]	NA
70-D19-00-3G	MH463	16-Nov-07	NA	NA	Brick	12-Dec-07	HPS-PDPIPE-121207-221	NA	0	NA	19-Mar-08	Non-LLRW[b]	NA
70-D19-00-3I	01	27-Aug-08	8	15	Concrete	15-Sep-08	HPS-PDPIPE-091508-301	NA	0	NA	26-Nov-08	Non-LLRW[b]	NA
70-D19-00-3I	02	27-Aug-08	6	15	Concrete	15-Sep-08	HPS-PDPIPE-091508-301	NA	0	NA	26-Nov-08	Non-LLRW[b]	NA
70-D19-00-3I	03	27-Aug-08	2	15	Concrete	15-Sep-08	HPS-PDPIPE-091508-301	NA	0	NA	26-Nov-08	Non-LLRW[b]	NA
70-D19-00-3I	04	27-Aug-08	3	15	Concrete	15-Sep-08	HPS-PDPIPE-091508-301	NA	0	NA	26-Nov-08	Non-LLRW[b]	NA
70-D19-00-3I	05	27-Aug-08	3	15	Concrete	15-Sep-08	HPS-PDPIPE-091508-301	NA	0	NA	26-Nov-08	Non-LLRW[b]	NA
70-D19-00-3I	06	27-Aug-08	3	15	Concrete	15-Sep-08	HPS-PDPIPE-091508-301	NA	0	NA	26-Nov-08	Non-LLRW[b]	NA
70-D19-00-3I	07	27-Aug-08	3	15	Concrete	15-Sep-08	HPS-PDPIPE-091508-301	NA	0	NA	26-Nov-08	Non-LLRW[b]	NA
70-D19-00-3I	08	27-Aug-08	3	15	Concrete	15-Sep-08	HPS-PDPIPE-091508-301	NA	0	NA	26-Nov-08	Non-LLRW[b]	NA
70-D19-00-3I	09	27-Aug-08	3	15	Concrete	15-Sep-08	HPS-PDPIPE-091508-301	NA	0	NA	26-Nov-08	Non-LLRW[b]	NA
70-D19-00-3I	10	27-Aug-08	3	15	Concrete	15-Sep-08	HPS-PDPIPE-091508-301	NA	0	NA	26-Nov-08	Non-LLRW[b]	NA
70-D19-00-3J	MH403	15-Nov-07	NA	NA	Brick	20-Nov-07	HPS-PDPIPE-112007-216	NA	0	NA	05-Dec-07	Non-LLRW[b]	NA
70-D19-00-3K	01	27-Aug-08	6	15	Concrete	15-Sep-08	HPS-PDPIPE-091508-301	NA	0	NA	26-Nov-08	Non-LLRW[b]	NA
70-D19-00-3L	MH401	27-Aug-08	NA	NA	Brick	13-Sep-08	HPS-PDPIPE-091308-298	NA	0	NA	03-Dec-08	Non-LLRW[b]	NA
70-D19-00-3L	MH404	27-Aug-08	NA	NA	Brick	03-Oct-08	HPS-PDPIPE-100308-307	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D19-00-3M	MH392	02-Sep-08	NA	NA	Brick	13-Sep-08	HPS-PDPIPE-091308-298	NA	0	NA	03-Dec-08	Non-LLRW[b]	NA
70-D19-00-3P	MH425	08-Aug-08	NA	NA	Concrete	21-Aug-08	HPS-PDPIPE-082108-289	NA	0	NA	08-Dec-08	Non-LLRW[b]	NA
70-D19-00-3Q	01	24-Oct-07	5	10	VCP	02-Nov-07	HPS-PDPIPE-110207-212	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA
70-D19-00-3R	MH421	23-Oct-07	NA	NA	Concrete	02-Nov-07	HPS-PDPIPE-110207-212	NA	0	NA	16-Nov-07	Non-LLRW[b]	NA
70-D19-00-3S	01	18-Oct-07	4	10	VCP	06-Nov-07	HPS-PDPIPE-110607-213	NA	0	NA	19-Nov-07	Non-LLRW[b]	NA
70-D19-00-3S	02	20-Oct-07	5.33	10	VCP	06-Nov-07	HPS-PDPIPE-110607-213	NA	0	NA	19-Nov-07	Non-LLRW[b]	NA
70-D19-00-3S	MH419	22-Oct-07	NA	NA	Concrete	06-Nov-07	HPS-PDPIPE-110607-213	NA	0	NA	19-Nov-07	Non-LLRW[b]	NA
70-D19-00-3T	MH417	19-Oct-07	NA	NA	Brick	06-Nov-07	HPS-PDPIPE-110607-213	NA	0	NA	20-Nov-07	Non-LLRW[b]	NA
70-D19-00-3Y	01	06-Oct-07	3	12	VCP	15-Oct-07	HPS-PDPIPE-101507-203	NA	0	NA	04-Dec-07	Non-LLRW[b]	NA
70-D19-00-3Y	MH397	19-Nov-07	NA	NA	Concrete	12-Dec-07	HPS-PDPIPE-121207-221	NA	0	NA	14-Mar-08	Non-LLRW[b]	NA
70-D19-00-3Y	MH409	07-Oct-08	NA	NA	Concrete	22-Oct-08	HPS-PDPIPE-102208-314	NA	0	NA	25-Nov-08	Non-LLRW[b]	NA
70-D19-00-4B	01	20-Oct-07	3	18	Concrete	06-Nov-07	HPS-PDPIPE-110607-213	NA	0	NA	19-Nov-07	Non-LLRW[b]	NA
70-D19-00-4B	02	20-Oct-07	3	18	Concrete	06-Nov-07	HPS-PDPIPE-110607-213	NA	0	NA	19-Nov-07	Non-LLRW[b]	NA
70-D19-00-4B	03	20-Oct-07	3	18	Concrete	06-Nov-07	HPS-PDPIPE-110607-213	NA	0	NA	19-Nov-07	Non-LLRW[b]	NA
70-D19-00-4B	04	23-Oct-07	2.67	18	Concrete	06-Nov-07	HPS-PDPIPE-110607-213	NA	0	NA	16-Nov-07	Non-LLRW[b]	NA
70-D19-00-4B	MH423	24-Oct-07	NA	NA	Brick	06-Nov-07	HPS-PDPIPE-110607-213	NA	0	NA	15-Nov-07	Non-LLRW[b]	NA

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D19-00-4D	01	23-Oct-07	3	6	Concrete/VCP	06-Nov-07	HPS-PDPIPE-110607-213	NA	0	NA	20-Nov-07	Non-LLRW[b]	NA
70-D19-00-5A	01	15-Nov-07	3	4	CIP	20-Nov-07	HPS-PDPIPE-112007-216	NA	0	NA	05-Dec-07	Non-LLRW[b]	NA
70-D19-00-5A	02	15-Nov-07	3	4	CIP	20-Nov-07	HPS-PDPIPE-112007-216	NA	0	NA	05-Dec-07	Non-LLRW[b]	NA
70-D19-00-5A	03	15-Nov-07	1	12	CIP	20-Nov-07	HPS-PDPIPE-112007-216	NA	0	NA	05-Dec-07	Non-LLRW[b]	NA
70-D19-00-5A	04	15-Nov-07	3	8	VCP	20-Nov-07	HPS-PDPIPE-112007-216	NA	0	NA	05-Dec-07	Non-LLRW[b]	NA
70-D19-00-5A	05	16-Nov-07	4	8	VCP	12-Dec-07	HPS-PDPIPE-121207-221	NA	0	NA	19-Mar-08	Non-LLRW[b]	NA
70-D19-00-5A	06	19-Nov-07	4.5	8	VCP	12-Dec-07	HPS-PDPIPE-121207-221	NA	0	NA	14-Mar-08	Non-LLRW[b]	NA
70-D19-00-8D	01	23-Oct-07	1.67	6	Concrete/VCP	06-Nov-07	HPS-PDPIPE-110607-213	NA	0	NA	19-Nov-07	Non-LLRW[b]	NA
70-D19-00-8G	01	22-Sep-08	1	6	CIP	03-Oct-08	HPS-PDPIPE-100308-311	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D19-00-8H	01	03-Sep-08	20	6	CMP	16-Sep-08	HPS-PDPIPE-091608-302	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D19-00-8H	02	03-Sep-08	14	6	CMP	16-Sep-08	HPS-PDPIPE-091608-302	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D19-00-8H	03	03-Sep-08	3	6	CMP	16-Sep-08	HPS-PDPIPE-091608-302	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D19-00-8H	04	03-Sep-08	16	6	CMP	16-Sep-08	HPS-PDPIPE-091608-302	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D19-00-8H	05	03-Sep-08	20	6	CMP	16-Sep-08	HPS-PDPIPE-091608-302	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D19-00-8H	06	03-Sep-08	5	6	CMP	16-Sep-08	HPS-PDPIPE-091608-302	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D19-09-1Z	01	05-Sep-07	3	15	Concrete	12-Sep-07	HPS-PDPIPE-091207-192	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-1Z	02	05-Sep-07	3	15	Concrete	12-Sep-07	HPS-PDPIPE-091207-192	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-1Z	03	05-Sep-07	3	15	Concrete	12-Sep-07	HPS-PDPIPE-091207-192	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-1Z	04	05-Sep-07	3	15	Concrete	12-Sep-07	HPS-PDPIPE-091207-192	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-1Z	05	05-Sep-07	3	15	Concrete	12-Sep-07	HPS-PDPIPE-091207-192	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-1Z	06	05-Sep-07	2.5	15	Concrete	12-Sep-07	HPS-PDPIPE-091207-194	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-1Z	07	05-Sep-07	3	15	Concrete	12-Sep-07	HPS-PDPIPE-091207-194	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-1Z	08	05-Sep-07	1.25	15	Concrete	12-Sep-07	HPS-PDPIPE-091207-194	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-1Z	09	05-Sep-07	3	15	Concrete	12-Sep-07	HPS-PDPIPE-091207-194	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-1Z	10	05-Sep-07	2.67	15	Concrete	12-Sep-07	HPS-PDPIPE-091207-194	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-1Z	11	05-Sep-07	3	15	Concrete	12-Sep-07	HPS-PDPIPE-091207-194	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-1Z	12	05-Sep-07	2.5	15	Concrete	12-Sep-07	HPS-PDPIPE-091207-194	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-1Z	13	05-Sep-07	2	15	Concrete	12-Sep-07	HPS-PDPIPE-091207-194	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-1Z	14	05-Sep-07	2.17	15	Concrete	12-Sep-07	HPS-PDPIPE-091207-194	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-1Z	15	05-Sep-07	3	15	Concrete	12-Sep-07	HPS-PDPIPE-091207-194	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-1Z	16	05-Sep-07	3	15	Concrete	12-Sep-07	HPS-PDPIPE-091207-195	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-1Z	17	05-Sep-07	2	15	Concrete	12-Sep-07	HPS-PDPIPE-091207-195	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-1Z	18	05-Sep-07	3	15	Concrete	12-Sep-07	HPS-PDPIPE-091207-195	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-5E	01	30-Aug-07	3	16	Concrete	11-Sep-07	HPS-PDPIPE-091107-191	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D19-09-5E	02	30-Aug-07	3	16	Concrete	11-Sep-07	HPS-PDPIPE-091107-191	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D19-09-5E	03	30-Aug-07	3	16	Concrete	11-Sep-07	HPS-PDPIPE-091107-191	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D19-09-5E	04	30-Aug-07	3	16	Concrete	11-Sep-07	HPS-PDPIPE-091107-191	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D19-09-5E	05	30-Aug-07	3	16	Concrete	11-Sep-07	HPS-PDPIPE-091107-191	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D19-09-5E	06	30-Aug-07	3	16	Concrete	11-Sep-07	HPS-PDPIPE-091107-191	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D19-09-5E	07	30-Aug-07	3	16	Concrete	11-Sep-07	HPS-PDPIPE-091107-191	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D19-09-5E	08	30-Aug-07	3	16	Concrete	11-Sep-07	HPS-PDPIPE-091107-191	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D19-09-5E	09	30-Aug-07	3	16	Concrete	11-Sep-07	HPS-PDPIPE-091107-191	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D19-09-5E	10	30-Aug-07	3	16	Concrete	11-Sep-07	HPS-PDPIPE-091107-191	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D19-09-5E	11	30-Aug-07	3	16	Concrete	11-Sep-07	HPS-PDPIPE-091107-191	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D19-09-5E	12	30-Aug-07	3	16	Concrete	11-Sep-07	HPS-PDPIPE-091107-191	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D19-09-5E	13	30-Aug-07	3	16	Concrete	11-Sep-07	HPS-PDPIPE-091107-191	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D19-09-5E	14	30-Aug-07	3	16	Concrete	11-Sep-07	HPS-PDPIPE-091107-191	NA	0	NA	19-Oct-07	LLRW	GFLU001115G2
70-D19-09-5E	15	30-Aug-07	3	16	Concrete	11-Sep-07	HPS-PDPIPE-091107-191	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D19-09-5E	16	30-Aug-07	3	16	Concrete	11-Sep-07	HPS-PDPIPE-091107-191	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D19-09-5E	17	30-Aug-07	3	16	Concrete	11-Sep-07	HPS-PDPIPE-091107-191	NA	0	NA	19-Oct-07	LLRW	GFLU001115G2
70-D19-09-5E	18	30-Aug-07	3	16	Concrete	11-Sep-07	HPS-PDPIPE-091107-191	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D19-09-5E	19	30-Aug-07	3	16	Concrete	11-Sep-07	HPS-PDPIPE-091107-191	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D19-09-5E	20	30-Aug-07	3	16	Concrete	11-Sep-07	HPS-PDPIPE-091107-191	NA	0	NA	31-Oct-08	Non-LLRW[b]	NA
70-D19-09-5E	21	30-Aug-07	3	16	Concrete	12-Sep-07	HPS-PDPIPE-091207-192	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-5E	22	30-Aug-07	3	16	Concrete	12-Sep-07	HPS-PDPIPE-091207-192	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-5E	23	30-Aug-07	3	16	Concrete	12-Sep-07	HPS-PDPIPE-091207-192	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-5E	24	04-Sep-07	3	16	Concrete	12-Sep-07	HPS-PDPIPE-091207-192	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-5E	25	04-Sep-07	3	16	Concrete	12-Sep-07	HPS-PDPIPE-091207-192	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-5E	26	04-Sep-07	3	16	Concrete	12-Sep-07	HPS-PDPIPE-091207-192	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-5E	27	04-Sep-07	3	16	Concrete	12-Sep-07	HPS-PDPIPE-091207-192	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-5E	28	04-Sep-07	3	16	Concrete	12-Sep-07	HPS-PDPIPE-091207-192	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-5E	29	04-Sep-07	3	16	Concrete	12-Sep-07	HPS-PDPIPE-091207-192	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-5E	30	04-Sep-07	3	16	Concrete	12-Sep-07	HPS-PDPIPE-091207-192	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-5E	31	04-Sep-07	3	16	Concrete	12-Sep-07	HPS-PDPIPE-091207-192	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-5E	32	04-Sep-07	3	16	Concrete	12-Sep-07	HPS-PDPIPE-091207-192	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-5E	33	04-Sep-07	2.5	16	Concrete	12-Sep-07	HPS-PDPIPE-091207-192	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-5E	34	05-Sep-07	2.83	15	Concrete	12-Sep-07	HPS-PDPIPE-091207-192	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-5E	35	05-Sep-07	2.25	15	Concrete	12-Sep-07	HPS-PDPIPE-091207-192	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-5E	MH462	05-Sep-07	NA	NA	Concrete	12-Sep-07	HPS-PDPIPE-091207-195	NA	0	NA	19-Sep-07	Non-LLRW[b]	NA
70-D19-09-8A	01	28-Nov-07	5	6	VCP	12-Dec-07	HPS-PDPIPE-121207-221	NA	0	NA	14-Mar-08	Non-LLRW[b]	NA

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-D19-37-1F	01	16-Oct-07	20	19	Steel	24-Oct-07	HPS-PDPIPE-102407-208	NA	0	NA	03-Dec-07	Non-LLRW[b]	NA
70-D19-37-2I	MH478	07-Jan-09	NA	NA	Brick	20-Jan-09	HPS-PDPIPE-012009-321	NA	0	NA	03-Feb-09	Non-LLRW[b]	NA
70-D19-37-2M	MH410	06-Jan-09	NA	NA	Concrete	20-Jan-09	HPS-PDPIPE-012009-322	NA	0	NA	03-Feb-09	Non-LLRW[b]	NA
70-D19-37-8A	01	07-Jan-09	5	3	CIP	20-Jan-09	HPS-PDPIPE-012009-320	NA	0	NA	03-Feb-09	Non-LLRW[b]	NA
70-D19-44-1L	01	11-Aug-08	3	24	Concrete	25-Aug-08	HPS-PDPIPE-082508-293	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D19-44-1L	02	11-Aug-08	3	24	Concrete	15-Sep-08	HPS-PDPIPE-091508-301	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D19-44-1L	05	11-Aug-08	3	24	Concrete	25-Aug-08	HPS-PDPIPE-082508-293	NA	0	NA	01-Dec-08	Non-LLRW[b]	NA
70-D19-44-8A	MH483	07-Apr-11	NA	NA	Brick	28-Jul-11	HPS-PGPIPE-072811-001	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-D19-66-2A	MH418	05-Sep-07	NA	NA	Concrete	19-Sep-07	HPS-PDPIPE-091907-202	NA	0	NA	03-Oct-07	Non-LLRW[b]	NA
70-D19-67-8G	01	22-Sep-08	7	6	CIP	03-Oct-08	HPS-PDPIPE-100308-311	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D19-67-8G	02	22-Sep-08	1.5	6	CIP	03-Oct-08	HPS-PDPIPE-100308-311	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D27-00-2S	MH442	26-Jun-08	NA	NA	Brick	21-Jul-08	HPS-PDPIPE-072108-277	NA	0	NA	15-Sep-08	Non-LLRW[b]	NA
70-D27-00-2X	01	25-Aug-08	10	15	PVC	17-Sep-08	HPS-PDPIPE-091708-305	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D27-00-2X	02	25-Aug-08	3	12	Brick	17-Sep-08	HPS-PDPIPE-091708-306	NA	0	NA	06-Dec-08	Non-LLRW[b]	NA
70-D27-00-2X	MH436	25-Aug-08	NA	NA	Brick	13-Sep-08	HPS-PDPIPE-091308-298	NA	0	NA	03-Dec-08	Non-LLRW[b]	NA
70-D27-00-2Y	MH437	19-Jun-08	NA	NA	Concrete	21-Jul-08	HPS-PDPIPE-072108-277	NA	0	NA	13-Sep-08	Non-LLRW[b]	NA
70-D27-36-2Q	01	14-Jul-08	8	15	Concrete/VCP	05-Aug-08	HPS-PDPIPE-080508-282	NA	0	NA	30-Oct-08	Non-LLRW[b]	NA
70-D27-37-2T	01	21-Jun-08	15.66	8	Steel	22-Jul-08	HPS-PDPIPE-072208-281	NA	0	NA	17-Sep-08	Non-LLRW[b]	NA
70-D27-37-2T	MH440	20-Jun-08	NA	NA	Brick	21-Jul-08	HPS-PDPIPE-072108-277	NA	0	NA	17-Sep-08	Non-LLRW[b]	NA
70-D27-37-2W	MH438	20-Jun-08	NA	NA	Brick	21-Jul-08	HPS-PDPIPE-072108-277	NA	0	NA	15-Sep-08	Non-LLRW[b]	NA
70-D27-67-2B	MH455	22-Sep-08	NA	NA	Concrete	03-Oct-08	HPS-PDPIPE-100308-310	NA	0	NA	09-Dec-08	Non-LLRW[b]	NA
70-E27-00-2A	01	13-Jun-11	5	24	VCP	28-Jul-11	HPS-PGPIPE-072811-002	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-E27-00-2A	MH456	13-Jun-11	NA	NA	Concrete	28-Jul-11	HPS-PGPIPE-072811-001	NA	0	NA	05-Aug-11	Non-LLRW[b]	NA
70-E27-00-2F	01	28-Jun-08	5	6	CIP	22-Jul-08	HPS-PDPIPE-072208-279	NA	0	NA	11-Sep-08	Non-LLRW[b]	NA
70-E27-00-2F	MH454	27-Jun-08	NA	NA	Brick	21-Jul-08	HPS-PDPIPE-072108-277	NA	0	NA	11-Sep-08	Non-LLRW[b]	NA
70-E27-00-2H	01	27-Jun-08	3	24	Concrete	21-Jul-08	HPS-PDPIPE-072108-276	NA	0	NA	11-Sep-08	Non-LLRW[b]	NA
70-E27-00-2H	02	27-Jun-08	3	24	Concrete	21-Jul-08	HPS-PDPIPE-072108-276	NA	0	NA	11-Sep-08	Non-LLRW[b]	NA
70-E27-00-2H	03	27-Jun-08	2	24	Concrete	21-Jul-08	HPS-PDPIPE-072108-276	NA	0	NA	11-Sep-08	Non-LLRW[b]	NA
70-E27-00-2H	04	27-Jun-08	3	24	Concrete	21-Jul-08	HPS-PDPIPE-072108-276	NA	0	NA	11-Sep-08	Non-LLRW[b]	NA
70-E27-00-2H	MH453	28-Jun-08	NA	NA	Concrete	21-Jul-08	HPS-PDPIPE-072108-277	NA	0	NA	11-Sep-08	Non-LLRW[b]	NA

TABLE 3-5

PARCEL G PIPE AND MANHOLE RADIOLOGICAL SURVEYS AND DISPOSITION SUMMARY

Trench Segment ID	Section No.	Date Excavated	Description			Radiological Survey		Sr-90 Solid Piping Analysis[a]			Disposition		
			Length (feet)	Diameter (inches)	Material Type	Date Performed	Survey Report No.	Date Collected	No. of Samples	Pipe/Manhole Sample ID	Date Transferred	Waste Type	LLRW Bin No.
70-E27-00-2J	01	30-Jun-08	2	4	CIP	22-Jul-08	HPS-PDPIPE-072208-279	NA	0	NA	17-Sep-08	Non-LLRW[b]	NA
70-E27-00-2K	MH452	30-Jun-08	NA	NA	Brick	21-Jul-08	HPS-PDPIPE-072108-277	NA	0	NA	17-Sep-08	Non-LLRW[b]	NA
70-E27-00-2L	MH451	30-Jun-08	NA	NA	Brick	21-Jul-08	HPS-PDPIPE-072108-277	NA	0	NA	11-Sep-08	Non-LLRW[b]	NA
70-E27-00-2M	01	07-Jul-08	6	18	Concrete/VCP	21-Jul-08	HPS-PDPIPE-072108-278	NA	0	NA	17-Sep-08	Non-LLRW[b]	NA
70-E27-00-2M	MH447	07-Jul-08	NA	NA	Brick	21-Jul-08	HPS-PDPIPE-072108-277	NA	0	NA	17-Sep-08	Non-LLRW[b]	NA
70-E27-00-2O	MH448	07-Jul-08	NA	NA	Brick	21-Jul-08	HPS-PDPIPE-072108-277	NA	0	NA	17-Sep-08	Non-LLRW[b]	NA
70-E27-00-2P	01	10-Jul-08	4	18	Concrete/VCP	21-Jul-08	HPS-PDPIPE-072108-278	NA	0	NA	17-Sep-08	Non-LLRW[b]	NA
70-E27-00-2P	MH444	10-Jul-08	NA	NA	Brick	21-Jul-08	HPS-PDPIPE-072108-277	NA	0	NA	17-Sep-08	Non-LLRW[b]	NA
70-E27-00-2R	MH443	26-Jun-08	NA	NA	Brick	21-Jul-08	HPS-PDPIPE-072108-277	NA	0	NA	15-Sep-08	Non-LLRW[b]	NA
70-E27-00-3C	MH446	08-Jul-08	NA	NA	Concrete	22-Oct-08	HPS-PDPIPE-102208-314	NA	0	NA	24-Nov-08	Non-LLRW[b]	NA
70-E27-00-3C	MH449	02-Jul-08	NA	NA	Concrete	21-Jul-08	HPS-PDPIPE-072108-277	NA	0	NA	16-Sep-08	Non-LLRW[b]	NA
70-E27-00-3H	01	08-Jul-08	20	16	Steel/VCP	22-Jul-08	HPS-PDPIPE-072208-280	NA	0	NA	17-Sep-08	Non-LLRW[b]	NA
70-E27-00-3K	01	11-Jul-08	20	16	Steel/VCP	22-Jul-08	HPS-PDPIPE-072208-280	NA	0	NA	17-Sep-08	Non-LLRW[b]	NA
70-E27-00-3K	MH441	25-Jun-08	NA	NA	Concrete	21-Jul-08	HPS-PDPIPE-072108-277	NA	0	NA	16-Sep-08	Non-LLRW[b]	NA
70-E27-00-3L	01	19-Jun-08	18	16	Steel/VCP	22-Jul-08	HPS-PDPIPE-072208-280	NA	0	NA	17-Sep-08	Non-LLRW[b]	NA
70-E27-00-3L	MH439	23-Jun-08	NA	NA	Concrete	21-Jul-08	HPS-PDPIPE-072108-277	NA	0	NA	16-Sep-08	Non-LLRW[b]	NA
70-E27-00-3M	MH445	10-Jul-08	NA	NA	Brick	21-Jul-08	HPS-PDPIPE-072108-277	NA	0	NA	17-Sep-08	Non-LLRW[b]	NA
72-D17-34-9C	03	02-Jun-08	2	18	CIP	23-Jun-08	HPS-PDPIPE-062308-275	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
72-D17-34-9G	03	03-Jun-08	2	18	CIP	23-Jun-08	HPS-PDPIPE-062308-275	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA
72-D17-34-9H	06	03-Jun-08	2	18	CIP	23-Jun-08	HPS-PDPIPE-062308-275	NA	0	NA	02-Jul-08	Non-LLRW[b]	NA

Notes:

[a] Solid pipe/manhole sample was analyzed for Sr-90 based on results of radiological survey to ensure material was not contaminated and minimize waste generation.

[b] Non-LLRW indicates that the pipe/manhole was disposed of off-site or recycled and NA indicates that the pipe was not surveyed.

[c] Piping was disposed of as LLRW with the DON's concurrence without performing radiological survey activities due to time constraints.

[d] Solid sample collected due to suspected fire brick construction; sample identified presence of Ra-226.

Abbreviations and Acronyms:

CIP – cast iron pipe
CMP – corrugated metal pipe
LLRW – low-level radioactive waste
MH – manhole
NA – not applicable
Non-LLRW – non-low-level radioactive waste
PVC – polyvinyl chloride plastic pipe
Ra-226 – radium-226
Sr-90 – strontium-90
VCP – vitreous clay pipe

TABLE 3-6

PARCEL G PIPE AND MANHOLE SEDIMENT SAMPLES AND DISPOSITION SUMMARY

			Description			Sediment Sample					Disposition		
Trench Segment ID	Section No.	Date Excavated	Length (feet)	Diameter (inches)	Material Type	Date Collected	Sample ID No.	No. of Samples	Elevated ROC	Elevated Results (pCi/g)	Date Transferred	Waste Type	LLRW Bin No.
70-C17-00-2C	01	23-Jul-07	3.5	10	Concrete	23-Jul-07	PI0007	1	NA	NA	15-Sep-07	Non-LLRW[a]	NA
70-C17-00-2C	02	23-Jul-07	3.5	10	Concrete	23-Jul-07	PI0008	1	NA	NA	15-Sep-07	Non-LLRW[a]	NA
70-D17-00-1G	44	04-Apr-11	3	15	Concrete	04-Apr-11	PI0001	1	NA	NA	5-Aug-11	Non-LLRW[a]	NA
70-D17-00-1L	19	30-Jul-07	7	21	Concrete	30-Jul-07	PI0013	1	NA	NA	15-Sep-07	Non-LLRW[a]	NA
70-D17-00-1L	20	30-Jul-07	3.5	21	Concrete	30-Jul-07	PI0014	1	NA	NA	07-Sep-07	Non-LLRW[a]	NA
70-D17-00-1O	02	01-Aug-07	4	24	VCP	01-Aug-07	PI0032	1	NA	NA	10-Sep-08	Non-LLRW[a]	NA
70-D17-00-1O	MH297	01-Aug-07	NA	NA	Brick	01-Aug-07	MH003	1	NA	NA	07-Sep-07	Non-LLRW[a]	NA
70-D17-00-1O	MH302	02-Aug-07	NA	NA	Brick	02-Aug-07	MH004	1	NA	NA	10-Sep-08	Non-LLRW[a]	NA
70-D17-00-1R	01	31-Jul-07	3	24	VCP	31-Jul-07	PI0029	1	NA	NA	10-Sep-08	Non-LLRW[a]	NA
70-D17-00-2F	01	07-Apr-11	10	15	Concrete	07-Apr-11	PI0002	1	NA	NA	5-Aug-11	Non-LLRW[a]	NA
70-D17-00-2F	MH309	07-Apr-11	NA	NA	Concrete	07-Apr-11	MH0003	1	NA	NA	5-Aug-11	Non-LLRW[a]	NA
70-D17-00-2G	03	07-Aug-07	7.42	15	Concrete	07-Aug-07	PI0020	1	Ra-226	2.1683	07-Sep-07	LLRW	GFLU001293G2
70-D17-00-2G	05	07-Aug-07	4	15	Concrete	07-Aug-07	PI0021	1	NA	NA	25-Sep-07	Non-LLRW[a]	NA
70-D17-00-2G	08	07-Aug-07	7	15	Concrete	07-Aug-07	PI0022	1	NA	NA	10-Sep-08	Non-LLRW[a]	NA
70-D17-00-2H	02	01-Aug-07	4	15	Concrete	01-Aug-07	PI0015	1	Cs-137	0.14897	09-Aug-07	LLRW	CVGU001124C
70-D17-00-2H	10	02-Aug-07	9	15	Concrete	02-Aug-07	PI0016	1	NA	NA	06-Sep-07	Non-LLRW[a]	NA
70-D17-00-2H	33	06-Aug-07	6	15	Concrete	06-Aug-07	PI0017	1	NA	NA	25-Oct-07	Non-LLRW[a]	NA
70-D17-00-2H	37	06-Aug-07	8	15	Concrete	06-Aug-07	PI0018	1	NA	NA	25-Oct-07	Non-LLRW[a]	NA
70-D17-00-2H	41	06-Aug-07	7	15	Concrete	06-Aug-07	PI0019	1	NA	NA	25-Oct-07	Non-LLRW[a]	NA
70-D17-00-2L	03	20-Jul-07	4	24	Concrete	20-Jul-07	PI0005	1	NA	NA	10-Aug-07	Non-LLRW[a]	NA
70-D17-00-2L	04	20-Jul-07	4	24	Concrete	20-Jul-07	PI0006	1	NA	NA	11-Sep-08	Non-LLRW[a]	NA
70-D17-00-2N	MH289	14-Aug-07	NA	NA	Concrete	14-Aug-07	MH006	1	NA	NA	25-Sep-07	Non-LLRW[a]	NA
70-D17-00-2P	04	09-Aug-07	12.33	12	Concrete	09-Aug-07	PI0023	1	NA	NA	25-Sep-07	Non-LLRW[a]	NA
70-D17-00-3C	01	19-Jul-07	2	8	VCP	19-Jul-07	PI0001	1	Cs-137	0.42159	31-Jul-07	LLRW	GFLU001163G2
70-D17-00-3C	MH281	19-Jul-07	NA	NA	Concrete	19-Jul-07	MH001	1	NA	NA	23-Sep-08	Non-LLRW[a]	NA
70-D17-00-3D	01	20-Jul-07	9.5	21	Concrete	20-Jul-07	PI0002	1	Ra-226	2.2179	31-Jul-07	LLRW	GFLU001163G2
70-D17-00-3D	03	20-Jul-07	5	21	Concrete	20-Jul-07	PI0003	1	Cs-137	0.35878	31-Jul-07	LLRW	GFLU001163G2
70-D17-00-3D	05	20-Jul-07	4.5	21	Concrete	20-Jul-07	PI0004	1	Cs-137	0.13621	31-Jul-07	LLRW	GFLU001163G2
70-D17-00-3F	MH284	23-Jul-07	NA	NA	Brick	23-Jul-07	MH002	1	Cs-137	0.47859	09-Aug-07	LLRW	CVGU001124C
70-D17-00-3H	MH287	25-Jul-07	NA	NA	Brick	25-Jul-07	MH050	1	Ra-226	4.2369	02-Sep-08	LLRW	GFLU001161G6
70-D17-00-3I	03	24-Jul-07	12	21	Concrete	24-Jul-07	PI0009	1	NA	NA	08-Sep-07	Non-LLRW[a]	NA

TABLE 3-6

PARCEL G PIPE AND MANHOLE SEDIMENT SAMPLES AND DISPOSITION SUMMARY

			Description			Sediment Sample					Disposition		
Trench Segment ID	Section No.	Date Excavated	Length (feet)	Diameter (inches)	Material Type	Date Collected	Sample ID No.	No. of Samples	Elevated ROC	Elevated Results (pCi/g)	Date Transferred	Waste Type	LLRW Bin No.
70-D17-00-3I	04	24-Jul-07	5.5	21	Concrete	24-Jul-07	PI0010	1	NA	NA	08-Sep-07	Non-LLRW[a]	NA
70-D17-00-3I	07	25-Jul-07	7	21	Concrete	25-Jul-07	PI0011	1	Cs-137	0.1798	09-Aug-07	LLRW	CVGU001124C
70-D17-00-3I	08	25-Jul-07	6.5	21	Concrete	25-Jul-07	PI0012	1	NA	NA	08-Sep-07	Non-LLRW[a]	NA
70-D17-00-3I	MH290	13-Aug-07	NA	NA	Concrete	13-Aug-07	MH005	1	NA	NA	25-Sep-07	Non-LLRW[a]	NA
70-D17-00-8I	06	19-Aug-08	8	10	Steel	19-Aug-08	PI0084	1	NA	NA	02-Dec-08	Non-LLRW[a]	NA
70-D17-00-8I	07	19-Aug-08	4	10	Steel	19-Aug-08	PI0085	1	NA	NA	02-Dec-08	Non-LLRW[a]	NA
70-D17-00-8K	MH481	04-Apr-11	NA	NA	Brick	04-Apr-11	MH0001	1	NA	NA	5-Aug-11	Non-LLRW[a]	NA
70-D17-00-8L	MH482	05-Apr-11	NA	NA	Concrete	05-Apr-11	MH0002	1	NA	NA	5-Aug-11	Non-LLRW[a]	NA
70-D17-34-1P	MH300	22-Aug-07	NA	NA	Brick	22-Aug-07	MH007	1	Cs-137	0.26691	18-Sep-07	LLRW	GFLU001115G2
70-D17-34-2K	02	21-Aug-07	3	8	VCP	21-Aug-07	PI0024	1	NA	NA	28-Sep-07	Non-LLRW[a]	NA
70-D18-00-1G	02	17-May-08	3	24	Concrete	17-May-08	PI0053	1	Cs-137	0.53823	23-May-08	LLRW	GFLU001279G4
70-D18-00-1G	13	17-May-08	3	24	Concrete	17-May-08	PI0054	1	Cs-137	0.67231	23-May-08	LLRW	GFLU001279G4
70-D18-00-1H	07	13-Aug-08	3	24	Concrete	13-Aug-08	PI0076	1	Cs-137	0.62791	28-Aug-08	LLRW	BKRU026026G5
70-D18-00-1H	10	13-Aug-08	3	24	Concrete	13-Aug-08	PI0077	1	Cs-137	0.68619	28-Aug-08	LLRW	BKRU026026G5
70-D18-00-1H	17	13-Aug-08	3	24	Concrete	13-Aug-08	PI0078	1	Cs-137	0.4263	28-Aug-08	LLRW	BKRU026026G5
70-D18-00-1H	21	13-Aug-08	3	24	Concrete	13-Aug-08	PI0079	1	Ra-226 Cs-137	1.7856 0.59296	28-Aug-08	LLRW	BKRU026026G5
70-D18-00-1J	01	14-Aug-08	3	24	Concrete	14-Aug-08	PI0080	1	Cs-137	0.49814	28-Aug-08	LLRW	BKRU026026G5
70-D18-00-1J	04	14-Aug-08	3	24	Concrete	14-Aug-08	PI0081	1	Cs-137	0.2773	28-Aug-08	LLRW	BKRU026026G5
70-D18-00-1J	08	14-Aug-08	3	24	Concrete	14-Aug-08	PI0082	1	Cs-137	0.25371	28-Aug-08	LLRW	BKRU026026G5
70-D18-00-1J	09	14-Aug-08	3	24	Concrete	14-Aug-08	PI0083	1	Cs-137	0.81112	28-Aug-08	LLRW	BKRU026026G5
70-D18-00-4H	MH315	04-Sep-08	NA	NA	Concrete	04-Sep-08	MH056	1	Cs-137	0.2051	14-Oct-08	LLRW	GFLU001052G6
70-D18-09-3C	MH468	11-Dec-07	NA	NA	Concrete	11-Dec-07	MH037	1	NA	NA	29-Jan-08	Non-LLRW[a]	NA
70-D18-09-3E	MH469	11-Dec-07	NA	NA	Concrete	11-Dec-07	MH038	1	NA	NA	29-Jan-08	Non-LLRW[a]	NA
70-D18-09-3H	MH340	12-Dec-07	NA	NA	Brick	12-Dec-07	MH041	1	NA	NA	10-Sep-08	LLRW[d]	GFLU001043G7
70-D18-09-3J	MH334	12-Dec-07	NA	NA	Concrete	12-Dec-07	MH039	1	NA	NA	04-Dec-08	Non-LLRW[a]	NA
70-D18-09-3L	MH338	11-Dec-07	NA	NA	Brick	11-Dec-07	MH036	1	Cs-137	0.21991	20-Dec-07	LLRW	GFLU001115G2
70-D18-09-3N	MH466	10-Dec-07	NA	NA	Concrete	10-Dec-07	MH034	1	NA	NA	13-Feb-08	Non-LLRW[a]	NA
70-D18-09-3O	MH337	11-Dec-07	NA	NA	Brick	11-Dec-07	MH035	1	Cs-137	0.23724	20-Dec-07	LLRW	GFLU001115G2
70-D18-33-1G	15	17-May-08	3	24	Concrete	17-May-08	PI0049	1	Cs-137	0.78355	23-May-08	LLRW	GFLU001279G4
70-D18-33-1G	17	17-May-08	3	24	Concrete	17-May-08	PI0050	1	Cs-137	0.87795	23-May-08	LLRW	GFLU001279G4
70-D18-33-1G	20	17-May-08	3	24	Concrete	17-May-08	PI0052	1	Cs-137	0.80153	23-May-08	LLRW	GFLU001279G4
70-D18-33-1G	21	17-May-08	3	24	Concrete	17-May-08	PI0051	1	Cs-137	0.86576	23-May-08	LLRW	GFLU001279G4

TABLE 3-6

PARCEL G PIPE AND MANHOLE SEDIMENT SAMPLES AND DISPOSITION SUMMARY

			Description			Sediment Sample					Disposition		
Trench Segment ID	Section No.	Date Excavated	Length (feet)	Diameter (inches)	Material Type	Date Collected	Sample ID No.	No. of Samples	Elevated ROC	Elevated Results (pCi/g)	Date Transferred	Waste Type	LLRW Bin No.
70-D18-33-1M	08	10-May-08	3	18	Concrete	10-May-08	PI0045	1	NA	NA	02-Jul-08	Non-LLRW[a]	NA
70-D18-33-2N	46	15-May-08	3	21	Concrete	15-May-08	PI0046	1	Cs-137	0.23328	27-May-08	LLRW	GFLU001279G4
70-D18-33-2N	47	15-May-08	3	21	Concrete	15-May-08	PI0047	1	NA	NA	02-Jul-08	Non-LLRW[a]	NA
70-D18-33-2N	53	15-May-08	3	21	Concrete	15-May-08	PI0048	1	Ra-226 Cs-137	1.582 0.19316	27-May-08	LLRW	GFLU001279G4
70-D18-33-2N	73	02-Dec-08	3	21	Concrete	02-Dec-08	PI0086	1	Ra-226 Cs-137	1.8063 0.17977	17-Dec-08	LLRW	GFLU001109G7
70-D18-33-2N	74	02-Dec-08	3	21	Concrete	02-Dec-08	PI0087	1	Cs-137	0.197	17-Dec-08	LLRW	GFLU001109G7
70-D18-33-2N	76	02-Dec-08	3	21	Concrete	02-Dec-08	PI0088	1	Ra-226 Cs-137	2.0191 0.2667	17-Dec-08	LLRW	GFLU001109G7
70-D18-33-2N	77	02-Dec-08	3	21	Concrete	02-Dec-08	PI0089	1	Ra-226 Cs-137	3.4019 0.26294	17-Dec-08	LLRW	GFLU001109G7
70-D18-33-2N	MH357	16-May-08	NA	NA	Concrete	16-May-08	MH046	1	Cs-137	0.20513	27-May-08	LLRW	GFLU001279G4
70-D18-33-3U	06	18-Jul-08	2.7	10	Concrete	18-Jul-08	PI0055	1	Cs-137	0.17784	28-Aug-08	LLRW	BKRU026026G5
70-D18-33-4B	MH322	21-Jan-08	NA	NA	Firebrick	21-Jan-08	MH042	1	NA	NA	29-Feb-08	LLRW	GFLU001279G4
70-D18-33-4D	MH319	15-Jan-08	NA	NA	Brick	15-Jan-08	MH040	1	NA	NA	13-Feb-08	Non-LLRW[a]	NA
70-D18-33-4E	MH474	22-Jul-08	NA	NA	Brick/Concrete	22-Jul-08	MH049	1	NA	NA	05-Dec-08	Non-LLRW[a]	NA
70-D18-33-4P	01	07-Feb-08	20	NA	Steel	07-Feb-08	PI0035	2	NA	NA	20-Mar-08	Non-LLRW[a]	NA
70-D18-33-4P	MH347	07-Feb-08	NA	NA	Concrete	07-Feb-08	MH045	1	NA	NA	20-Mar-08	Non-LLRW[a]	NA
70-D18-33-6C	01	22-Jul-08	2.7	4	CIP	22-Jul-08	PI0059	1	NA	NA	28-Aug-08	LLRW[c]	BKRU026026G5
70-D18-33-6C	02	22-Jul-08	3.5	4	CIP	22-Jul-08	PI0056	1	NA	NA	28-Aug-08	LLRW[c]	BKRU026026G5
70-D18-33-6C	03	22-Jul-08	5	4	CIP	22-Jul-08	PI0060	1	NA	NA	28-Aug-08	LLRW[c]	BKRU026026G5
70-D18-33-6C	04	22-Jul-08	4.5	4	CIP	22-Jul-08	PI0057	1	NA	NA	28-Aug-08	LLRW[c]	BKRU026026G5
70-D18-33-6C	06	22-Jul-08	3.5	4	CIP	22-Jul-08	PI0058	1	NA	NA	28-Aug-08	LLRW[c]	BKRU026026G5
70-D18-44-1L	15	02-Aug-08	4	10	CMP	02-Aug-08	PI0062	1	NA	NA	01-Dec-08	LLRW[d]	BKRU026006G2
70-D18-44-1U	02	13-Feb-08	4	10	CMP	13-Feb-08	PI0039	1	NA	NA	20-Mar-08	Non-LLRW[a]	NA
70-D18-44-1V	09	13-Feb-08	2.25	10	CMP	13-Feb-08	PI0041	1	NA	NA	30-May-08	Non-LLRW[a]	NA
70-D18-44-1V	21	13-Feb-08	1.9	10	CMP	13-Feb-08	PI0042	1	NA	NA	30-May-08	Non-LLRW[a]	NA
70-D18-44-1W	10	12-Feb-08	1.75	10	CMP	12-Feb-08	PI0043	1	NA	NA	30-May-08	Non-LLRW[a]	NA
70-D18-44-1W	17	12-Feb-08	2.1	10	CMP	12-Feb-08	PI0044	1	NA	NA	30-May-08	Non-LLRW[a]	NA
70-D18-44-2G	06	12-Feb-08	5	10	CMP	12-Feb-08	PI0036	1	Cs-137	0.60541	29-Feb-08	LLRW	GFLU001279G4
70-D18-44-2G	07	12-Feb-08	4	10	CMP	12-Feb-08	PI0037	1	Cs-137	0.45033	29-Feb-08	LLRW	GFLU001279G4

TABLE 3-6

PARCEL G PIPE AND MANHOLE SEDIMENT SAMPLES AND DISPOSITION SUMMARY

			Description			Sediment Sample					Disposition		
Trench Segment ID	Section No.	Date Excavated	Length (feet)	Diameter (inches)	Material Type	Date Collected	Sample ID No.	No. of Samples	Elevated ROC	Elevated Results (pCi/g)	Date Transferred	Waste Type	LLRW Bin No.
70-D18-44-2G	10	12-Feb-08	2	10	Concrete/VCP	12-Feb-08	PI0038	1	Cs-137	0.19014	29-Feb-08	LLRW	GFLU001279G4
70-D18-44-8C	02	14-Feb-08	3.5	4	CIP	14-Feb-08	PI0040	1	Cs-137	0.48015	29-Feb-08	LLRW	GFLU001279G4
70-D19-00-1M	08	09-Aug-08	3	24	Concrete	09-Aug-08	PI0063	1	Cs-137	0.45293	28-Aug-08	LLRW	BKRU026026G5
70-D19-00-1M	10	09-Aug-08	3	24	Concrete	09-Aug-08	PI0064	1	Ra-226 Cs-137	1.4937 0.21319	28-Aug-08	LLRW	BKRU026026G5
70-D19-00-1M	11	09-Aug-08	3	24	Concrete	09-Aug-08	PI0065	1	Cs-137	0.58532	28-Aug-08	LLRW	BKRU026026G5
70-D19-00-1M	16	09-Aug-08	3	24	Concrete	09-Aug-08	PI0066	1	Cs-137	0.15603	28-Aug-08	LLRW	BKRU026026G5
70-D19-00-1M	17	09-Aug-08	3	24	Concrete	09-Aug-08	PI0067	1	Cs-137	0.17613	28-Aug-08	LLRW	BKRU026026G5
70-D19-00-1M	21	09-Aug-08	3	24	Concrete	09-Aug-08	PI0068	1	Ra-226	2.1086	28-Aug-08	LLRW	BKRU026026G5
70-D19-00-1M	23	09-Aug-08	3	24	Concrete	09-Aug-08	PI0069	1	NA	NA	26-Nov-08	Non-LLRW[a]	NA
70-D19-00-1M	25	09-Aug-08	3	24	Concrete	09-Aug-08	PI0070	1	NA	NA	26-Nov-08	Non-LLRW[a]	NA
70-D19-00-1M	26	09-Aug-08	3	24	Concrete	09-Aug-08	PI0071	1	Ra-226	1.9408	28-Aug-08	LLRW	BKRU026026G5
70-D19-00-1M	29	09-Aug-08	3	24	Concrete	09-Aug-08	PI0072	1	NA	NA	26-Nov-08	Non-LLRW[a]	NA
70-D19-00-1M	31	09-Aug-08	3	24	Concrete	09-Aug-08	PI0073	1	NA	NA	26-Nov-08	Non-LLRW[a]	NA
70-D19-00-1M	MH430	11-Aug-08	NA	NA	Concrete	11-Aug-08	MH051	1	Ra-226 Cs-137	2.5562 0.42211	29-Aug-08	LLRW	BKRU026026G5
70-D19-00-1P	46	26-Oct-07	3	24	Concrete	26-Oct-07	PI0025	1	NA	NA	05-Dec-07	Non-LLRW[a]	NA
70-D19-00-1T	MH422	24-Oct-07	NA	NA	Brick	24-Oct-07	MH011	1	NA	NA	15-Nov-07	Non-LLRW[a]	NA
70-D19-00-2K	MH412	16-Oct-07	NA	NA	Brick	16-Oct-07	MH010	1	NA	NA	20-Nov-07	Non-LLRW[a]	NA
70-D19-00-2Q	MH407	08-Oct-07	NA	NA	Brick	08-Oct-07	MH009	1	NA	NA	04-Dec-07	Non-LLRW[a]	NA
70-D19-00-2V	MH390	03-Sep-08	NA	NA	Brick	03-Sep-08	MH055	1	NA	NA	24-Nov-08	Non-LLRW[a]	NA
70-D19-00-2V	MH391	03-Sep-08	NA	NA	Brick	03-Sep-08	MH054	1	Cs-137	0.179	14-Oct-08	LLRW	GFLU001016G6
70-D19-00-3F	MH402	26-Aug-08	NA	NA	Brick	26-Aug-08	MH052	1	Cs-137	0.20919	23-Sep-08	LLRW	GFLU001234G6
70-D19-00-3L	MH404	27-Aug-08	NA	NA	Brick	27-Aug-08	MH053	1	NA	NA	06-Dec-08	Non-LLRW[a]	NA
70-D19-44-1L	02	11-Aug-08	3	24	Concrete	11-Aug-08	PI0074	1	NA	NA	01-Dec-08	Non-LLRW[a]	NA
70-D19-44-1L	03	11-Aug-08	3	24	Concrete	11-Aug-08	PI0075	1	Cs-137	0.12059	28-Aug-08	LLRW	BKRU026026G5
70-D19-44-1L	06	07-Apr-11	4	24	Concrete	07-Apr-11	PI0003	1	Cs-137	0.2626	27-Jun-11	LLRW	BKRU025707G3
70-D19-66-2A	MH418	05-Sep-07	NA	NA	Concrete	05-Sep-07	MH008	1	NA	NA	03-Oct-07	Non-LLRW[a]	NA
70-E27-00-2F	MH454	27-Jun-08	NA	NA	Brick	27-Jun-08	MH047	1	NA	NA	11-Sep-08	Non-LLRW[a]	NA
70-E27-00-2H	MH453	28-Jun-08	NA	NA	Concrete	28-Jun-08	MH048	1	NA	NA	11-Sep-08	Non-LLRW[a]	NA
72-D17-34-8D	04	12-Jun-08	5.25	4	CIP	12-Jun-08	PI0005	1	Cs-137	0.25978	23-Jun-08	LLRW	GFLU001262G4
72-D17-34-9C	01	02-Jun-08	2.5	4	CIP	02-Jun-08	PI0001	1	NA	NA	23-Jun-08	LLRW[c]	GFLU001262G4
72-D17-34-9C	02	02-Jun-08	3.7	4	CIP	02-Jun-08	PI0002	1	NA	NA	23-Jun-08	LLRW[c]	GFLU001262G4