

3003-0604250004



CH2MHILL

CH2M HILL
Mound, Inc.
1 Mound Road
P.O. Box 3030
Miamisburg, OH
45343-3030

ER/WM-160/04
November 29, 2004

Ms. Margaret L. Marks, Director
Miamisburg Closure Project
U. S. Department of Energy
1075 Mound Road
Miamisburg, OH 45342

ATTENTION: Paul Lucas

SUBJECT: Contract No. DE-AC24-03OH20152
Statement of Work Requirement 055 - Regulator Reports
VARIOUS DOCUMENTS

Dear Ms. Marks:

Paul Lucas of your office has authorized the release of the following documents for public review:

- PRS 106 PRS Package, Public Review Draft, November 2004
- PRSs 211/212 PRS Package, Public Review Draft, November 2004
- ✓• PRS 271 / PRS 336 PRS Package, Public Review Draft, November 2004

Public comment will be accepted through December 29, 2004.

If you or members of your staff have any questions regarding the document, or if additional support is needed, please contact me at 937-865-4203.

Sincerely,

David A. Rakel
CERCLA Lead

DAR/ms

Enclosures

cc: Tim Fischer, USEPA, (1) w/attachments
Brian Nickel, OEPA, (4) w/attachments
Ruth Vandegrift, ODH, (1) w/attachments
Mary Wojciechowski, Tetra Tech, (1) w/attach
Sue Smiley, DOE/MCP, (1) w/attachments
Lisa Rawls, MCP, w/o attachments
Randy Tormey, DOE/OH, (1) w/attachments
Frank Bullock, MMCIC, (3) w/attachments

Jim Bonfiglio, MESH, (1) w/attachments
Public Reading Room, (4) w/attachments
Dave Rakel, CH2M Hill, (1) w/attachs
Val Darnell, CH2M Hill, (1) w/attachs
ER Records, CH2M Hill, (1) w/attachs
DCC (1) w/attachments
John Lehew, CH2M Hill, w/o attachments
file

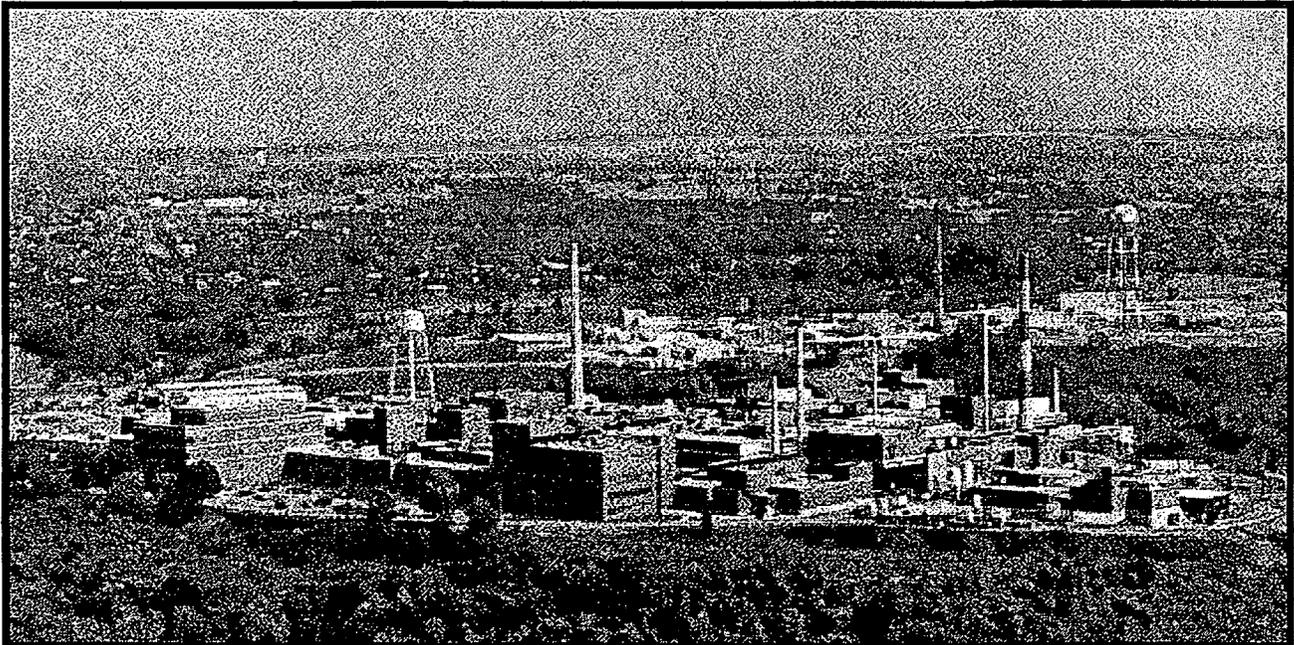


**Environmental
Restoration
Program**



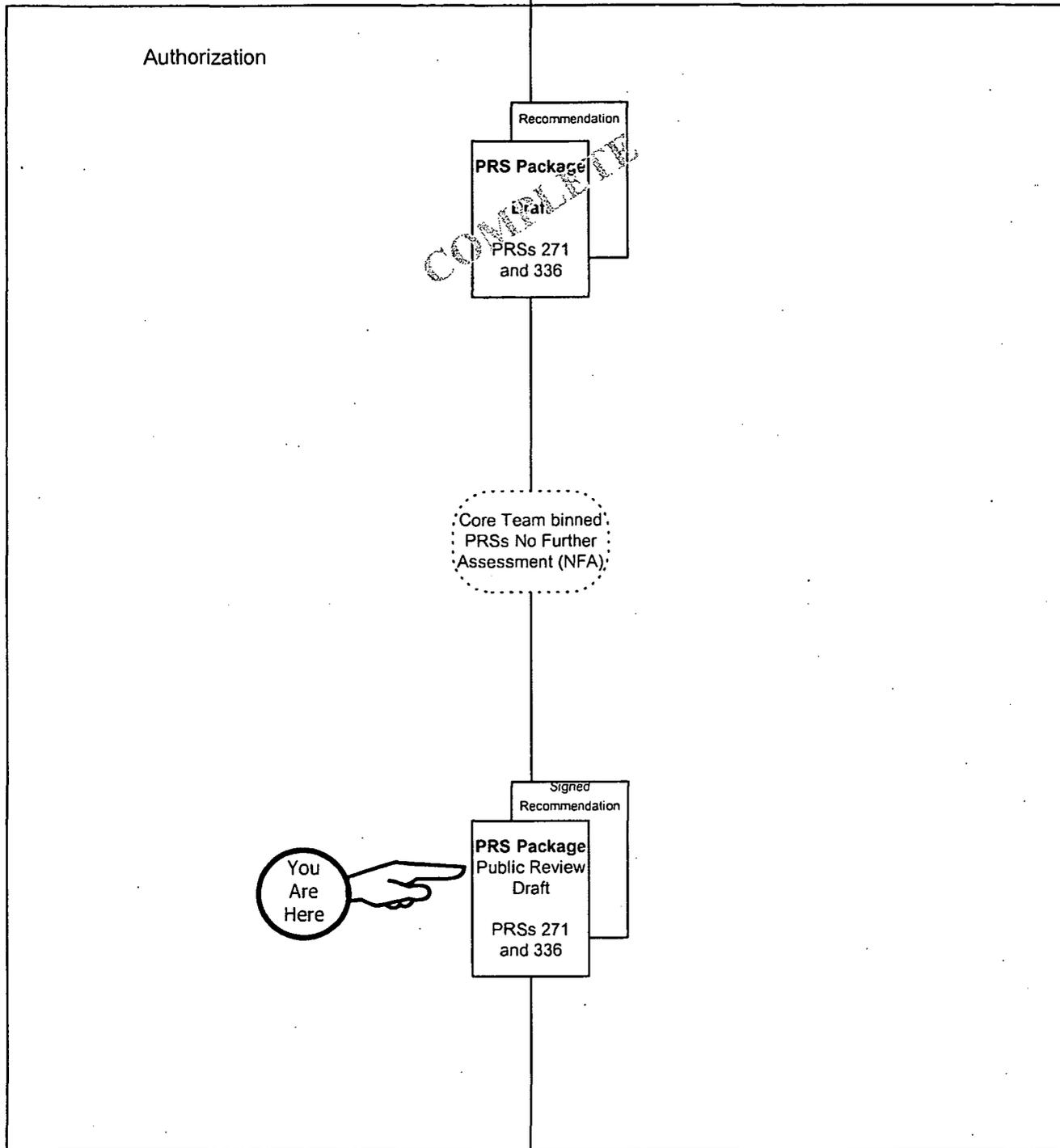
Miamisburg Closure Project Potential Release Site Package PRS 271 / PRS 336

Public Review Draft
November 2004



PRs 271 and 336

PRs 271 and 336



*Core Team recommendation also included in the Building 37 Closeout Report

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MIAMISBURG CLOSURE PROJECT

POTENTIAL RELEASE SITE PACKAGES

The following three documents are available
(November 29, 2004) for public information in
the CERCLA Public Reading Room, 305 E.
Central Ave., Miamisburg, Ohio.

PRS 106 (soil below G Building)
PRSs 211/212 (A Building Tanks)
PRS 271 / PRS 336 (Building 37 Tanks)

Questions can be referred to Paul Lucas at
(937) 847-8350 ext. 314

U.S. Department of Energy
U.S. Environmental Protection Agency
Ohio Environmental Protection Agency

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PRS HISTORY:

PRS 271 and PRS 336 are assigned to two underground tanks associated with Building 37: "Tank 100" (PRS 271), and "Tank 267" (PRS 336) [1]. See Figures 1-3 for their location. Building 37 was designed as a Radioactive Heat Source Testing Facility [2]. The building was equipped with sanitary facilities and low risk radiological drains. Both Tanks 100 and 267 were installed in 1966-1968, during the construction of Building 37 [3]. Tank 100 was designed to receive sanitary waste water and to serve as a lift station for the wastes into a sanitary waste manhole south of Building 37. Tank 267 was designed to receive low risk radioactive waste water from floor drains. However, Building 37 is reported not to have handled unsealed radionuclides [2]. Later uses of the building were non-radiological, including spectroscopy, adhesives formulation, organic materials process development, polymer battery development, and machine shop operations [2]. Safe Shutdown of Building 37 in 2003 was followed by its demolition in 2003/2004 [4].

Tank numbers 100 and 267 were assigned during a series of underground storage tank inventories [5]. A later underground tank evaluation described the regulatory status of both tanks to be "in compliance" [6] (see also Attachment 1).

Tank 100 (PRS 271) was an unlined single-walled steel 500-gallon sanitary holding tank [6]. It served as a lift station for both Building 37 and Building 88 (an office building). It was located in a 6' L x 4.5' W x 6' H underground concrete vault on the east side of Building 37 near its northeast corner. The tank was removed from its concrete vault in 2000/2001 during the Building 126 construction project [4]. During that project the Building 37 sanitary effluent line was re-piped from the vault, along the north side of the building, toward a new sanitary main to the west (see Figure 3). The concrete vault remained until March 2004, at which time it was demolished (see Figures 4 and 5).

Tank 267 (PRS 336) was an unlined single-walled steel 500-gallon settling tank [6]. It was located underground (not in a vault) on the north side of Building 37 near its northwest corner. The original intention for this tank was to receive low risk radioactive waste water from floor drains. Probably because of the lack of radiological operations in Building 37 [2], the floor drains were disconnected from Tank 267 and by-passed into Tank 100 in 1978 [7] (see Figure 3). Tank 267 was removed on February 22, 2001 during the Building 126 construction project [4] (see Figures 6 and 7). During that project the floor drain discharge line was probably connected to the new sanitary line running along the north side of the building (see Figure 3), and the 1978 line was abandoned.

Several drain lines that serviced the tanks in the vicinity of Building 37 were allowed to remain. The 1978 by-pass line connecting Building 37 floor drains to Tank 100, the sanitary line to the Tank 100 vault from the former Building 88, and the sanitary line from the Tank 100 vault to the manhole south of Building 37 remain in place. Lines

entering or exiting the concrete vault were cut and capped when the vault was removed. The 2000/2001 sanitary discharge line was cut and capped near the northwest corner of Building 37.

CONTAMINATION:

Historic Radiological Information

When the PRS numbers 271 and 336 were originally assigned, the tanks were not suspected of being contaminated or of causing releases to the environment [1]. PRS 271, "Sanitary Waste Tank (Tank 100)", was identified simply as holding sanitary wastes, with "None Suspected" entered under "Hazardous Conditions and Incidents". PRS 336, "Low Risk Waste Tank (Tank 267)", was identified simply as holding "Wastewater", with "None Suspected, Never used for low risk wastewaters" entered under "Hazardous Conditions and Incidents".

Recent Sampling

Radiological surveys of Tank 267, and soils nearby the tank, were performed at the time of its removal in 2001. These are contained in Radiological Survey Data Sheet (RSDS) #01-50-037 (Attachment 2) and RSDS #01-50-039 (Attachment 3). The data show that the tank was not contaminated above DOE Order 5400.5 release criteria, either inside or outside. Detected radionuclides in nearby soils were below 10^{-6} risk-based Soil Screening Level (SSL) criteria.

Radiological surveys of Tank 100, performed at the time of its removal in 2000/2001, have not been located. Because of this, the Building 37 Data Package (BDP) [4] planned the collection of additional radiological data during the demolition of the concrete vault that once held Tank 100. The BDP also planned that additional samples for chemical contaminants would be taken if stained soil, soil with any odor, or any other indication of contamination were found. The radiological results are found in RSDS #04-TF-0108 (Attachment 4). Swipes and direct alpha surveys of vault concrete detected no activity above DOE Order 5400.5 criteria. A soil sample taken at the base of the vault showed no detected radioactivity above the 10^{-6} risk-based SSL criteria. No unusual soil coloration or odor was observed.

Prior to its demolition, Building 37 was surveyed in 2003 under Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) protocols. Surveys found no residual radioactivity above DOE Order 5400.5 release criteria. Smear and direct surveys of sediment in floor drains also found no activity above these criteria [4]. For this reason Building 37 demolition debris was handled as non-radiological waste.

DISCUSSION:

The tanks constituting PRS 271 and 336 have been removed. The vault containing PRS 271 has been removed. PRS 336 had no vault.

Radionuclide contamination levels in soils near the original locations of PRS 271 (Tank 100) and PRS 336 (Tank 267) are below 10^{-6} risk-based SSL criteria.

The interior of Tank 267 is the first and most likely area outside Building 37 to have collected radiological contamination (if it was ever present). Residual activity on and in Tank 267 was below DOE 5400.5 release criteria. Therefore, the 1978 by-pass pipeline leading from Building 37 drains to sanitary Tank 100, and the sanitary pipelines to and from Tank 100, are likewise considered acceptable (below DOE 5400.5 release criteria). These lines have been capped and abandoned in place.

REFERENCES:

- [1] Operable Unit 9 Site Scoping Report: Volume 12 – Site Summary Report, Mound Plant, Miamisburg, Ohio, December 1994, pages A.1-29 and A.1-36.
- [2] Floyd Hertweck, CH2M Hill Mound, Inc., White Paper: Building 37 Structural History and Process History Summary Background Document, April 2003.
- [3] Drawing 303700-04007, drawer 114, 66-M-7, "Radioactive Heat Source Testing Facility, Plumbing", Rev. 1, 3/14/68; Miamisburg Cleanup Project Drawing Control Department.
- [4] Environmental Restoration Program, Building Data Package, Building 37, Final, January 2004; also: Barge Waggoner Sumner Cannon, Job No. 18368-00, "New Support Buildings for Power Systems Technologies", Sheets 1005, 1006, Issue A, June 2000, and personal communication with W. Brunner regarding as-built condition, October 2004.
- [5] Mound Plant Underground Storage Tank Program Plan and Regulatory Status Review (Final), US DOE, Albuquerque Operations Office, Albuquerque, NM, November 1992, and references cited therein.
- [6] Dames & Moore, Active Underground Storage Tank Plan, prepared for EG&G Mound Applied Technologies, DOE Mound Facility, Miamisburg, Ohio, July 20, 1994.
- [7] Drawing FSD 17504, "Building 37, Relocation of Equipment from Building 28, Sump Tank Relocation", Rev. B, 12/14/78; Miamisburg Cleanup Project Drawing Control Department.

ATTACHMENTS:

- 1.) Active Underground Storage Tank Plan (pages relevant to PRS 271 and PRS 336)
- 2.) Radiological Survey Data Sheet #01-50-037
- 3.) Radiological Survey Data Sheet #01-50-039
- 4.) Radiological Survey Data Sheet #04-TF-0108

PREPARED BY:

John Gill, CH2M Hill Mound, Inc., ER Technical Staff

**MIAMISBURG CLOSURE PROJECT
PRS 271/PRS 336**

RECOMMENDATION:

PRS 271 and PRS 336 are the locations of two underground tanks that once received waste water from the former Building 37. PRS 271 received sanitary waste water, while PRS 336 was designed to receive low risk radiological waste water. An historic review and recent sampling have found no evidence to suspect actual presence of radiological contamination in Building 37. Both tanks were removed during a sanitary system upgrade in 2000/2001. Sampling of soils near the two tanks showed no activity exceeding 10^{-6} risk-based Soil Screening Level criteria. Surveys within the PRS 336 tank found no radiological contamination above DOE Order 5400.5 criteria. Remaining underground portions of by-pass and sanitary sewer pipeline to or from these tanks are considered less contaminated than the inside of the PRS 336 tank and have thus been capped and abandoned in place.

The Core Team recommends No Further Assessment for PRS 271 and PRS 336.

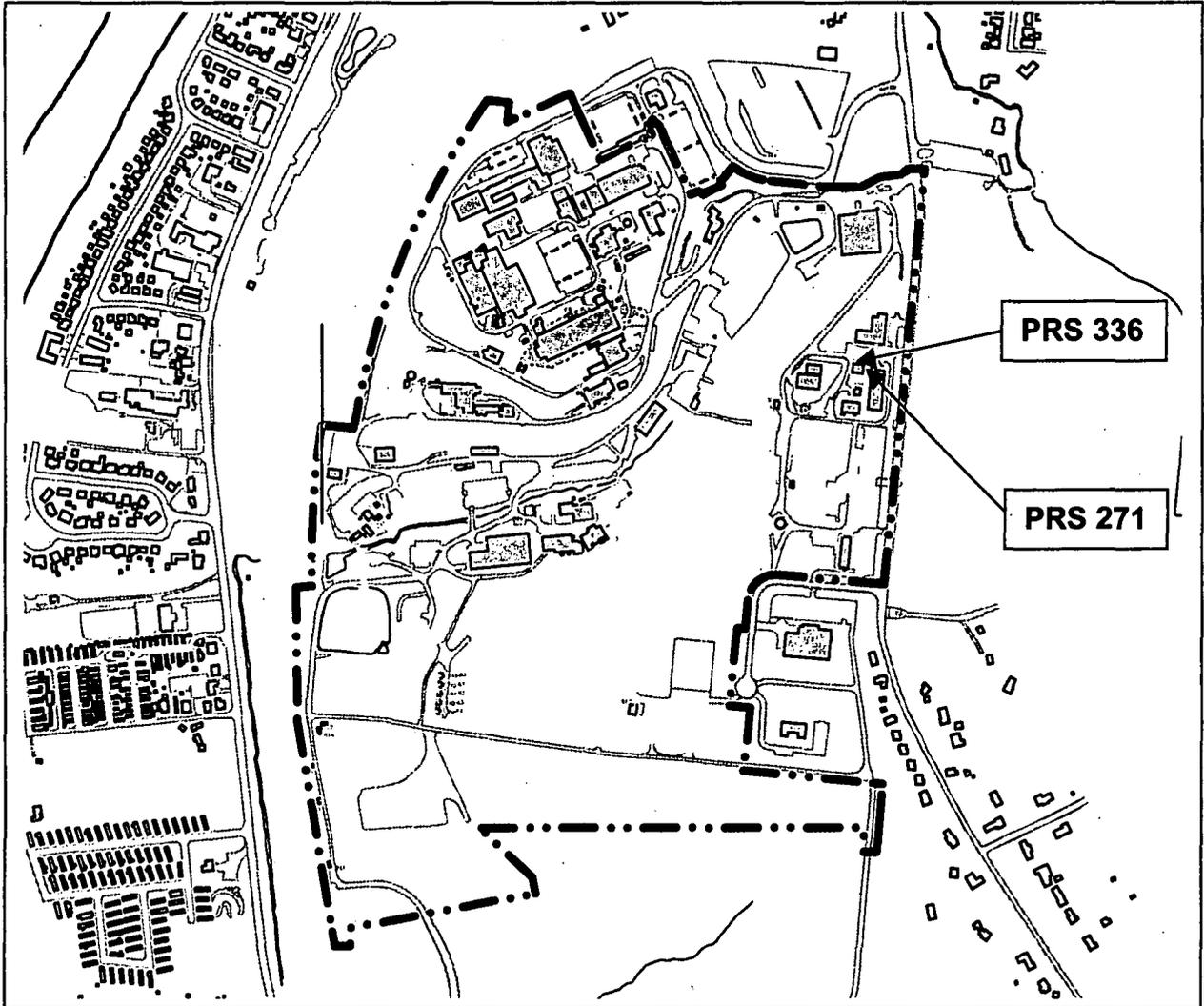
A PRS Package with an NFA recommendation signed by the Core Team will be placed in the Public Reading Room for a 30-day review period. Upon closure of the public review comments, if any, the PRS Package will be issued as a final document and made available in the Public Reading Room.

The final Core Team recommendation sheet from this evaluation will be included in the Building 37 Closeout Report.

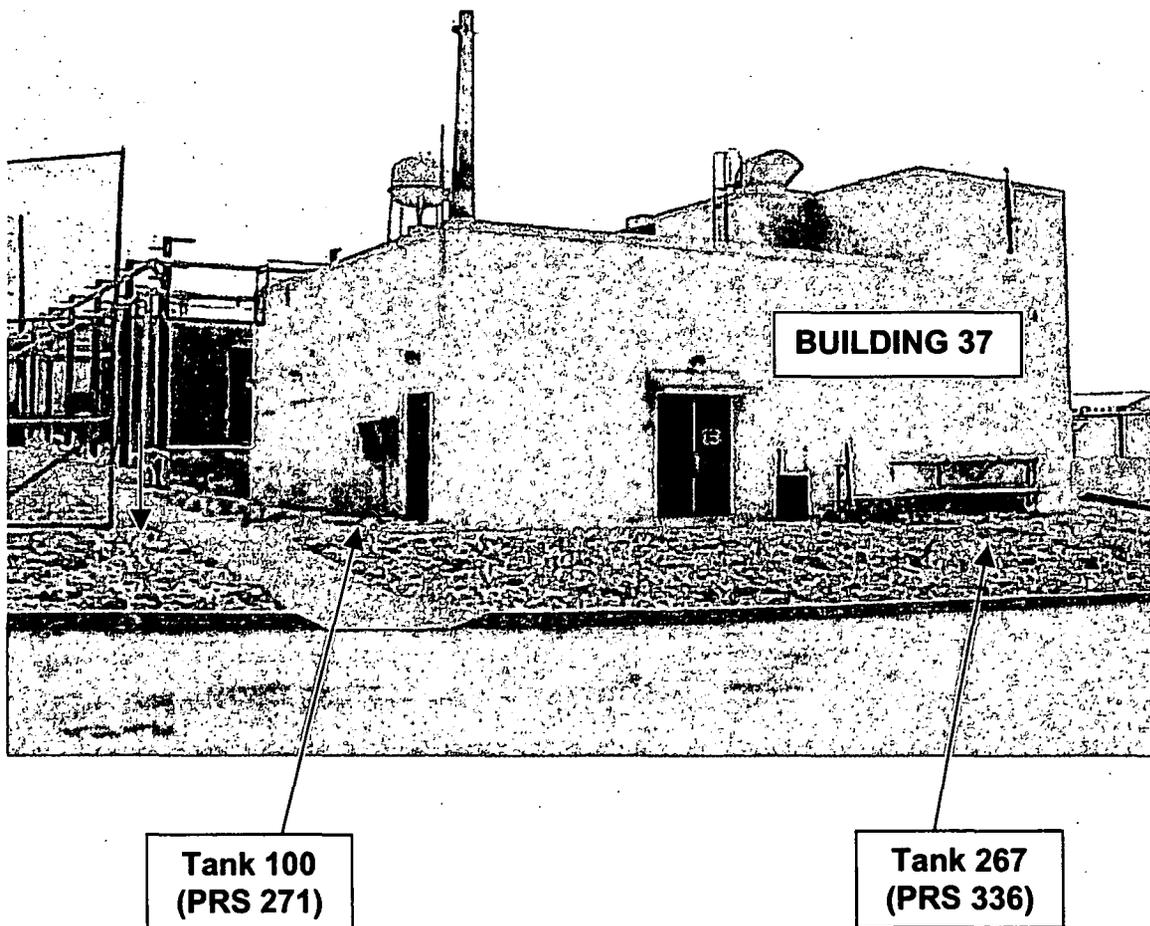
CONCURRENCE:

| | | |
|----------|---|----------|
| DOE/MCP: |  | 11/17/04 |
| | Paul Lucas, Remedial Project Manager | (date) |
| USEPA: |  | 11/17/04 |
| | Timothy J. Fischer, Remedial Project Manager | (date) |
| OEPA: |  | 11/17/04 |
| | Brian K. Nickel, Project Manager | (date) |

FIGURE 1: Location of PRS 271 and PRS 336



**FIGURE 2: View of Building 37 before demolition,
looking southwest,
showing approximate locations of underground tanks:
Tank 100 (PRS 271) and Tank 267 (PRS 336)**



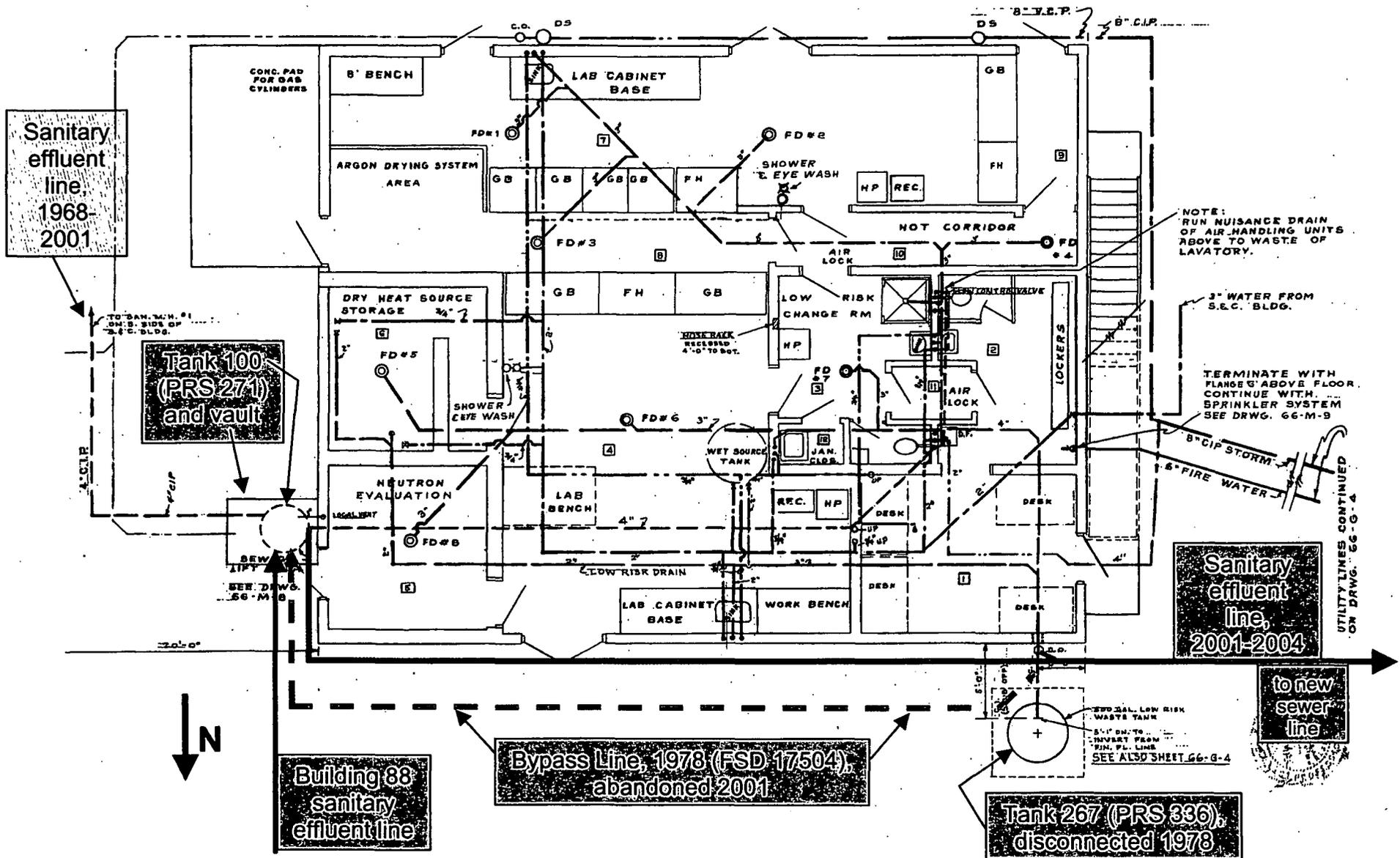
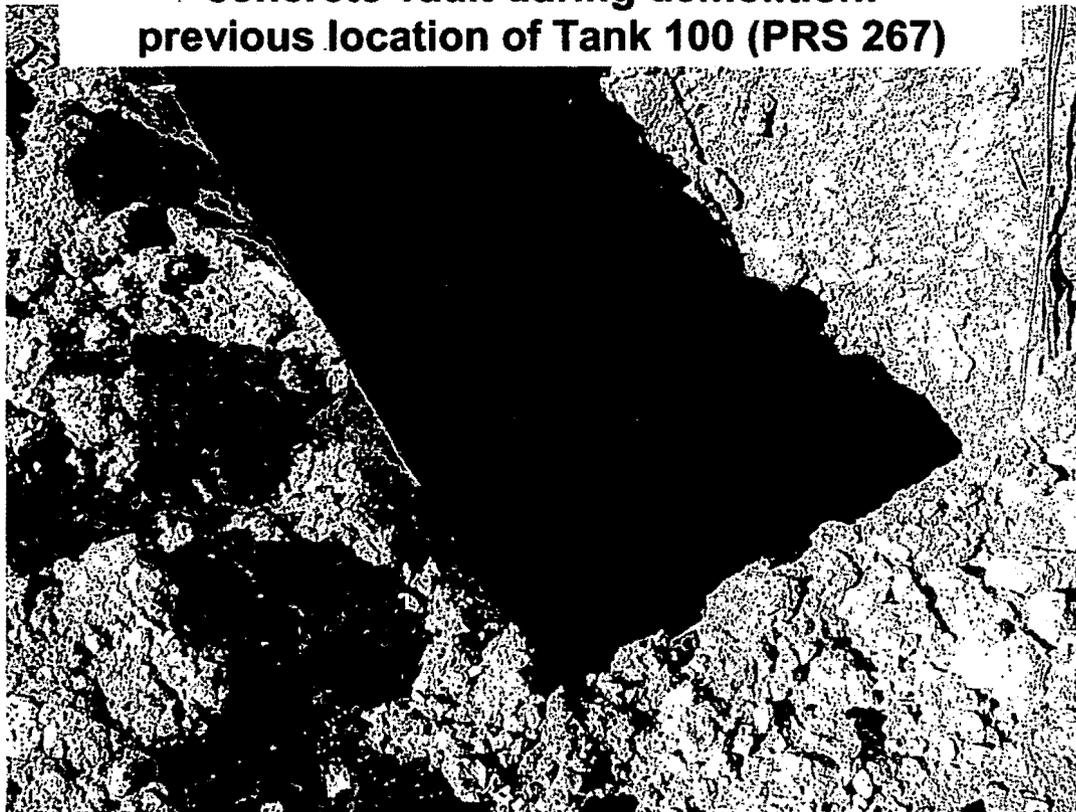
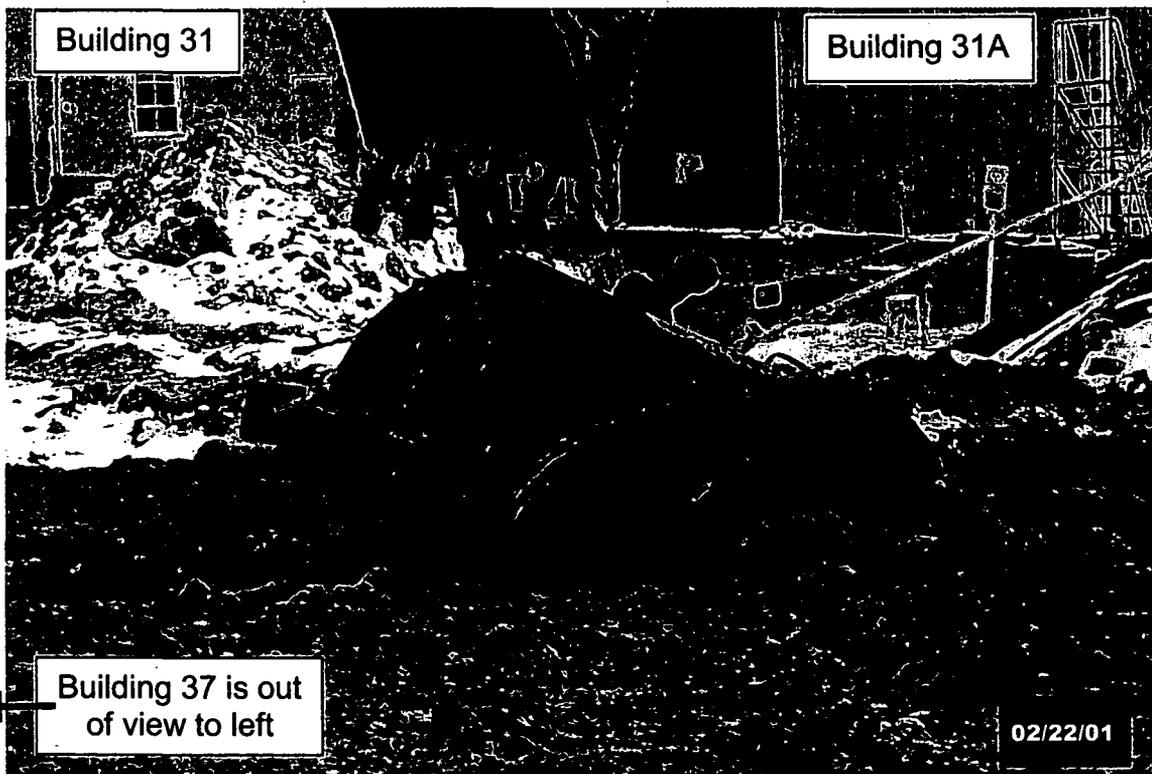
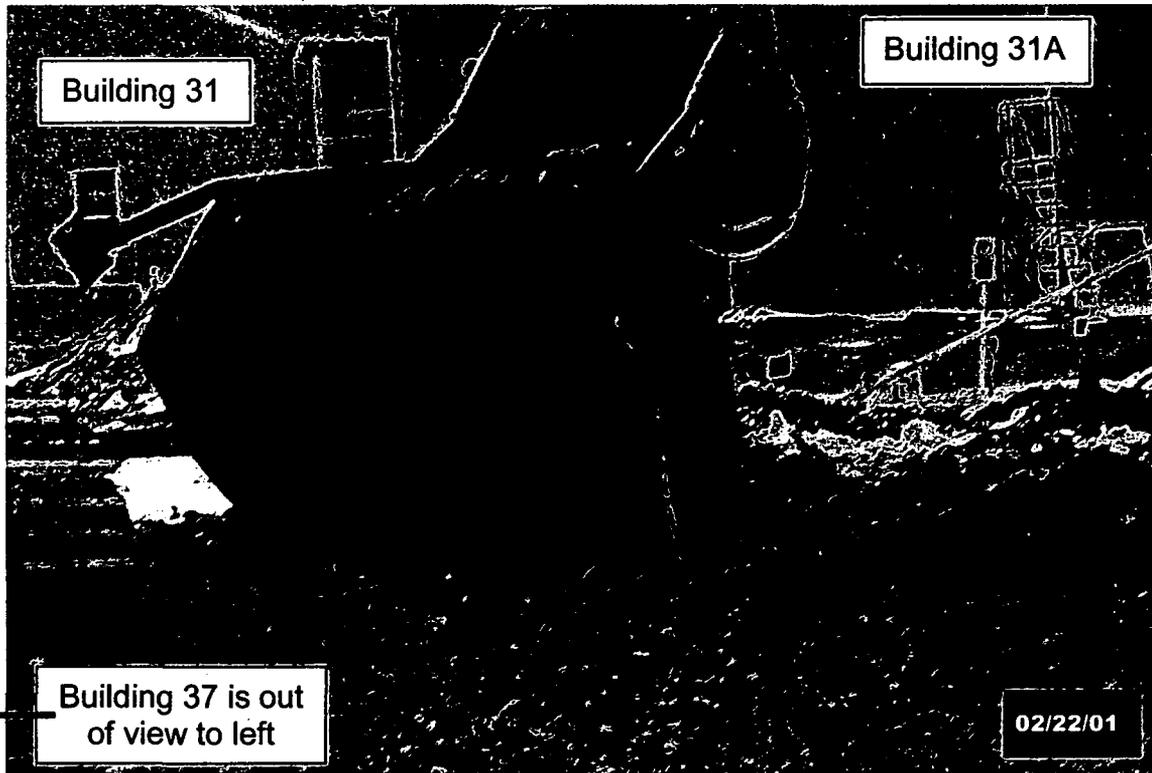


FIGURE 3: Building 37 floor plan view, Drawing 3037-4007, (66-M-7, Rev. 1), Drawer 114, 1968 as-built; showing drains, Tank 100 (PRS 271), and Tank 267 (PRS 336)

**FIGURES 4 and 5: March 2004 views of open
concrete vault during demolition:
previous location of Tank 100 (PRS 267)**



FIGURES 6 and 7: February 2001 views of removal of Tank 267 (PRS 336), looking southwest



ATTACHMENT 1

ACTIVE UNDERGROUND STORAGE TANK PLAN

(pages relevant to PRS 271 / PRS 336)



Final Draft

*Active Underground Storage
Tank Plan*

July 20, 1994

Prepared for:

**Project Management and Planning
EG&G Mound Applied Technologies
One Mound Road
Miamisburg, Ohio**

| | | | |
|---|-------------------|---|---------|
| Tank No. | | 29 | |
| Proposed Program | Bldg | Location | Owner |
| AUSTP | A | | U.S.DOE |
| Status | Installation Date | Estimated Capacity (gallons) | |
| in service | 1968 | 400 | |
| Purpose of Tank | | | |
| Medical decon shower collection tank | | | |
| Tank Material | | Tank Cathodic Protection | |
| Bare Steel | | Internal PVC Lining | |
| Inlet of Tank | | Outlet of Tank | |
| From medical decon showers | | Tested - if non-rad to Bldg 57, if rad to WD Bldg | |
| Evidence of Release | | Spill/Overfill Prevention | |
| No | | High Level Alarm | |
| Substance Current/Last Stored | | Tank Site Description | |
| Sanitary Wastewater/Radioactive Wastewater | | Outdoor; Asphalt/Concrete | |
| Calibration/Maintenance | | Tank Release Detection | |
| None | | None | |
| Piping Release Detection | | Closure | |
| None | | Date Last Used | N/A |
| OU9 Reference No | 212 | FFA OU | N/A |
| Primary Regulatory Jurisdiction | | Spill Jurisdiction | |
| AEA | | AEA | |
| Regulatory Status In compliance | | | |
| Documents Provided | | | |
| DOE, 1992a; DOE, 1993; UST Inspection Sheet; Drawing No. M-1, Rev 1 | | | |
| Comments | | | |
| None | | | |

| | | | |
|--|-------------------|---|---------|
| Tank No. | | 100 | |
| Proposed Program | Bldg | Location | Owner |
| AUSTP | 37 | | U.S.DOE |
| Status | Installation Date | Estimated Capacity (gallons) | |
| in service | 1968 | 500 | |
| Purpose of Tank | | | |
| sanitary waste tank | | | |
| Tank Material | | Tank Cathodic Protection | |
| Bare Steel | | None | |
| Inlet of Tank | | Outlet of Tank | |
| Sanitary Wastes from Bldg 37 & 88 | | Bldg 57, New Sewage Disposal Area | |
| Evidence of Release | | Spill/Overfill Prevention | |
| No | | On/Off Level Float Switch; High Level Alarm | |
| Substance Current/Last Stored | | Tank Site Description | |
| Sanitary Wastewater | | Outdoor | |
| Calibration/Maintenance | | Tank Release Detection | |
| None | | None | |
| Piping Release Detection | | Closure | |
| None | | Date Last Used | N/A |
| OU9 Reference No | 271 | FFA OU | N/A |
| Primary Regulatory Jurisdiction | | Spill Jurisdiction | |
| CWA | | AEA | |
| Regulatory Status In compliance | | | |
| Documents Provided | | | |
| DOE, 1992a; DOE, 1993; NUS, 1989; UST Insp; Dwg No 66-M-7; Dwg No 66-M-8 | | | |
| Comments | | | |
| Tank is unlined steel in a concrete pit. | | | |

DAMES & MOORE - INSPECTION & DOCUMENT REVIEW NOTES

| | | | | | |
|--|--------------------------------|-----------------------------------|-----------------------------------|---------------------------|--|
| CLIENT EG&G Mound Applied Technologies | | JOB NUMBER 10805-794 | | DATE 4/20/94 | |
| JOB TITLE Active Underground Storage Tank Program | | D&M TEAM Grantelli & DiSpirito | | | |
| TANK NO. 100 | BLDG/LOCATION 37 | EG&G SPONSOR Operations | | OWNER U.S. DOE | |
| TANK STATUS In Service | TANK CAPACITY (gallons) 500 | INSTALLATION DATE 1966 | INTERVIEWED WITH Bruno & Cloud | INTERVIEW DATE 2/24/94 | |

TANK DESCRIPTION, Purpose of Tank *Sanitary waste tank*

| | | | |
|---|--|--|--|
| Tank Material <input checked="" type="checkbox"/> Bare Steel (unprotected) <input type="checkbox"/> Composite (steel & FRP) <input type="checkbox"/> Fiberglass Reinforced Plastic <input type="checkbox"/> Stainless Steel Lined Concrete <input type="checkbox"/> Steel Lined Concrete <input type="checkbox"/> Concrete <input type="checkbox"/> Other - Specify <input type="checkbox"/> Unknown | Tank Cathodic Protection <input type="checkbox"/> Internal Lining - Specify <input type="checkbox"/> Sacrificial Anodes <input type="checkbox"/> Impressed Current <input type="checkbox"/> Composite (Steel & FRP) <input type="checkbox"/> Other - Specify <input type="checkbox"/> Unknown <input checked="" type="checkbox"/> None | Inlet of Tank <i>Sanitary</i> <i>Waste from Bldg 37A 88</i> Outlet of Tank <i>(38 Under demo)</i> <i>to Bld 57,</i> <i>New Sewage Disposal Area</i> | History of Spills No Spill/Overfill Prevention <input type="checkbox"/> Float Vent Valve <input checked="" type="checkbox"/> High Level Alarm <input type="checkbox"/> Auto Shutoff <input checked="" type="checkbox"/> Other - Specify <input checked="" type="checkbox"/> None <i>On/Off, Bell Float, Loc 1 Switch</i> |
|---|--|--|--|

| | | | |
|---|--|---|---|
| Piping Material <input type="checkbox"/> Cathodically Protected Steel <input type="checkbox"/> Bare Steel (unprotected) <input type="checkbox"/> Fiberglass Reinforced Plastic <input type="checkbox"/> Double Walled or Jacketed <input checked="" type="checkbox"/> Other - Specify <input type="checkbox"/> Unknown <i>Cast Iron</i> | Substance Currently/Last Stored <input type="checkbox"/> Gasoline <input type="checkbox"/> Diesel <input type="checkbox"/> Kerosene <input type="checkbox"/> Used Oil <input type="checkbox"/> Hazardous Substances - <input checked="" type="checkbox"/> Specify <input type="checkbox"/> Other - Specify <input type="checkbox"/> Unknown <i>Sanitary Wastewater</i> | Tank Site Description <input type="checkbox"/> Indoor <input checked="" type="checkbox"/> Outdoor <input type="checkbox"/> Soil <input type="checkbox"/> Asphalt/Concrete <input type="checkbox"/> Storm Drains, Potential Surface water runoff <input type="checkbox"/> Soil Staining | DOE / AEC / PM No: None Calibration Records Maintenance Records |
|---|--|---|---|

| | | | |
|---|--|--|---|
| Tank Release Detection Method <input type="checkbox"/> Inventory Control <input type="checkbox"/> Manual Tank Gauging <input type="checkbox"/> Tank Tightness Testing <input type="checkbox"/> Automatic In-Tank Monitor & Inventory Control <input type="checkbox"/> Vapor Monitoring <input type="checkbox"/> Groundwater Monitoring <input type="checkbox"/> Secondary Containment with Interstitial Monitoring <input checked="" type="checkbox"/> Other - Specify <input checked="" type="checkbox"/> None | Piping Release Detection Method <input type="checkbox"/> Pressure Piping Automatic Line Flow Restrictor <input type="checkbox"/> Pressure Piping Automatic Line Shutoff Device <input type="checkbox"/> Line Tightness Test (Pressure Annual, Suction Every 3 yrs) <input type="checkbox"/> Vapor Monitoring <input type="checkbox"/> Groundwater Monitoring <input type="checkbox"/> Approved Suction Piping <input type="checkbox"/> Other - Specify <input checked="" type="checkbox"/> None | Closure - n/a Date of Last use Intended Replacement Closure Plan Part of Operable Unit | Primary Regulatory Jurisdiction CWA Spill Jurisdiction AEA Regulated Units |
|---|--|--|---|

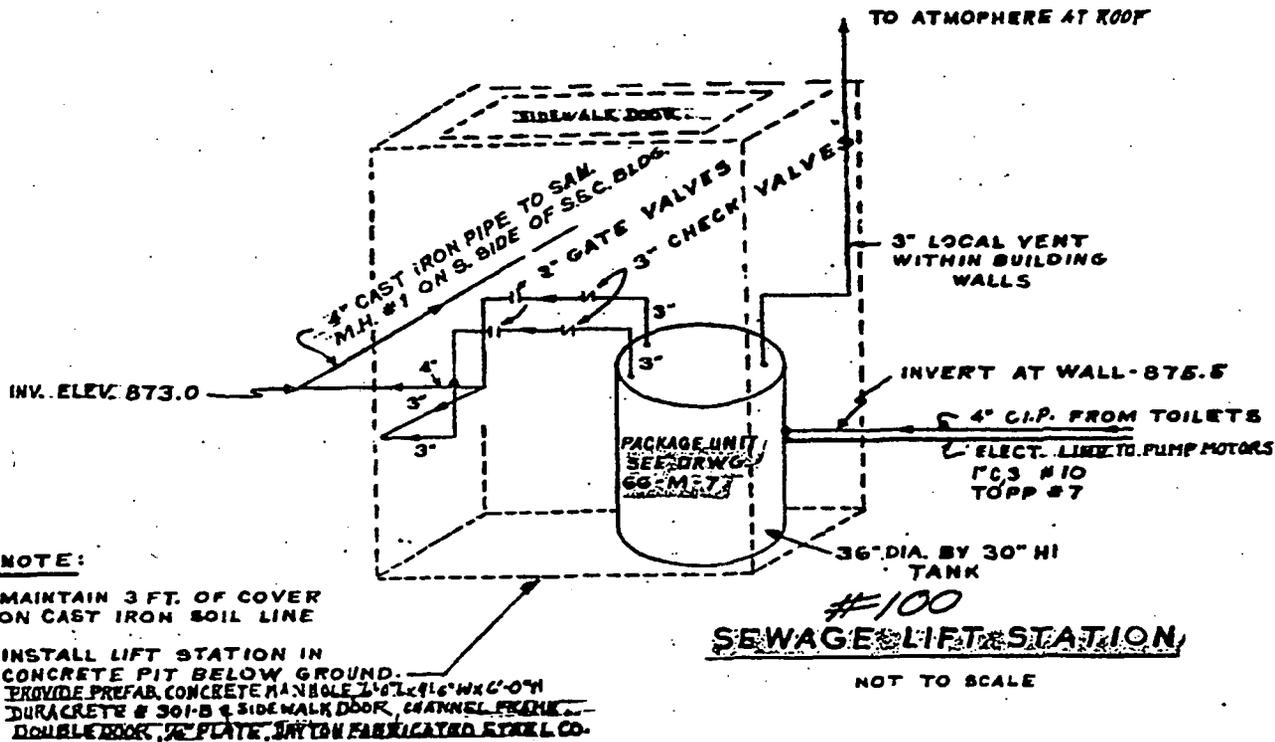
DOCUMENTS, REFERENCES USED: DOE, 1992a; DOE, 1993; NUS, 1989; UST Inspection Sheet; Dwg No 66-M-7; Dwg No 66-M-8

COMMENTS: The tank is ~~an~~ unlined steel in concrete pit. There appears to be a ball float level on/off switch and an operable audible alarm in the case of overflow. A control panel for this was seen on the outer wall of Bldg 37. Could only see the sidewalk cover for this pit. Could not open.

SIGNATURE *Asly*

| | | | | |
|--|--------------------------------|-----------------------------------|---------------------------------|---------------------------|
| CLIENT EG&G Mound Applied Technologies | | JOB NUMBER 10805-794 | DATE 4/20/94 | |
| JOB TITLE Active Underground Storage Tank Program | | D&M TEAM Grantelli & Dispirito | | |
| TANK NO. 100 | BLDG LOCATION 37 | EG&G SPONSOR Operations | OWNER U.S. DOE | |
| TANK STATUS In Service | TANK CAPACITY (gallons) 500 | INSTALLATION DATE 1966 | INTERVIEWED WITH Bruno/Cloud | INTERVIEW DATE 2/24/94 |

SKETCH OF TANK/TANK SYSTEM:



COMMENTS:

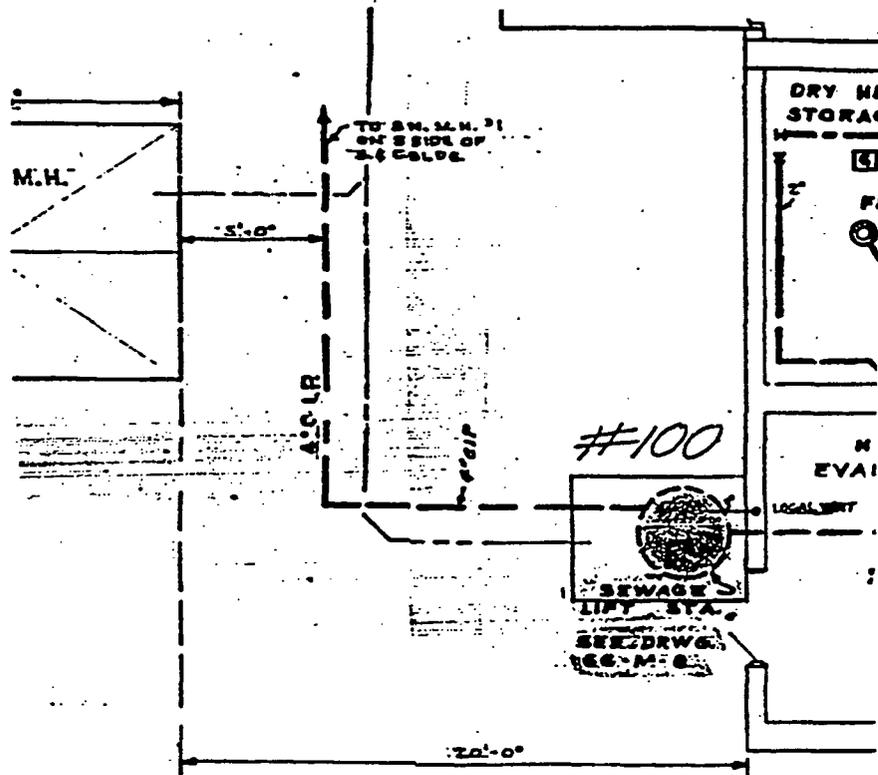
SIGNATURE

[Handwritten Signature]

DAMES & MOORE - INSPECTION & DOCUMENT REVIEW NOTES

| | | | | | |
|--|--------------------------------|-----------------------------------|-----------------------------------|---------------------------|--|
| CLIENT EG&G Mound Applied Technologies | | JOB NUMBER 10805-794 | | DATE 4/20/94 | |
| JOB TITLE Active Underground Storage Tank Program | | D&M TEAM Giantelli & DiSpirito | | | |
| TANK NO. 100 | BLDG/LOCATION 37 | EG&G SPONSOR Operations | | OWNER U.S. DOE | |
| TANK STATUS In Service | TANK CAPACITY (gallons) 500 | INSTALLATION DATE 1966 | INTERVIEWED WITH Bruno & Cloud | INTERVIEW DATE 2/24/94 | |

SKETCH OF TANK/TANK SYSTEM:



COMMENTS:

SIGNATURE

A.S. Giantelli

| | | | |
|--|---------------------------|--------------------------------------|------------------|
| Tank No. | | 267 | |
| Proposed Program D&D-Proposed | Bldg 37 | Location | Owner U.S.DOE |
| Status inactive | Installation Date 1966 | Estimated Capacity (gallons) 500 | |
| Purpose of Tank low risk waste tank | | | |
| Tank Material Bare Steel | | Tank Cathodic Protection Unknown | |
| Inlet of Tank Bldg 37 Radioactive Laboratory Floor Drains | | Outlet of Tank Stormwater System | |
| Evidence of Release No | | Spill/Overfill Prevention N/A | |
| Substance Current/Last Stored Wastewater/Radioactive Wastewater | | Tank Site Description Outdoor | |
| Calibration/Maintenance N/A | | Tank Release Detection N/A | |
| Piping Release Detection N/A | | Closure Date Last Used Unknown | |
| OU9 Reference No | Not included | FFA OU | Not assigned |
| Primary Regulatory Jurisdiction AEA | | Spill Jurisdiction AEA | |
| Regulatory Status / In compliance | | | |
| Documents Provided Dwg No 66-M-7; Dwg No 66-G-4 | | | |
| Comments Tank is believed to have been bypassed to Tank 100. | | | |

| | | | |
|---|---------------------------|--|------------------|
| Tank No. | | 270 | |
| Proposed Program D&D-Proposed | Bldg 29 | Location East Side | Owner U.S.DOE |
| Status inactive | Installation Date 1965 | Estimated Capacity (gallons) 1,000 | |
| Purpose of Tank historic septic tank | | | |
| Tank Material Concrete | | Tank Cathodic Protection None | |
| Inlet of Tank Sanitary systems from the Formulation Bldg | | Outlet of Tank Adjacent Leach Field | |
| Evidence of Release No | | Spill/Overfill Prevention N/A | |
| Substance Current/Last Stored Sanitary Wastewater | | Tank Site Description Outdoor | |
| Calibration/Maintenance N/A | | Tank Release Detection N/A | |
| Piping Release Detection N/A | | Closure Date Last Used 1975 | |
| OU9 Reference No | Not included | FFA OU | Not assigned |
| Primary Regulatory Jurisdiction AEA | | Spill Jurisdiction AEA | |
| Regulatory Status / In compliance | | | |
| Documents Provided Dwg No 352045-01-004; Dwg No 5-1900; Dwg No U-1 | | | |
| Comments Tank is on drawings, believed inactive and in place. | | | |

| | | | |
|--|--------------------------------|-----------------------------------|-----------------------------------|
| CLIENT EG&G Mound Applied Technologies | | JOB NUMBER 10805-794 | DATE 4/20/94 |
| JOB TITLE Active Underground Storage Tank Program | | D&M TEAM Grantelli & Dispirito | |
| TANK NO. 267 | BLDG/LOCATION 37 | EG&G SPONSOR - Proposed D&D | OWNER U.S. DOE |
| TANK STATUS Inactive | TANK CAPACITY (gallons) 500 | INSTALLATION DATE 1966 | INTERVIEWED WITH Bruno & Cloud |
| INTERVIEW DATE 2/24/94 | | | |

TANK DESCRIPTION, Purpose of Tank *Low Risk Waste Tank*

| | | | |
|---|--|---|---|
| Tank Material <input checked="" type="checkbox"/> Bare Steel (unprotected) <input type="checkbox"/> Composite (steel & FRP) <input type="checkbox"/> Fiberglass Reinforced Plastic <input type="checkbox"/> Stainless Steel Lined Concrete <input type="checkbox"/> Steel Lined Concrete <input type="checkbox"/> Concrete <input type="checkbox"/> Other - Specify <input type="checkbox"/> Unknown | Tank Cathodic Protection <input type="checkbox"/> Internal Lining - Specify <input type="checkbox"/> Sacrificial Anodes <input type="checkbox"/> Impressed Current <input type="checkbox"/> Composite (Steel & FRP) <input type="checkbox"/> Other - Specify <input checked="" type="checkbox"/> Unknown <input type="checkbox"/> None | Inlet of Tank <i>Bldg 37</i> <i>Radioactive</i> <i>Laboratory</i> <i>Floor drains</i> Outlet of Tank <i>Storm Water</i> <i>System</i> | History of Spills <i>No</i> Spill/Overfill Prevention <input type="checkbox"/> Float Vent Valve <input type="checkbox"/> High Level Alarm <input type="checkbox"/> Auto Shutoff <input type="checkbox"/> Other - Specify <input type="checkbox"/> None |
|---|--|---|---|

| | | | |
|---|--|---|--|
| Piping Material <input type="checkbox"/> Cathodically Protected Steel <input type="checkbox"/> Bare Steel (unprotected) <input type="checkbox"/> Fiberglass Reinforced Plastic <input type="checkbox"/> Double Walled or Jacketed <input checked="" type="checkbox"/> Other - Specify <input type="checkbox"/> Unknown <i>Cast Iron</i> | Substance Currently/Last Stored <input type="checkbox"/> Gasoline <input type="checkbox"/> Diesel <input type="checkbox"/> Kerosene <input type="checkbox"/> Used Oil <input type="checkbox"/> Hazardous Substances - Specify <input checked="" type="checkbox"/> Other - Specify <input type="checkbox"/> Unknown <i>Potentially Radioactive Waste Water</i> | Tank Site Description <input type="checkbox"/> Indoor <input checked="" type="checkbox"/> Outdoor <input type="checkbox"/> Soil <input type="checkbox"/> Asphalt/Concrete <input type="checkbox"/> Storm Drains, Potential Surface water runoff <input type="checkbox"/> Soil Staining | DOE / AEC / PM No: <i>None</i> Calibration Records Maintenance Records |
|---|--|---|--|

| | | | |
|--|--|---|---|
| Tank Release Detection Method <input type="checkbox"/> Inventory Control <input type="checkbox"/> Manual Tank Gauging <input type="checkbox"/> Tank Tightness Testing <input type="checkbox"/> Automatic In-Tank Monitor & Inventory Control <input type="checkbox"/> Vapor Monitoring <input type="checkbox"/> Groundwater Monitoring <input type="checkbox"/> Secondary Containment with Interstitial Monitoring <input checked="" type="checkbox"/> Other - Specify <input type="checkbox"/> None | Piping Release Detection Method <input type="checkbox"/> Pressure Piping Automatic Line Flow Restrictor <input type="checkbox"/> Pressure Piping Automatic Line Shutoff Device <input type="checkbox"/> Line Tightness Test (Pressure Annual, Suction Every 3 yrs) <input type="checkbox"/> Vapor Monitoring <input type="checkbox"/> Groundwater Monitoring <input type="checkbox"/> Approved Suction Piping <input type="checkbox"/> Other - Specify <input checked="" type="checkbox"/> None | Closure Date of Last use <i>Unknown</i> Intended Replacement Closure Plan Part of Operable Unit | Primary Regulatory Jurisdiction <i>AEA</i> Spill Jurisdiction <i>AEA</i> Regulated Units |
|--|--|---|---|

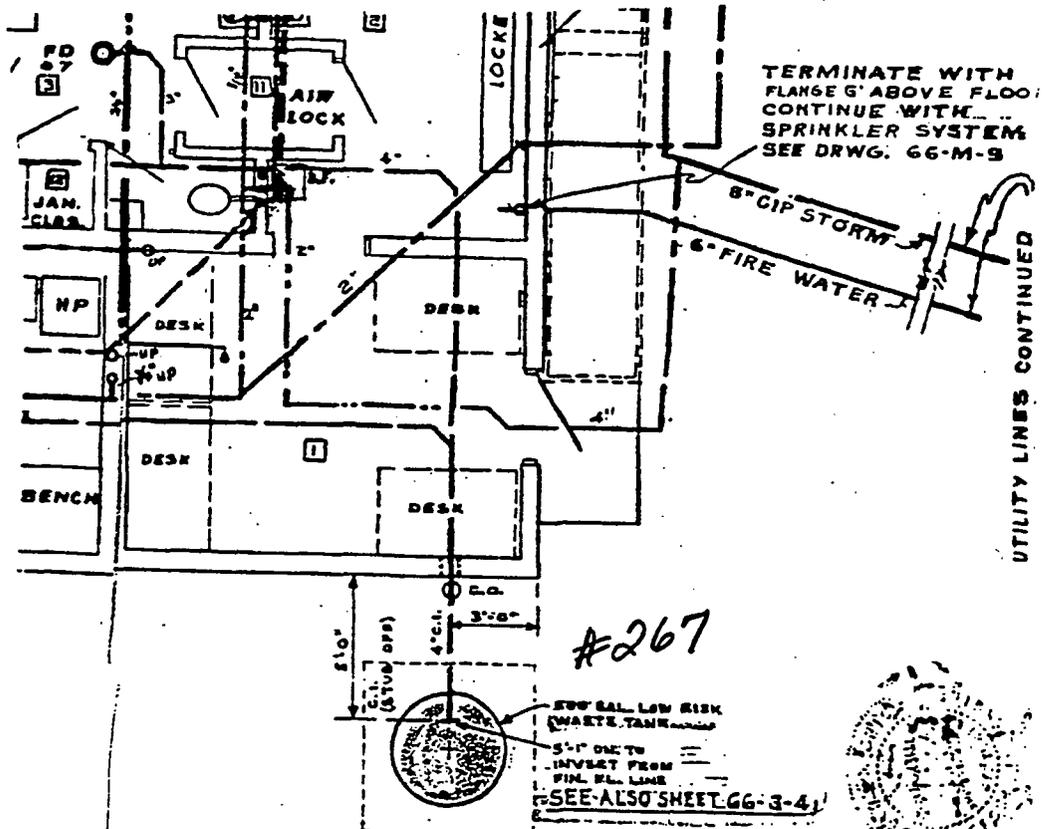
DOCUMENTS, REFERENCES USED: *Dwg No 66-M-7; Dwg 66-G-4*

COMMENTS: *This tank appears from plumbing drawing to receive "low risk" waste from the floor drains within bldg 37. It appears that any water which enter the floor drains would enter this tank and likely following testing be discharged to the storm sewer system or pumped and sent to ~~the~~ WD Bldg for treatment. It is unknown if the tank when the tank was taken out of service. However, from the interview, this building is not being*

SIGNATURE *J.S. Grantelli*

| | | | | | |
|--|--------------------------------|-------------------------------------|-----------------------------------|---------------------------|--|
| CLIENT EG&G Mound Applied Technologies | | JOB NUMBER 10805-794 | | DATE 4/20/94 | |
| JOB TITLE Active Underground Storage Tank Program | | D&M TEAM Grantelli & DiSpirito | | | |
| TANK NO. 267 | BLDG/LOCATION 37 | EG&G SPONSOR D&D <i>propared</i> | OWNER U.S. DOE | | |
| TANK STATUS <i>Inactive</i> | TANK CAPACITY (gallons) 500 | INSTALLATION DATE 1966 | INTERVIEWED WITH Bruno & Cloud | INTERVIEW DATE 2/24/94 | |

SKETCH OF TANK/TANK SYSTEM:



COMMENTS:

used for radioactive material testing and the tank ~~was~~ is believed to have been bypassed to Tank 100. From the outside, the tank appears to be bare steel. ~~It~~ ^{was} disconnected and manhole cover was, ~~not~~ ^{is} visible. Drawings do not indicate its removal.

~~and~~ Drawings indicate that the tank would only receive potentially radioactive wastewater and would be subject to regulations on the AEA.

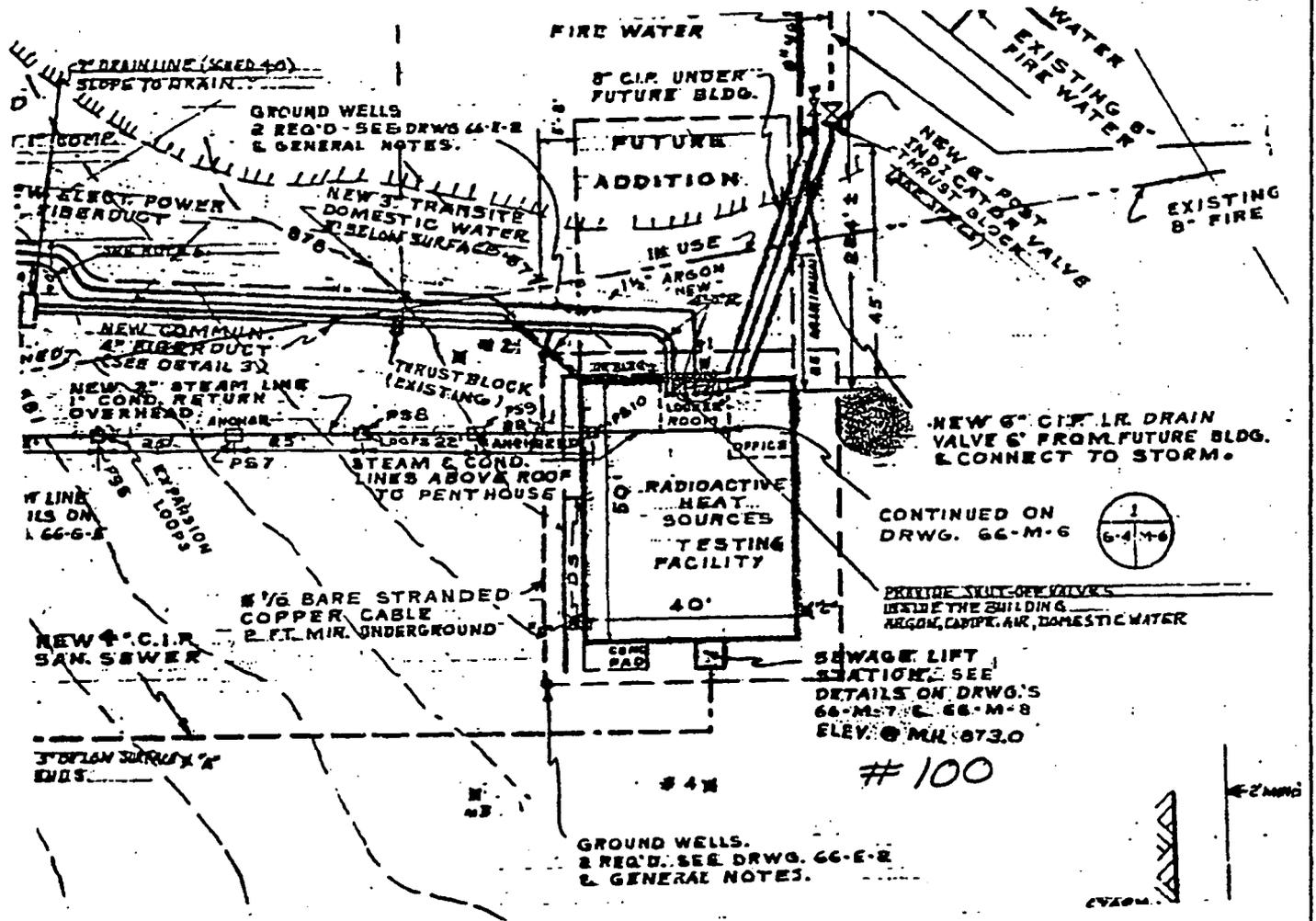
D&D should be notified of this tank.

SIGNATURE

Ad Grantelli

| | | | | | |
|--|--------------------------------|------------------------------------|-----------------------------------|---------------------------|--|
| CLIENT EG&G Mound Applied Technologies | | JOB NUMBER 10805-794 | | DATE 4/20/94 | |
| JOB TITLE Active Underground Storage Tank Program | | D&M TEAM Grantelli & Di Spirito | | | |
| TANK NO. 267 | BLDG LOCATION 37 | EG&G SPONSOR D&D - proposed | OWNER U.S. DOE | | |
| TANK STATUS Inactive | TANK CAPACITY (gallons) 500 | INSTALLATION DATE 1966 | INTERVIEWED WITH Bruno & Cloud | INTERVIEW DATE 2/24/94 | |

SKETCH OF TANK/TANK SYSTEM:



COMMENTS:

SIGNATURE

As Grantelli

ATTACHMENT 2

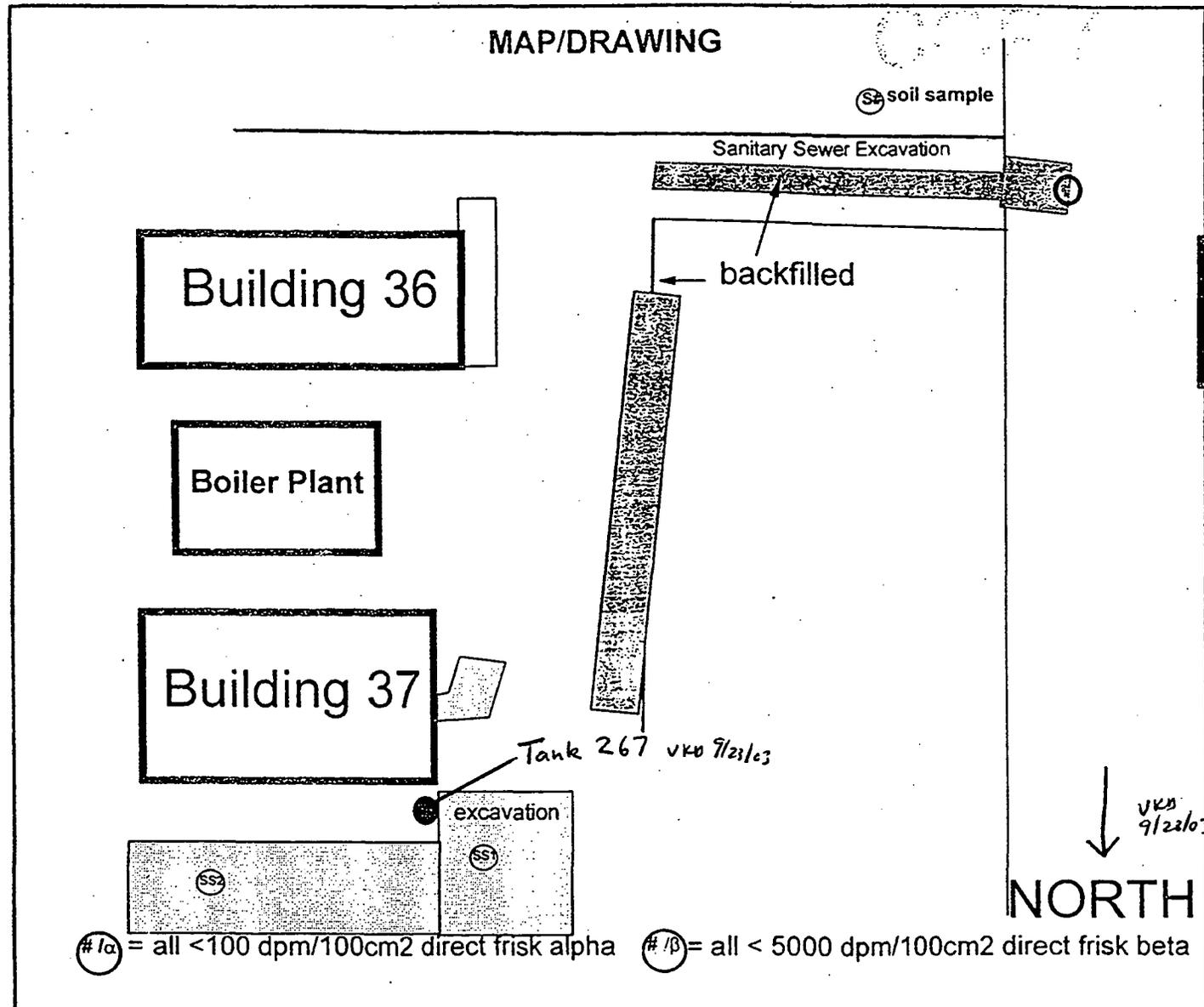
RADIOLOGICAL SURVEY DATA SHEET

#01-50-037

RADIOLOGICAL SURVEY DATA SHEET

| | |
|---|------------------------------|
| LOCATION: (BLDG./AREA/ROOM) Building 37 North | SURVEY NO. 01-50-037. |
| PURPOSE: Perform fidler survey of excavation for sewer, sample soil | RWP NO. NA |
| | DATE: 02/21/01 |
| | TIME: 1550 |

MAP/DRAWING



LEGEND:

- # = mrem/hr (Y) whole body
- # E = mrem/hr (β+n+γ) extremity on contact
- △ # = mrem/hr neutron
- # = air sample number
- # = swipe number
- #/α or /β = direct contamination measurement in dpm/100cm²

INSTRUMENTS USED

| Instrument | Serial Number | Cal. Due Date |
|------------|---------------|---------------|
| NA | NA | NA |
| Fidler | 3028/3851 | 03/14/01 |
| | NA | |
| | | |

| | | |
|----------------------------------|-------------|-----------------------|
| Compl | 5214 | Date: 02-21-01 |
| Compl | | |
| Counted by: (Signature) | N/A | Date: |
| Counted by: (Print) | N/A | |
| Reviewed/Approved by (Signature) | 5706 | Date: 03/08/01 |
| Reviewed/Approved by: (Print) | | |

RADIOLOGICAL SURVEY DATA SHEET (cont.)

| Removable Contamination | | | | |
|----------------------------------|----------------|-------|---------|----------|
| Swipes (dpm/100cm ²) | | | | |
| Sample# | β/γ | Alpha | Tritium | Comments |
| 1 | | | | NA |
| 2 | | | | NA |
| 3 | | | | NA |
| 4 | | | | NA |
| 5 | | | | NA |
| 6 | | | | NA |
| 7 | | | | NA |
| 8 | | | | NA |
| 9 | | | | NA |
| 10 | | | | NA |
| 11 | | | | NA |
| 12 | | | | NA |
| 13 | | | | NA |
| 14 | | | | NA |
| 15 | | | | NA |
| 16 | | | NA | NA |
| 17 | | | | NA |
| 18 | | | | NA |
| 19 | | | | NA |
| 20 | | | | NA |
| 21 | | | | NA |
| 22 | | | | NA |
| 23 | | | | NA |
| 24 | | | | NA |
| 25 | | | | NA |
| 26 | | | | NA |
| 27 | | | | NA |
| 28 | | NA | | NA |
| 29 | | | | NA |
| 30 | | | | NA |
| 31 | | | | NA |
| 32 | | | | NA |
| 33 | | | | NA |
| 34 | | | | NA |
| 35 | | | | NA |

| Removable Contamination | | | | |
|----------------------------------|----------------|-------|---------|----------|
| Swipes (dpm/100cm ²) | | | | |
| Sample# | β/γ | Alpha | Tritium | Comments |
| 36 | | | NA | NA |
| 37 | | | | NA |
| 38 | | | | NA |
| 39 | | | | NA |
| 40 | | | | NA |
| 41 | | | | NA |
| 42 | | | | NA |
| 43 | | | | NA |
| 44 | | | | NA |
| 45 | | | | NA |
| 46 | | | | NA |
| 47 | | | | NA |
| 48 | | | | NA |
| 49 | | | | NA |
| 50 | | | | NA |
| 51 | | | | NA |
| 52 | | | | NA |
| 53 | | | | NA |
| 54 | | | NA | NA |
| 55 | | | | NA |
| 56 | | | | NA |
| 57 | | | | NA |
| 58 | | | | NA |
| 59 | | | | NA |
| 60 | | | | NA |
| 61 | | | | NA |
| 62 | | | | NA |
| 63 | | | | NA |
| 64 | | | | NA |
| 65 | | | | NA |
| 66 | | | | NA |
| 67 | | | | NA |
| 68 | | | | NA |
| 69 | | | | NA |
| 70 | | | | NA |

See attached data sheet

See attached data sheet

COMMENTS: No fidler readings detected on channels 1 or 2

NOTES:

1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO count Room analysis for β/γ , alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

2-2-06

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
LAB SAMPLE ID: ML10320
FILE ID: 1PT00016.S0
PRIORITY:

Description\Location:

Collector: 5214

PST SEWER SS21

Date Received: 2/21/01

Date Collected:

| <u>Radionuclide</u> | | <u>Activity (pCi/g)</u> | <u>MDA</u> | <u>MD-10438 Limit (pCi/g)</u> |
|---------------------|---|-------------------------|------------|-------------------------------|
| Co-60 | * | 0.00 | 0.06 | 45,000 |
| Cs-137 | * | 0.00 | 0.04 | 45,000 |
| Pb-210 | | 0.87 | 0.47 | 45,000 |
| Ra-226 | | 1.97 | 0.66 | 800 |
| Ac-227 (D) | * | 0.07 | 0.19 | 40 |
| Th-230 | * | 0.00 | 5.52 | 800 |
| Th-232 (D) | | 0.86 | 0.17 | 130 |
| Pu-238 | * | 5.04 | 11.44 | 500 |
| Am-241 | * | 0.00 | 0.06 | 500 |

Other Nuclides:

| <u>Radionuclide</u> | <u>Activity (pCi/g)</u> | <u>MDA</u> | <u>MD-10438 Limit (pCi/g)</u> |
|---------------------|-------------------------|------------|-------------------------------|
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |

Σ DOT 0.02 nCi/g

Σ Respirator 0.04

Σ Respirator <1 indicates soil levels below limit.
Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4.

Instrument type: High Purity Germanium

Σ DOT 2 nCi/g limit, total activity.

(D) Denotes identification by daughter emissions.
Sample is assumed to be in secular equilibrium.

* Indicates activity < MDA. MDA used in limits calculation.

Comments:

Date: 3/1/01

Counted By: 6024

Analyzed By: 5613

INITIALS

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
LAB SAMPLE ID: ML10321
FILE ID: 2PT00021.S0
PRIORITY:

Description/Location:

PST SEWER SS22

Collector: 5214

Date Received: 2/21/01

Date Collected:

| <u>Radionuclide</u> | | <u>Activity (pCi/g)</u> | <u>MDA</u> | <u>MD-10438 Limit (pCi/g)</u> |
|---------------------|---|-------------------------|------------|-------------------------------|
| Co-60 | * | 0.00 | 0.01 | 45,000 |
| Cs-137 | * | 0.00 | 0.01 | 45,000 |
| Pb-210 | | 0.82 | 0.24 | 45,000 |
| Ra-226 | | 1.64 | 0.30 | 800 |
| Ac-227 (D) | | 0.11 | 0.09 | 40 |
| Th-230 | * | 1.28 | 2.70 | 800 |
| Th-232 (D) | | 0.73 | 0.04 | 130 |
| Pu-238 | * | 0.00 | 7.21 | 500 |
| Am-241 | * | 0.00 | 0.03 | 500 |

Other Nuclides:

| <u>Radionuclide</u> | <u>Activity (pCi/g)</u> | <u>MDA</u> | <u>MD-10438 Limit (pCi/g)</u> |
|---------------------|-------------------------|------------|-------------------------------|
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |

Σ DOT 0.01 nCi/g

Σ Respirator 0.03

Σ Respirator < 1 indicates soil levels below limit.
Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4.

Instrument type: High Purity Germanium

Σ DOT 2 nCi/g limit, total activity.

(D) Denotes identification by daughter emissions.
Sample is assumed to be in secular equilibrium.

* Indicates activity < MDA. MDA used in limits calculation.

Comments:

Date: 3/1/01

Counted By: 6024

Analyzed By: 5613

INITIALS XXXXXXXXXX

ATTACHMENT 3

RADIOLOGICAL SURVEY DATA SHEET

#01-50-039

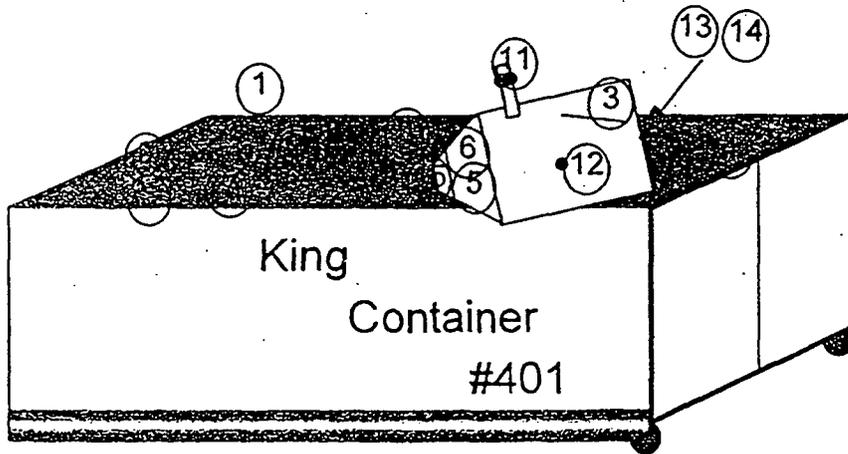
RADIOLOGICAL SURVEY DATA SHEET

37 vko 9/23/03

| | | | |
|---|---------------------------|------------|-----------|
| LOCATION: (BLDG./AREA/ROOM) | Building 36 North Outside | SURVEY NO. | 01-50-039 |
| PURPOSE: Survey Roll-Off (KING #401) dumpster for Staver Construction, P/WRE 092900-PST-01 | | RWP NO. | NA |
| | | DATE: | 02/26/01 |
| | | TIME: | 1000 |

MAP/DRAWING

COPY



⊙ #/α = all < 100 dpm/100cm² direct frisk alpha ⊙ #/β = all < 5000 dpm/100cm² direct frisk beta

LEGEND:

= mrem/hr (γ) whole body
E = mrem/hr (β+π+γ) extremity on contact

△ # = mrem/hr neutron

□ # = air sample number

⊙ # = swipe number

⊙ #/α or #/β = direct contamination measurement in dpm/100cm²

INSTRUMENTS USED

| Instrument | Serial Number | Cal. Due Date |
|---------------|---------------|---------------|
| NE | 5348/5353 | 08/15/01 |
| NA | | |
| | | |
| | | |

| | | | |
|--|------------|------|----------------|
| Complete | [Redacted] | 5214 | Date: 02-26-01 |
| Complete | [Redacted] | 5681 | Date: 2-26-01 |
| | [Redacted] | 5706 | Date: 02/26/01 |
| Reviewed/Approved by: (Print) [Redacted] | | | |

RADIOLOGICAL SURVEY DATA SHEET (cont.)

| Removable Contamination | | | | |
|----------------------------------|---------------|-------|---------|------------------|
| Swipes (dpm/100cm ²) | | | | |
| Sample# | $\beta\gamma$ | Alpha | Tritium | Comments |
| 1 | | | | right side |
| 2 | | | | bags |
| 3 | | | | pipe |
| 4 | | | | door ledge |
| 5 | | | | tank ext. |
| 6 | | | | tank ext. |
| 7 | | | | box |
| 8 | | | | left rail top |
| 9 | | | | front rail top |
| 10 | | | | support plate |
| 11 | | | | pipe&flange |
| 12 | | | | tank penetration |
| 13 | | | | tank interior |
| 14 | | | | tank interior |
| 15 | | | | tank penetration |
| 16 | | | | NA |
| 17 | | | | NA |
| 18 | | | | NA |
| 19 | | | | NA |
| 20 | | | | NA |
| 21 | | | | NA |
| 22 | | | | NA |
| 23 | | | | NA |
| 24 | | | | NA |
| 25 | | | | NA |
| 26 | | | | NA |
| 27 | | | | NA |
| 28 | | | | NA |
| 29 | | | | NA |
| 30 | | | | NA |
| 31 | | | | NA |
| 32 | | | | NA |
| 33 | | | | NA |
| 34 | | | | NA |
| 35 | | | | NA |

| Removable Contamination | | | | |
|----------------------------------|---------------|-------|---------|----------|
| Swipes (dpm/100cm ²) | | | | |
| Sample# | $\beta\gamma$ | Alpha | Tritium | Comments |
| 36 | | | | NA |
| 37 | | | | NA |
| 38 | | | | NA |
| 39 | | | | NA |
| 40 | | | | NA |
| 41 | | | | NA |
| 42 | | | | NA |
| 43 | | | | NA |
| 44 | | | | NA |
| 45 | | | | NA |
| 46 | | | | NA |
| 47 | | | | NA |
| 48 | | | | NA |
| 49 | | | | NA |
| 50 | | | | NA |
| 51 | | | | NA |
| 52 | | | | NA |
| 53 | | | | NA |
| 54 | | | | NA |
| 55 | | | | NA |
| 56 | | | | NA |
| 57 | | | | NA |
| 58 | | | | NA |
| 59 | | | | NA |
| 60 | | | | NA |
| 61 | | | | NA |
| 62 | | | | NA |
| 63 | | | | NA |
| 64 | | | | NA |
| 65 | | | | NA |
| 66 | | | | NA |
| 67 | | | | NA |
| 68 | | | | NA |
| 69 | | | | NA |
| 70 | | | | NA |

See attached data sheet

See attached data sheet

NA

NA

COMMENTS: **P/WRL PS-01-006**
 Misc. const. debris, mortar bags, conduit, boxes, lift station tank

- NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
 2. To request RO count Room analysis for $\beta\gamma$, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
 3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

Alpha/Beta Analysis

Batch ID: 01-50-039 RILEY BLDG.#36 NORTH OUTSIDE (15) CYR

Batch File: Smear Unit 1 - 200102261059

Acquisition Date: 2/26/2001

Group: J

Count Time (min): 1.5

Device: Unit 1

Recalibration Date: 5/17/2001

Geometry: Swipe/Smear

Serial Number: 64937

| <u>Sample ID</u> | <u>Carrier</u> | <u>Alpha (dpm)</u> | <u>2σ</u> | <u>Beta (dpm)</u> | <u>2σ</u> |
|------------------|----------------|--------------------|-----------------------------|-------------------|-----------------------------|
| 1 | 140 | 0.00 | 0.02 | 5.73 | 5.12 |
| 2 | 42 | 0.00 | 0.03 | 6.87 | 5.61 |
| 3 | 42 | 1.91 | 3.83 | 2.28 | 3.24 |
| 4 | 100 | 0.00 | 0.01 | 2.29 | 3.24 |
| 5 | 88 | 0.00 | 0.01 | 2.29 | 3.24 |
| 6 | 73 | 0.00 | 0.02 | 4.58 | 4.58 |
| 7 | 33 | 0.00 | 0.00 | 1.15 | 2.29 |
| 8 | 142 | 0.00 | 0.00 | 1.15 | 2.29 |
| 9 | 110 | 0.00 | 0.00 | 1.15 | 2.29 |
| 10 | 12 | 1.91 | 3.83 | 5.72 | 5.12 |
| 11 | 6 | 0.00 | 0.01 | 3.44 | 3.97 |
| 12 | 24 | 1.91 | 3.83 | 2.28 | 3.24 |
| 13 | 11 | 1.91 | 3.83 | 2.28 | 3.24 |
| 14 | 20 | 1.91 | 3.83 | 5.72 | 5.12 |
| 15 | 38 | 0.00 | 0.02 | 4.58 | 4.58 |

3-3063

P343
5
SC

ATTACHMENT 4

RADIOLOGICAL SURVEY DATA SHEET

#04-TF-0108

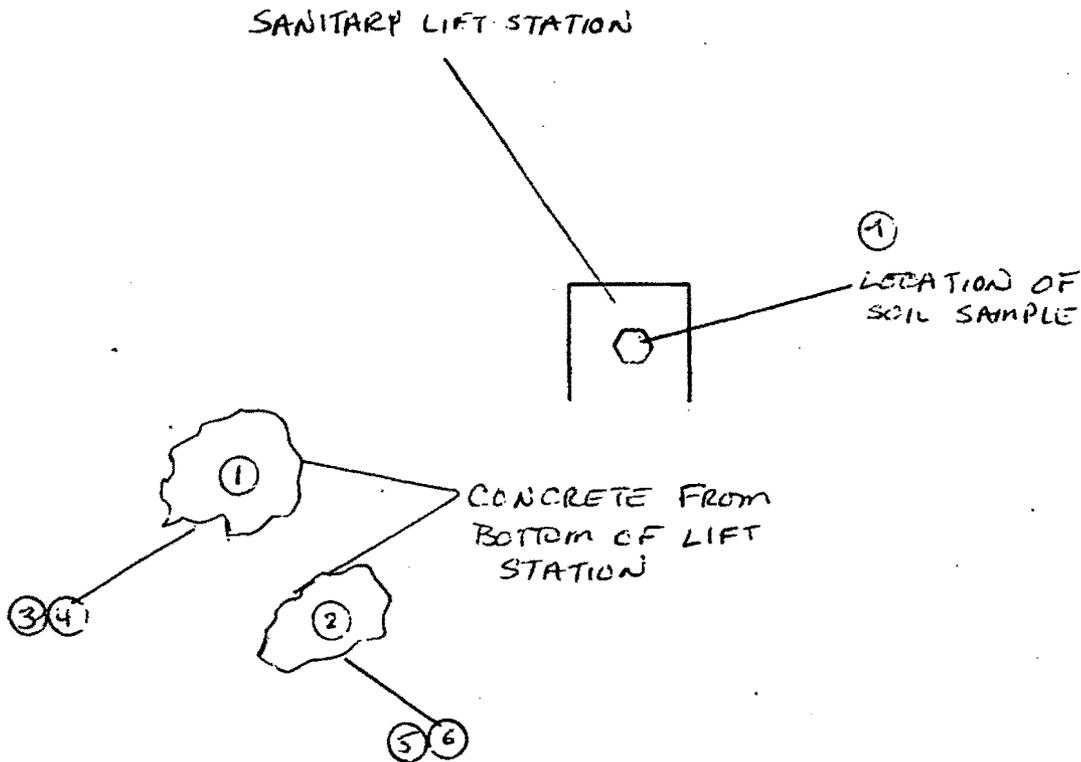
RADIOLOGICAL SURVEY DATA SHEET

1 of 4

| | |
|--|------------------------------|
| LOCATION: (BLDG./AREA/ROOM) 37 | SURVEY NO. 04-TF-0108 |
| PURPOSE: CHARACTERIZATION OF SANITARY LIFT STATION | RWP NO. N/A |
| | DATE: 3-22-04 |
| | TIME: 1405 |

MAP/DRAWING

COPY



INTEGRATED COUNTS TAKEN IF ALPHA AUDIBLE DETECTED
 NO ALPHA AUDIBLE DETECTED. ALL RESULTS

$\frac{2100}{J}$ $\frac{2516}{B}$

LEGEND: # = mrem/hr (γ) whole body
 #E = mrem/hr ($\beta + \eta + \gamma$) extremity on contact

\triangle # = mrem/hr neutron
 # = air sample number

= swipe number
 or/ β = direct cont. measurement in dpm/100cm²
 #/ α

INSTRUMENTS USED

| Instrument | Serial Number | Cal. Due Date |
|------------|---------------|---------------|
| 2360 | 5853/5847 | 3-2-05 |
| N/A | | |
| A | | |

| | | |
|---|------------------|----------------------|
| Completed: [Redacted] | HP # 6178 | Date: 3-23-04 |
| Counted by: (Signature) [Redacted] | HP # | Date: |
| Counted by: (Print Name) SEE | ATTACHED | |
| Reviewed/Approved by: (Signature) [Redacted] | HP # 7492 | Date: 3-24-04 |
| Reviewed/Approved by: (Print Name) [Redacted] | | |

RADIOLOGICAL SURVEY DATA SHEET

| Removable Contamination | | | | |
|----------------------------------|--------------|-------|---------|----------|
| Swipes (dpm/100cm ²) | | | | |
| Sample # | β/γ | Alpha | Tritium | Comments |
| 1 | SEE ATTACHED | | N/A | TOP |
| 2 | ↓ | ↓ | ↓ | TOP |
| 3 | | | | BOTTOM |
| 4 | ↓ | ↓ | ↓ | |
| 5 | ↓ | ↓ | ↓ | |
| 6 | ↓ | ↓ | ↓ | ↓ |
| 7 | ↓ | ↓ | ↓ | SAMPLE |
| N/A | | | | |

| Removable Contamination | | | | |
|----------------------------------|-----|-------|---------|----------|
| Swipes (dpm/100cm ²) | | | | |
| Sample # | β/γ | Alpha | Tritium | Comments |
| N/A | | | | |

COMMENTS: **2360 USED TO FIELD CHECK SMEARS PRIOR TO SENDING THEM TO COUNT LAB**

NOTES:

1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If needed, mark N/A.

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR018
Batch Ended: 3/22/04 14:22

Crosstalk correction performed.

Recalibration Date: 03/18/05
Serial Number: 26966-1

Batch ID: HARVEY 04-TF-0108 [7] JC

| Detector ID | Sample ID | Alpha Activity | | |
|-------------|-----------|----------------|----------|-------|
| | | DPM | σ | flags |
| A1 | 1 | 1.62 | 2.07 | |
| A2 | 2 | 1.65 | 2.13 | |
| A3 | 3 | 0.00 | 1.95 | |
| A4 | 4 | 0.00 | 1.98 | |
| B1 | 5 | 0.00 | 2.05 | |
| B2 | 6 | 1.33 | 2.13 | |
| B3 | 7 | 0.00 | 1.81 | |

29#

| Beta Activity | | |
|---------------|----------|-------|
| DPM | σ | flags |
| 7.62 | 3.53 | |
| 5.77 | 3.18 | |
| 0.00 | 1.21 | |
| 0.14 | 1.67 | |
| 3.89 | 3.08 | |
| 11.87 | 4.09 | |
| 0.00 | 1.21 | |

29#

4-3-04

3084
Page 1 of 1
29# 3-23-04

J. Collins

SOIL ANALYSIS REPORT

Field Sample ID:
Lab Sample ID: GL00945
File ID: MG500504.s0
Priority: Yes

Description\Location
Soil Under Bd. 37 Sanitary Lift Station
Long Count

Collector: 6178
Date Received: 03/22/04
Date Collected: 03/22/04

| <u>Radionuclide</u> | | <u>Activity (pCi/g)</u> | <u>MDA</u> | <u>MD-10438 Limit (pCi/g)</u> |
|---------------------|---|-------------------------|------------|-------------------------------|
| Co-60 | * | 0 | 0.02 | 45.000 |
| Cs-137 | * | 0 | 0.03 | 45.000 |
| Pb-210 | | 0.86 | 0.53 | 45.000 |
| Ra-226 | | 0.8 | 0.5 | 800 |
| Ac-227 (D) | * | 0.08 | 0.14 | 40 |
| Th-230 | * | 1.72 | 4.59 | 800 |
| Th-232 (D) | | 0.18 | 0.08 | 130 |
| Pu-238 | * | 0 | 16.18 | 500 |
| Am-241 | * | 0.03 | 0.04 | 500 |

Other Nuclides

| <u>Radionuclide</u> | <u>Activity (pCi/g)</u> | <u>MDA</u> | <u>MD-10438 Limit (pCi/g)</u> |
|---------------------|-------------------------|------------|-------------------------------|
| U-238D | 0.64 | 0.3 | |

Σ DOT 0.02 nCi/g Σ Respirator 0.04

Σ Respirator < 1 indicates soil levels below limit.

Instrument type: High Purity Germanium

Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4.

Σ DOT 2nCi/g limit, total activity.

(D) Denotes identification by daughter emissions.

Sample is Assumed to be in secular equilibrium.

* Indicates activity < MDA. MDA used in limits calculation

DGA H of U

Comments:

04-TF-0108

Date: 03/23/04

Counted By: 5288

Analyzed By: 7559

Initials XXXXXXXXXX

4-4-04