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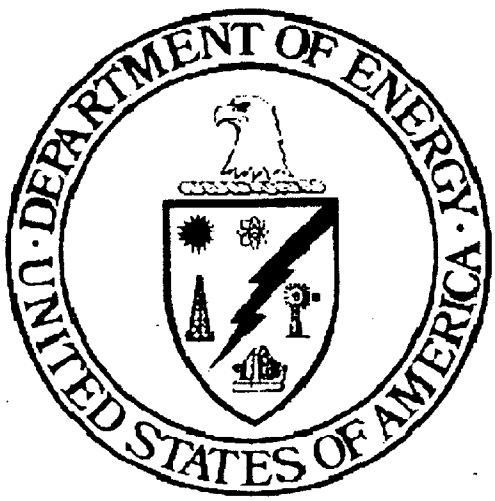
Phase I

Ecological Scoping Report

Final
March 2003



Miamisburg Closure Project

The Mound Core Team
P.O. Box 66
Miamisburg, Ohio 45343-0066

Mr. Daniel Bird, AICP
Planning Manager
Miamisburg Mound Community Improvement Corporation
720 Mound Road
COS Bldg. 4221
Miamisburg, Ohio 45342-6714

Dear Mr. Bird:

The Core Team, consisting of the U.S. Department of Energy Miamisburg Environmental Management Project (DOE-MEMP), U.S. Environmental Protection Agency (USEPA), and the Ohio Environmental Protection Agency (OEPA), appreciates your comments on the Phase I Residual Risk Evaluation, Phase I Ecological Scoping Report, and the Phase I Proposed Plan. Attached are our responses.

Should the responses to comments require additional detail, please contact Rob Rothman at (937) 865-3823 and we will gladly arrange a meeting or telephone conference.

Sincerely,

DOE/MEMP: 12-11-02
Robert S. Rothman, Remedial Project Manager

USEPA 2/7/03
Timothy J. Fischer, Remedial Project Manager

OEPA 12/11/02
Brian K. Nickel, Project Manager

Comment 1. MMCIC acknowledges that the residual risks calculated in the Residual Risk Evaluation (RRE) for an hypothetical construction worker and site worker in Release Phase 1 exceed the acceptable risk thresholds or ranges for some exposure media, exposure pathways, and/or routes of exposure, given the assumptions incorporated into the Mound 2000 Residual Risk Evaluation Methodology (DOE, January 1997). These exceedances include the incremental and total non-carcinogenic hazards for the future construction worker and future site employee, which exceed a Hazard Index of one due to potential exposure to groundwater. In addition, the total lifetime cancer risk for the future site employee scenario (1.2×10^{-4}) exceeds the acceptable risk range (10^{-4} to 10^{-6}). These risk exceedances are driven by the exposure to groundwater risk calculation.

MMCIC understands that the conservative assumptions incorporated into Mound's groundwater risk model will overestimate risk. These assumptions (that natural attenuation physical and chemical processes are not included in the calculation of the input groundwater concentration term, the use of the maximum detected value (from as much as seventeen years' worth of data), and the assumption that certain contaminants (such as chromium) are present in only their most toxic form) are intended to be conservative and were all accepted and commented upon during the public review period of the *Residual Risk Evaluation Methodology*. With this in mind, MMCIC understands that the actual groundwater risks are likely to be lower and accepts that the proposed action for Phase 1, namely institutional controls that will bar the use of groundwater at the Mound facility and continued groundwater modeling for Trichloroethylene (TCE) in the area of Well 0411, will be protective of human health and the environment under an industrial/commercial exposure scenario.

Response 1. Thank you for your comment and support.

Comment 2. MMCIC concurs with the conclusion of the Ecological Scoping Report, that based on the completion of the Ecological Scoping Checklist (Ohio EPA, April 2001 Procedure), the fact that no threatened or endangered species were observed in Phase 1 and that no sensitive environments or ecologically important resources were identified within Phase 1, and the review of numerous investigation reports performed in the Phase 1 area, a more detailed assessment of the ecological risk is not warranted.

Response 2. Thank you for the comment and concurrence.

Comment 3. MMCIC recommends that the Proposed Plan more clearly state for the public reader the reasons why TCE groundwater monitoring in the vicinity of Well 0411 is incorporated into the preferred remedial alternative for Phase 1, whereas the monitoring of barium, nickel and chromium *will* be performed on an ongoing basis in Phase 1, but is not included as part of the preferred alternative. Please clarify the process of identifying TCE as a *contaminant of concern* for the Phase 1 area, while barium, nickel, and chromium are identified, in this instance, as *constituents of interest*. MMCIC believes this issue could create confusion for the public reader.

Response 3. This ROD is, in effect, the final version of the Proposed Plan. The "Comparison of Groundwater Contaminants to MCLs" section of this ROD was rewritten with your comment in mind. The phrase "constituent of interest" is no longer used in the

document. In addition, an MCL exceedance for radium-226 and 228 was recently observed at well 0445. As a result of your comment and the radium exceedance, the last four paragraphs of this section now read:

"There are currently six groundwater monitoring wells and one seep located within the boundary of Phase I that show MCL exceedances. Four of the monitoring wells (0411, 0443, 0445, and 0399) are screened in the bedrock groundwater system, and two of the monitoring wells (0319 and 0400) are screened in the BVA. Wells 0411, 0443, and Seep 0617 exceed the MCL (5 parts per billion (ppb)) for TCE. Well 0445 exceeds the MCL for barium (2 parts per million (ppm)) and the MCL for radium-226 and 228 (5 pCi/L combined). Wells 0400, 0319, 0399, and 0411 exceed the MCLs for nickel (100 ppb) and chromium (100 ppb). The locations of the wells in Phase I are shown in Figure 5. In the last two years (September 2000 to present), the TCE concentrations at well 0411 have ranged from 8 to 16 ppb. The most recent result (Summer 2002) was 14 ppb.

Collectively, the soil data and groundwater data from the wells in the vicinity of well 0411 suggest that the TCE contamination is most likely limited to the area adjacent to well 0411. There is no known continuing source of TCE contamination in the soil in Phase I. However, TCE is not naturally occurring and was widely used in plant operations. Therefore, TCE is a contaminant of concern (COC) for the groundwater in Phase I and is addressed by the selected remedy.

Collectively, the soil data and groundwater data in the vicinity of well 0445 suggest that the elevated barium concentrations are most likely limited to the area immediately adjacent to well 0445. Other properties (high levels of total dissolved solids, very low tritium level, elevated levels of radium-226 and radium-228) of the groundwater observed at well 0445 are unlike the values typically observed in the bedrock groundwater at Mound, indicating that the groundwater at well 0445 may be neither representative of overall site conditions nor the result of plant operations. Therefore, barium, radium-226, and radium-228 in the Phase I property are not considered contaminants of concern to be addressed in the proposed remedies. To provide assurance that the understanding of the barium, radium-226, and radium-228 in groundwater situation is correct, DOE will continue to monitor for them. The specifics of the monitoring will be established in the Phase I Groundwater Monitoring Plan that will require approval by USEPA and OEPA. This will become part of the O&M Plan required by the ROD. With four consecutive quarters of consistent results for barium, radium-226, and radium-228. DOE could petition USEPA and OEPA to decrease the sampling frequency.

Limited Field Investigations (References 21 and 22) indicate the nickel and chromium concentrations observed at wells 0400, 0319, 0399, and 0411 are the likely result of corrosion of the wellcasing and not the result of plant operations. Therefore, nickel and chromium are not considered contaminants of concern to be addressed in the proposed remedies. However, because the data set supporting this conclusion is limited, DOE will continue to monitor for nickel and chromium. The specifics of the monitoring will be established in the Phase I Groundwater Monitoring Plan that will require approval by USEPA and OEPA. With four consecutive quarters of consistent or decreasing nickel and chromium results, DOE could, with the concurrence of USEPA and OEPA, discontinue monitoring groundwater in Phase I for nickel and chromium."

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Appendices

Acronyms

DOE	Department of Energy
EA	Environmental Assessment
FEIS	Final Environmental Impact Statement
MMCIC	Miamisburg Mound Community Improvement Corporation
NPL	National Priorities List
ODNR	Ohio Department of Natural Resources
OEPA	Ohio Environmental Protection Agency
PRS	Potential Release Site
USEPA	United States Environmental Protection Agency

1.0 EXISTING DATA SUMMARY

1.1 Site Location

This Ecology Scoping Report addresses the next portion of the US Department of Energy (DOE) Mound Plant to be transferred to the Miamisburg Mound Community Improvement Corporation (MMCIC). This portion of the Mound Plant has been designated as Phase I.

The Mound Plant is located about 10 miles southwest of Dayton, Ohio in Montgomery County, within the City of Miamisburg as shown in Figure 1. At one time, the Mound Plant occupied approximately 306 acres and approximately 130 buildings with a total of 1.4 million square feet of floor space. Since 1999, approximately 122 acres have been transferred to MMCIC. Phase I, which consists of three areas, occupies approximately 53.8 of the remaining 183 acres. The location of Phase I is illustrated in Figure 2.

1.2 Site History

Since 1948, Mound has operated as a research, development, and production facility in support of DOE's weapons and energy programs. Mound's past missions included process development, production engineering, manufacturing, and surveillance of detonators, explosives, and nuclear components. Mound's current mission is to support DOE's efforts in environmental management and to transition the site, in cooperation with the City of Miamisburg, from a cold-war production facility to commercial or industrial use.

In 1989, US Environmental Protection Agency (USEPA) placed Mound on the National Priorities List (NPL). As a result, a number of investigative and remedial projects have been conducted at Mound. This report will use the results of these projects to support a conclusion regarding the need for an ecological assessment.

Phase I includes 13 existing buildings and explosives magazines and 25 former production-era building sites including buildings, explosives storage magazines, and an electrical generator. Details of current and historic buildings are provided in Appendix C. Since the plant became operational, the properties in Phase I, with the exception of those lands in the area designated "South Property" (or recently transferred Parcel 4) have supported a number of plant related operations. Included in the activities that once took place in Phase I are explosives testing and production-related activities, administrative activities (i.e., offices and site security operations), utilities operations, waste processing operations (the Burn Area), and cleanup waste storage operations.

In addition to the 38 production-era buildings noted above, Phase I also includes building sites for around seven buildings, constructed in 1947 with the sole purpose to support the construction of the original site buildings. An additional building location includes the site of a building that was transferred from Dayton Unit III to the Mound site in 1949. This building was again moved to another location on the Mound site, and is

known as "Building 19." The building sites dating from the construction era include a quonset-type building and some other temporary buildings.

Phase I lands have also been used for various waste and non-waste storage activities including waste container management, equipment management, and for other general plant uses.

1.3 Site Land and/or Water Use

1.3.1 Current

The current land use in Phase I (Reference 1) is illustrated in Figure 3. Approximately 42% of Phase I is wooded. Approximately 30% of Phase I consists of shrub/scrub/grasses. Approximately 28% of Phase I is an engineered surface (road, parking, building). There are no flowing or non-flowing water bodies. There is a designated wetland (0.03 acres) in Phase I (Reference 7).

1.3.2 Future

MMCIC is developing the Mound site to become a contemporary research and industrial park, the Mound Advanced Technology Center. The planned land use is illustrated in Figure 4 ("Vision Plan" from Reference 2). MMCIC plans to retain Buildings 102, 3, and 63 and Magazines 80-84. MMCIC plans to include developing part of Phase I with the addition of six buildings with adjacent parking. MMCIC has identified as a principal feature of the plan the "greening" of the Mound through a proposed reforestation program to control erosion on the steep hillsides and improve stormwater management. MMCIC is also planning to improve site and building vehicle access and provide adjacent parking and green space consistent with the campus-like character of a modern research and industrial park.

1.4 Known or Suspected Hazardous Substance Releases

During past operations at the Mound facility, the release of hazardous materials occurred. During subsequent facility investigations, over 400 Potential Release Sites (PRSs) have been identified. These PRSs were identified on the basis of potential radiological and/or chemical (non-radioactive) contamination, knowledge of historical processes or land use, or on actual sample data. Phase I includes 45 PRSs. The locations of PRSs in Phase I are shown in Figure 5. The Core Team, with representatives from the USDOE, USEPA, and the Ohio Environmental Protection Agency (OEPA) performed an evaluation of these PRSs. The Core Team used process knowledge, site visits, and existing data to determine whether or not any action was warranted concerning the PRSs. All investigative and removal activities in Phase I have been completed. Appendix D includes excerpts from closure documents for these PRSs.

1.5 Sensitive Environments

Table 3 lists sensitive environments (Defined in Reference 3 and the Hazard Ranking System. Reference 3 is included in this report as Appendix G (Procedure tab)) and their applicability to Phase I, areas adjacent to Phase I, and areas within a half mile of Phase I.

1.6 Threatened and/or Endangered Species

During the development of the Final Environmental Impact Statement (FEIS) for the Mound Plant, federal and state resource trustees were contacted to assess onsite occurrence of threatened and/or endangered species. At that time there were no known records of such species on the Mound property. Furthermore, because of the lack of habitat availability and because of widespread construction impacts, the FEIS concluded "that the probability of endangered or threatened species occurring onsite is extremely remote" (Reference 4).

Another investigation (OU9 Ecological Characterization Report, Reference 1) indicated that no federal threatened or endangered species occur on the Mound Plant site. Two species listed by the State of Ohio as endangered were found, the dark-eyed junco (*Junco hyemalis*) and the inland rush (*Juncus interior*). The report indicated that "A single individual of this grass species was found growing adjacent to a limestone seepage area in an open grassland on the South Property. Inland rush is a prairie plant living at the extreme eastern edge of its natural range in Ohio. While abundant elsewhere, only five populations scattered over four counties have been conclusively documented in the state. ...Because only a single individual was located (despite intensive efforts to find others), inland rush at the Mound facility cannot be considered a viable breeding population. Furthermore, the solitary occurrence should in no way interfere with ongoing or future activities at the site. A second endangered species, a bird, discovered at Mound is the dark-eyed junco (*Junco hyemalis*). Several individuals were observed foraging in grassland, scrub/shrub, and forested habitats during both the fall of 1992 and winter 1993 bird surveys. Despite being a common winter visitor to Ohio and to much of the eastern US, only a small contingent of the population is known to actually breed within the state. It is this small group of breeding birds that is responsible for state listing and that is the target of special protection. It should be stressed that there are currently no known breeding populations of dark-eyed junco in southern Ohio. The only known breeding populations in Ohio occur in the extreme northeastern portion of the state, where they inhabit isolated bogs or hemlock ravines." The most likely location of the observation of inland rush is in the vicinity of Seep 0609. This is outside the boundaries of Phase I. Although the dark-eyed junco has been observed at Mound, the small breeding population that has state protection has not been observed at Mound.

Recently, an ecological risk evaluation was performed for Parcel 4, which is adjacent to Phase I (immediately to the south). During that investigation, Ohio Department of Natural Resources (ODNR) and United States Department of the Interior Fish and

Wildlife Service were contacted about threatened and endangered species at the Mound Plant site. The responses are included in Appendix E. ODNR reported the location of the inland rush. The Fish and Wildlife Service indicated that Mound is located within the range of the Indiana bat, a federally listed endangered species. It is also in range of the eastern massasauga, a docile rattlesnake that is a federal candidate species (Reference 6). The snake is currently listed as endangered by the State of Ohio.

The Environmental Assessment (EA) for Commercialization of the Mound Plant (Reference 5) indicated that the Indiana bat has not been seen onsite. In addition, a Dayton Museum of Natural History field survey in 1991 did not locate any shagbark hickories (potential roosting locations of the Indiana bat) (Appendix B of Reference 5). This information can be located in Appendix E of this report. The EA concluded that the commercialization of the Mound Plant "would not be expected to have any effect on threatened or endangered species in the area of the Mound Plant. Such species (other than the single specimen of Inland Rush (*Juncas interior weig*)) are not observed on the plant site, nor are they likely to be dependent on the site for food and habitat due to the commercial and residential development surrounding the plant."

2.0 Site Visit Summary

2.1 Contaminants of Interest

The contaminants of interest, their proximity to the site, and the media in which they occur are summarized in Part 2 of the Ecological Scoping Checklist (Appendix F).

2.2 Ecological Features

Ecological Features are listed in Part 3 of the Ecological Scoping Checklist (included in Appendix F). They are also illustrated on the Phase I Habitat Map (Figure 3).

2.3 Ecologically Important Species/Habitats

This analysis was performed for "Important Ecological Resources" as defined in Reference 3.

Ecologically important resources are those that contain:

- Individual listed threatened and endangered species, or
- Local populations of species that are recreational and/or commercial resources, or
- Local populations of any species with a known or suspected susceptibility to the hazardous substance.

Local populations of invertebrate species are those that:

- Provide not replaceable food resource for higher organisms and whose function

as such would not be replaced by more tolerant species, or
- Perform a critical ecological function (such as organic matter decomposition) and whose function would not be replaced by other species, or
- Can be used as a surrogate measure of adverse effects for individuals or populations of other species.

Ecologically important plants are those that:

- form the habitat for an ecologically important species, or
- are listed as threatend and endangered species.

The definition of *ecologically important* resources is meant to exclude areas such as mowed, maintained, or other areas that exhibit few to no important ecological resource functions.

As defined above, there are no *ecologically important* resources in Phase I.

2.3.1 Threatened and/or Endangered Species

The site visit (summarized in Part 4 of the Ecological Scoping Checklist) did not identify threatened or endangered species within Phase I.

2.3.2 Threatened and/or Endangered Species Habitat

The site visit (summarized in Part 4 of the Ecological Scoping Checklist) did not identify threatened or endangered species habitats within Phase I.

2.4 Exposure Pathways

Exposure pathways are identified in Part B of the Ecological Scoping Checklist (Appendix F). There are no exposure pathways identified on Part B of the Ecological Scoping Checklist.

3.0 Recommendations

This report has been prepared in accordance with an OEPA procedure to determine if an ecological assessment is warranted at a site (Reference 3, reprinted in Appendix G). Based on the site visit that is part of the OEPA procedure, the fact that no threatened or endangered species were observed within Phase I, and that no sensitive environments or ecologically important resources were identified within Phase I, the future reuse of Phase I as a research and industrial park and the information developed during the FEIS, OU 9 Ecological Characterization Report, Parcel 4 Ecological Assessment, Environmental Assessment for the Commercialization of the Mound Plant, Miami-Erie Canal Ecological Risk Assessment and the several characterization investigations and removal actions performed in the Phase I area, a more detailed assessment of the ecological risk is not warranted.

4.0 References/Data Sources

Reference 1 Operable Unit 9, Ecological Characterization Report, Technical Memorandum Revision 0, March 1994

Reference 2 Miamisburg Mound Comprehensive Reuse Plan, Final January 1997 with Addenda through September 2001

Reference 3 Recommended Procedure For Determining If Ecological Assessment is Warranted at a Site, September, 2001

Reference 4 Final Environmental Impact Statement, Mound Facility, US Department of Energy, June 1979

Reference 5 Environmental Assessment for the Commercialization of the Mound Plant, DOE/EA-1001, October 1994

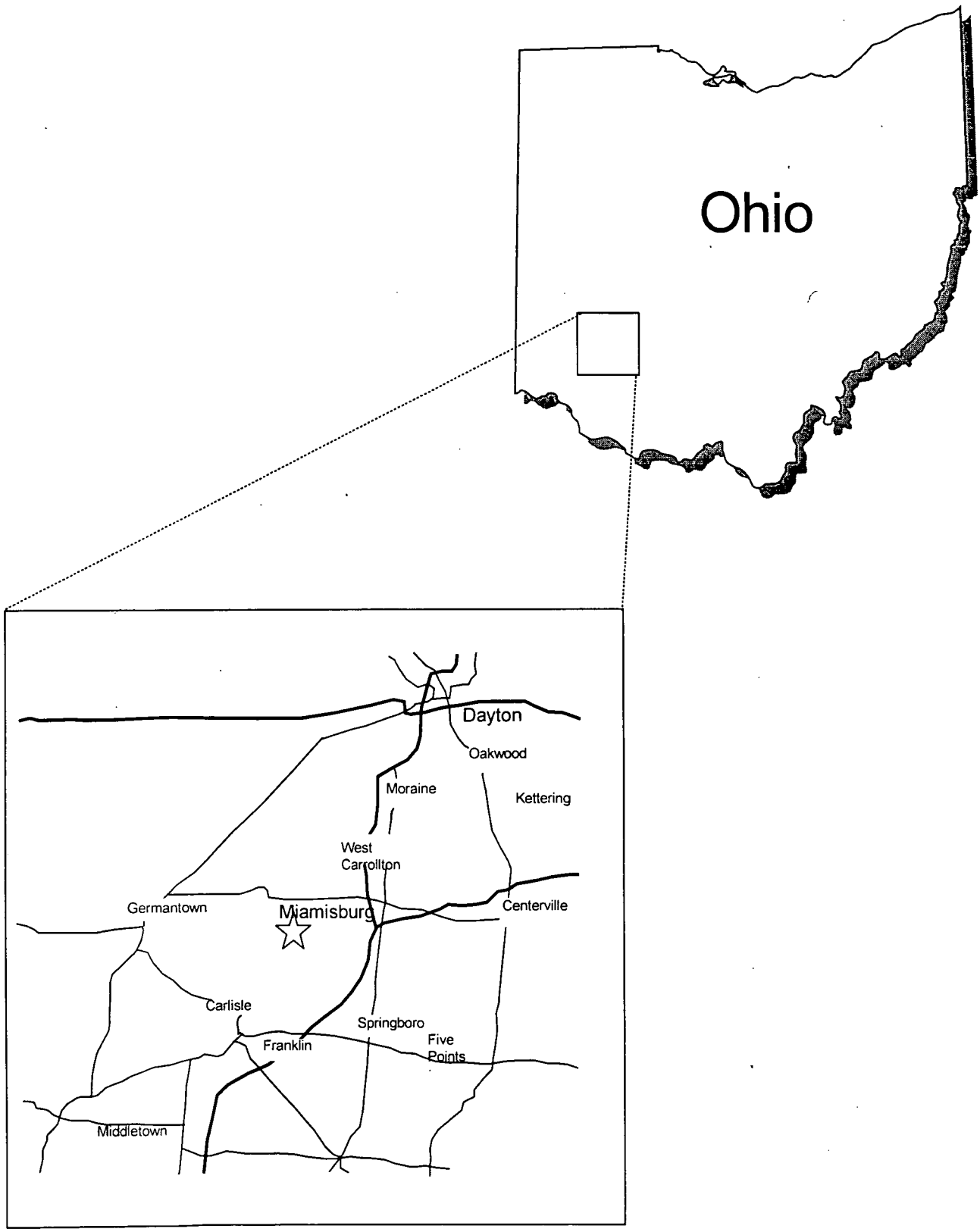
Reference 6 Federal Register Notice, June 13, 2002

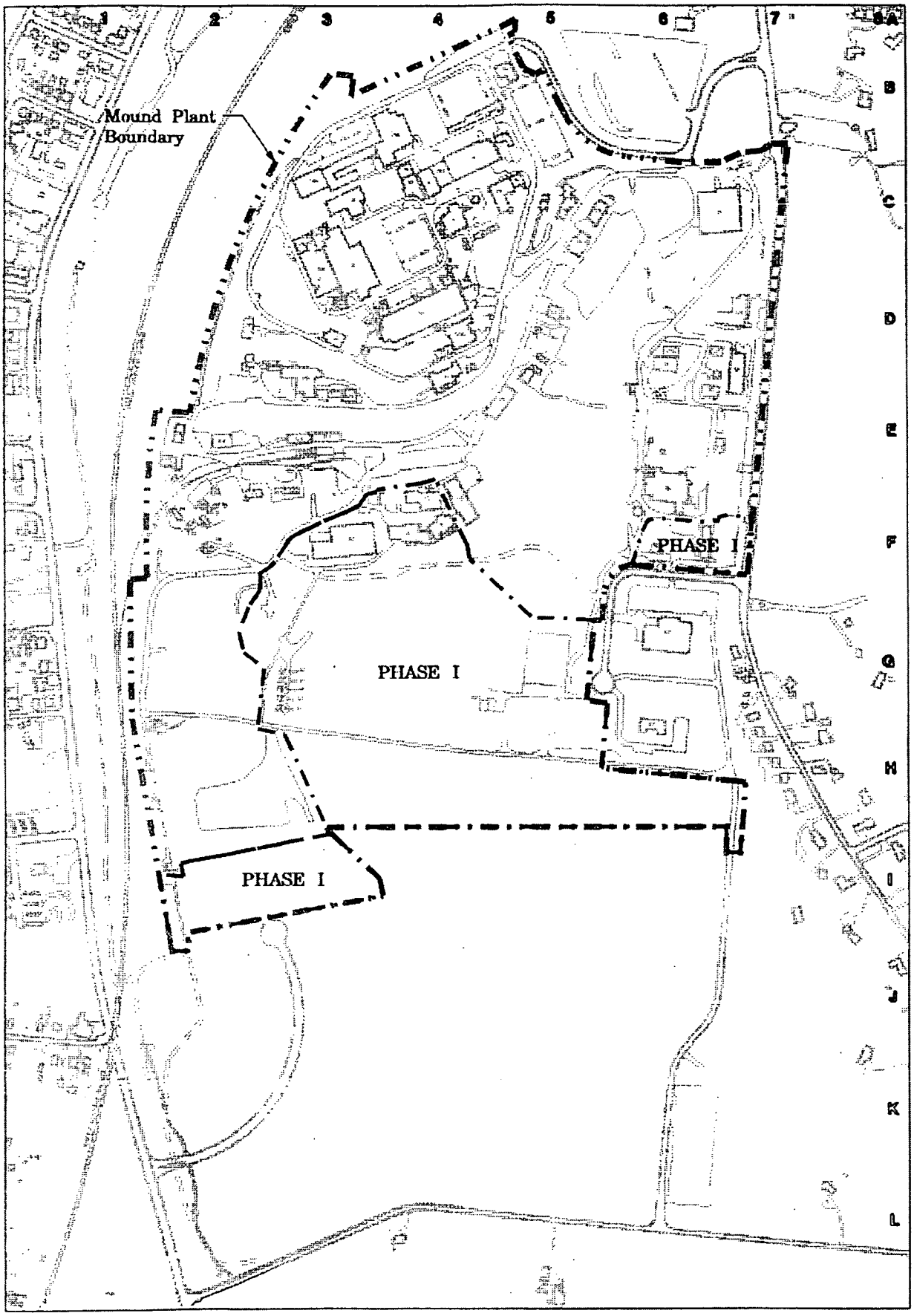
Reference 7 Delineation of Federal Wetlands and Other Waters of the U.S., Final, August 1999

APPENDIX A

Figures

Figure 1: Regional Context of the Mound Plant





Legend

Structures
Paved roadway
Unpaved roadway
Railroad
Water course
Fence
Mound Plant boundary
Contour line

0 100 200 400 600 800 1000
Scale in Feet

05/08/02	ISSUE FOR GENERAL USE	SSP				
DATE	REVISION	BY	CHKR	ENG	#	

MOUND
Environmental Restoration Geographic Information System

SHEET	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27									
ISSUE																														
SHEET	1	2	3	4	5	6																								
ISSUE	A																													

PART CLASSIFICATION

DRAWING CLASSIFICATION: UNCLASSIFIED | SIZE: D | DRAWING NUMBER: gen_site_plan.dgn | LAB NUMBER

DRG TYPE: SITE | PROJ | CAGE | SCALE: Graphic | SHEET 1 OF

STATUS: MEL-REL-09/14/99 | ORIGIN | MSTATION / ,d

TITLE CLASSIFICATION

Figure 2
Location of Phase I

gen_site_plan.dgn

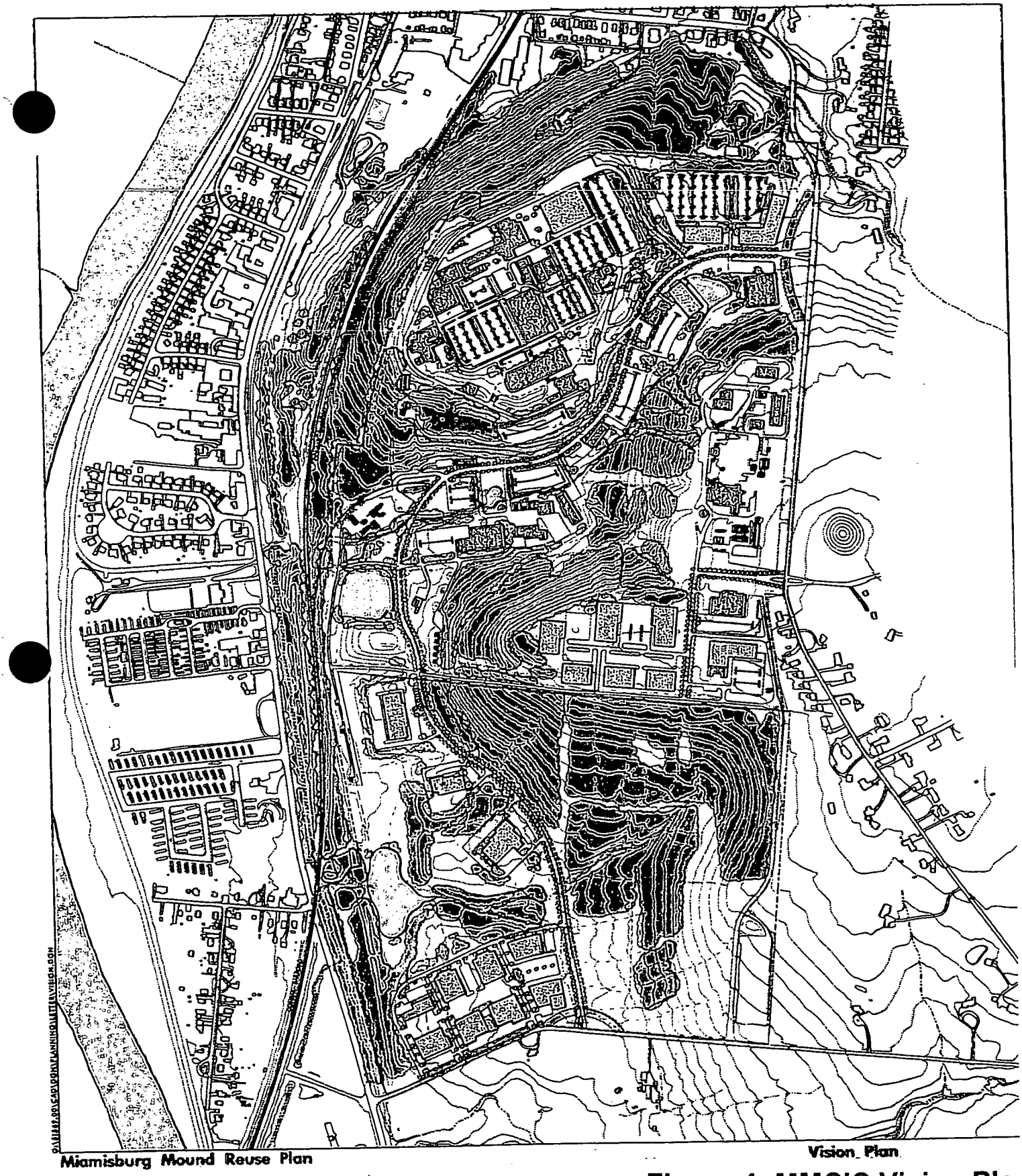


Figure 4: MMCIC Vision Plan

MIAMISBURG Mound COMMUNITY IMPROVEMENT CORP

SASAKI

URS Consultants, Inc.
Economic Research Associates, Inc.
Hamilton, Rabinovitz & Alschuler
Environmental Technologies and Communications, Inc.

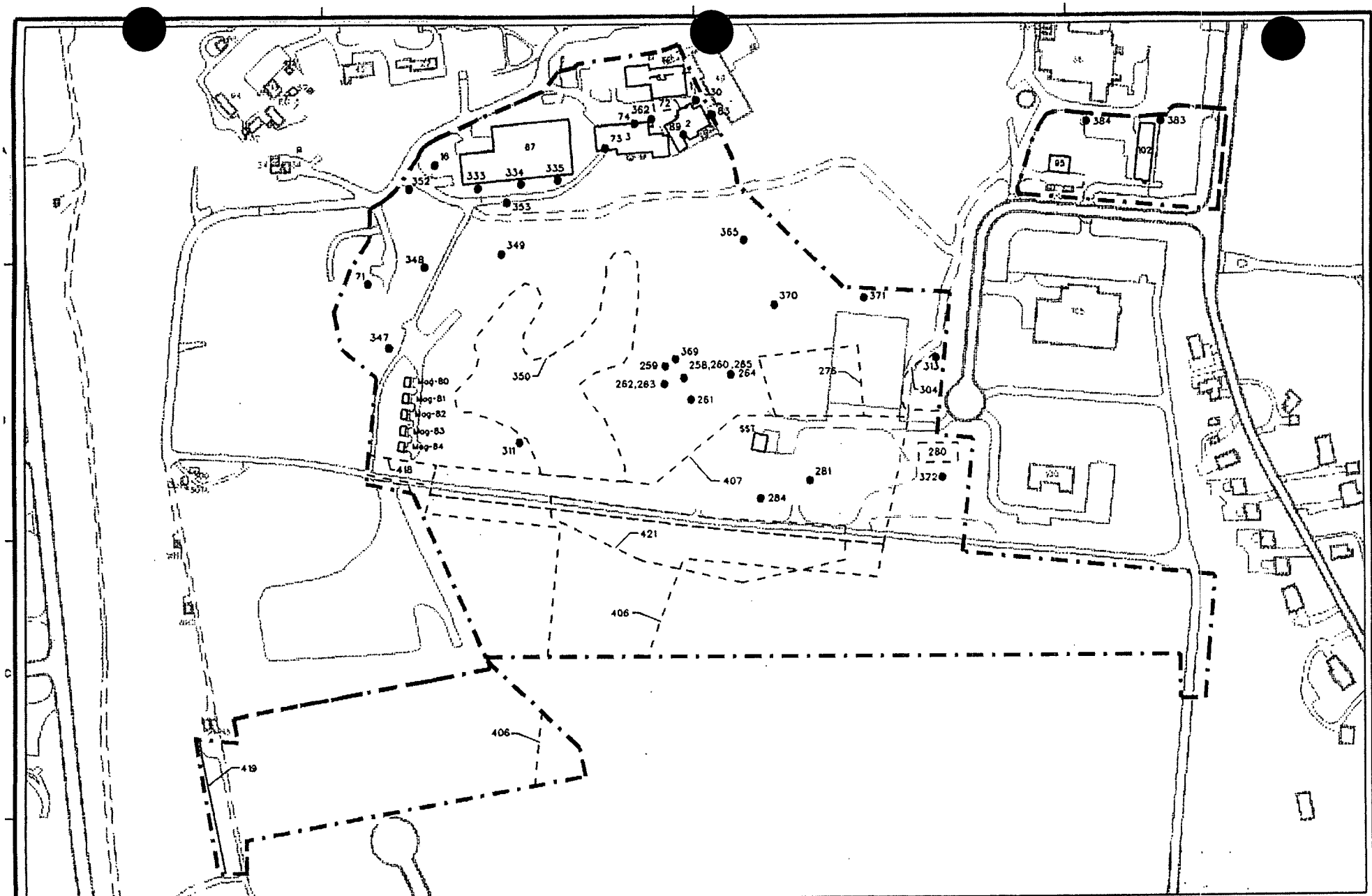


Figure 5: Location of PRSs in Phase I

	05/08/02			SSP					
ISS	DATE	REVISION	BY	CHKD	APVD	UNITS	MODEL	S	

APPENDIX B

Tables

Table 1: Phase I PRSs and Core Team Conclusions

PRS	Description	Core Team Decision	Closeout of PRS
16	Area C (Old Building 72)	NFA	Recommendation signed 8 May 1996
71	Building 85 Waste Solvent Tank (Tank 136)	NFA	Recommendation signed 4 August 1996
72	Area 13 Polonium from Dayton Unit IV	NFA	Recommendation signed 17 January 2002
73	Evaporator Storage Area	NFA	Recommendation signed 17 January 2002
74	Quonset Hut: former waste storage site	NFA	Recommendation signed 19 February 1997
83	Building 2 Propane Storage Tank (Tank 122)	NFA	Recommendation signed 17 January 2002
89	Test Fire Residual Storage Area	NFA	Recommendation signed 17 January 2002
258-265	Burn Area	NFA	Recommendation signed 20 June 2001
276	Area 22: Orphan Soil from Other Areas	RA	OSC Report signed (pending)
280	Waste Oil Drum Field	NFA	Recommendation signed 28 February 2002
281	Area E, Waste Oil Spill	NFA	Recommendation signed 12 July 2000
284	Building 21 Thorium Sludge Storage Facility	NFA	Recommendation signed 17 February 2001
304	Excavated Material Disposal Area was	NFA	Recommendation signed 19 February 1997
311	Potential Hot Spot Location S0706	NFA	Recommendation signed 4 March 1996
313	Potential Hot Spot Location S0982	NFA	Recommendation signed 19 February 1997
330	Building 2 Fuel Oil Tank (Tank 260)	NFA	Recommendation signed 19 February 1997
333	Explosive Surge Tank (Tank 263)	NFA	Recommendation signed 19 March 1997

Table 1: Phase I PRSs and Core Team Conclusions
(continued)

PRS	Description	Core Team Decision	Closeout of PRS
334	Explosive Surge Tank (Tank 264)	NFA	Recommendation signed 19 March 1997
335	Explosive Surge Tank (Tank 265)	NFA	Recommendation signed 19 March 1997
347	Soil Contamination	NFA	Recommendation signed 20 November 1996
348	Soil Contamination	NFA	Recommendation signed 20 November 1996
349	Soil Contamination	NFA	Recommendation signed 19 February 1996
350	Soil Contamination, Area West of Building 21	NFA	Recommendation signed 4 March 1996
352	Soil Contamination	NFA	Recommendation signed 20 November 1996
353	Soil Contamination	NFA	Recommendation signed 20 November 1996
362	Soil Contamination	NFA	Recommendation signed 20 November 1996
365	Soil Contamination	NFA	Recommendation signed 17 December 1996
369	Soil Contamination	NFA	Recommendation signed 20 November 1996
370	Soil Contamination	NFA	Recommendation signed 20 November 1996
371	Soil Contamination	NFA	Recommendation signed 18 December 1996
372	Soil Contamination	NFA	Recommendation signed 8 May 1996
383	Soil Contamination	NFA	Recommendation signed 31 March 1997
384	Soil Contamination	NFA	Recommendation signed 31 March 1997
406	Thorium Sludge Redrumming	NFA	Recommendation signed 14 March 1996

Table 1: Phase I PRSs and Core Team Conclusions
(continued)

PRS	Description	Core Team Decision	Closeout of PRS
407	Soil Contamination West of Building 21	NFA	Recommendation signed 17 February 2000
418	PRS 418: Overflow Pond South Inlet	NFA	Recommendation signed 21 June 2000
419	Drainage Outflow Reroute	NFA	Recommendation signed 17 November 1999
421	Ridge	NFA	OSC Report signed (pending)

NFA: No Further Action
PRS: Potential Release Site
RA: Removal Action

Table 2: Phase I Buildings and Core Team Conclusions

Building	Description	Core Team Decision	Closeout Action
2	EM Test Facility	NFA	Recommendation signed February 2002
3	EM Test Facility	NFA	Recommendation signed March 2002
63	Surveillance Facility	NFA	Recommendation signed March 2002
87	Component Test Facility	NFA	Recommendation signed March 1997
Mag 80	Magazine	NFA	Recommendation signed March 2002
Mag 81	Magazine	NFA	Recommendation signed March 2002
Mag 82	Magazine	NFA	Recommendation signed March 2002
Mag 83	Magazine	NFA	Recommendation signed March 2002
Mag 84	Magazine	NFA	Recommendation signed March 2002
95	SM/PP Area Chiller Plant	NFA	Recommendation signed July 2002
102	Offices (Process Support Building)	NFA	Recommendation signed June 2002
SST	Salt Storage for Water Treatment and Road Salt	NFA	Recommendation signed March 2002

NFA: No Further Action

Table 3: Sensitive Environments and Applicability to Phase I

Sensitive Environment	Present in Phase I	Present in Adjacent Property	Present within 0.5 mile of Phase I
Critical habitat for designated endangered or threatened species	No	No	No
Marine Sanctuary	No	No	No
National Park	No	No	No
Designated Federal Wilderness area	No	No	No
Critical areas identified under the Clean Lakes Program	No	No	No
National Monument	No	No	No
National Lakeshore Recreational Area	No	No	No
Habitat known to be used by federal designated or proposed endangered or threatened species	No	No	No
National Preserve	No	No	No
National or State wildlife refuge	No	No	No
Federal land designated for the protection of natural ecosystems	No	No	No
Administratively Proposed Federal Wilderness Area	No	No	No
Spawning areas critical for the maintenance fish/shellfish species within a river, lake, or coastal waters	No	No	No
Migratory pathways and feeding areas critical for the maintenance of anadromous fish species within river reaches or areas of lake or coastal tidal waters in which the fish spend extended periods of time	No	No	No
Terrestrial areas utilized for breeding by large or dense aggragations of animals	No	No	No
National river reach designated as Recreational	No	No	Yes
Habitat known to be used by species under review as to its federal endangered or threatened status	No	No	No
Federally-designated Natural Areas	No	No	No
Area important to maintenance of unique biotic communities	No	No	No
State designated areas for protection or maintenance of aquatic life	No	No	No
Wetlands	No	Yes	Yes

APPENDIX C

Building Information

Phase I includes 53.8 acres of land located in three distinct sections or parcels of the site property (Figure 2). The first parcel, the largest block of property in Phase I includes lands located on the south central part of the original 182 acres of the site that was purchased in 1947. This piece of property also contains a portion of the South Property (purchased in 1982). The second parcel of property included in Phase I is situated to the south of the Spoils Area and the site well pump houses, in the area designated as the South Property. The third parcel of property in Phase I lies to the south-southeast of Building 38.

Phase I includes 13 existing buildings and explosives magazines and 25 former production-era building sites including buildings, explosives storage magazines, and an electrical generator. Since the plant became operational, the properties in Phase I, with the exception of the South Property, have supported a number of plant related operations. Included in the activities that once took place in Phase I is explosives testing and production-related activities, administrative activities (i.e., offices and site security operations), utilities operations, waste processing operations (the Burn Area), and cleanup waste storage operations.

In addition to the 38 production-era buildings noted above, Phase I also includes building sites for around seven buildings constructed in 1947 with the sole purpose to support the construction of the original site buildings. An additional building location includes the site of a building that was transferred from Dayton Unit III to the Mound site in 1949. This building was again moved to another location on the Mound site, and is known as "Building 19." The building sites dating from the construction era include a storage warehouse, a quonset-type building, and some other temporary buildings.

Phase I lands have also been used for various waste and non-waste storage activities including waste container management, equipment management, and for other general plant uses.

BUILDINGS CURRENTLY LOCATED IN PHASE I

There are 13 existing buildings located within Phase I (as shown in Figure 5), including five buildings located in the Test Fire Area that have supported detonator and explosives testing operations (Buildings 2, 3, 63E, 63W, and 87). In addition to the five Test Fire Area buildings, there are five explosives magazines located to the southwest of the Test Fire Area (Magazines 80, 81, 82, 83, and 84). All of the buildings in the Test Fire Area, with the exception of Building 2, as well as the explosives magazines, are currently operated under users agreements that are being administered by MMCIC.

The remaining three buildings located in Phase I include Building 95, which is a chiller and steam plant that is located on the SM/PP Hill; Building 102, an office building located on the SM/PP Hill; and the Salt Storage (SST) Building.

Buildings currently located in Phase I are described below.

Building 2. The former Energetic Materials Destructive Testing Facility (Building 2) was constructed in 1956. At the time of construction, the building contained approximately

3,130 square feet of floor space. With five additions to the building, the square footage of Building 2 has grown to 6,291 square feet. Today, Building 2 exists as a reinforced concrete and concrete block structure that is constructed slab-on-grade with a built-up membrane roof. In addition to the more permanent parts of the building, Building 2 includes two attached metal storage sheds.

From the time of its construction in 1956 until the construction of Building 87 in the late 1980s, the function of Building 2 remained the same, a facility for the destructive testing of energetic materials.

Building 3. Building 3 was constructed in 1963 and is an explosives material destructive test firing and environmental testing laboratory. With four additions to the building, including two attached corrugated fiberglass faced metal framed storage sheds, the square footage of Building 3 is currently 12,400 square feet.

When operated by DOE and the contractor, Building 3 included 17 environmental chambers for thermal testing, six systems for mechanical testing operations, two vibration testing systems, one centrifuge testing system, and three shock testing systems.

Building 3 was used as a facility for the destructive and environmental testing of explosives materials from the time of construction in 1963 until the building was turned over to EG&G Star City (now Perkin-Elmer) in 1994 under a lease agreement with the DOE. Building 3 has operated under that agreement since that time.

Buildings 63E and 63W. Building 63 East/West is actually two separate, or two distinct buildings, that are adjacent and therefore share the same building number. There is no shared point of entry between either building.

Building 63 East contains 14,418 square feet of floor space, and was constructed to provide a facility to test systems design and for related development activities.

Building 63 West contains 3,050 square feet of floor space and was constructed to provide a facility for long-term environmental conditioning studies. When constructed, one-half of the building consisted of administrative areas (i.e., offices). The other part of Building 63 West was used for environmental storage and conditioning chambers, ovens, and spin testing equipment. Building 63 West included 10 environmental chambers for spin testing and eight chambers for thermal testing.

Building 63 East/West functioned as a facility for testing and testing research and related support activities, from the time of construction in 1981 until the building was turned over to EG&G Star City (now Perkin-Elmer). The transition of Building 63 East and Building 63 West to private industry took place in the mid-1990s. Building 63 East/West has continued to operate under this lease agreement since that time.

Building 87. Building 87 (or CTF-the Component Test Facility) is a two-story, 38,882 square foot, concrete structure, built slab-on-grade. The CTF offices and support facilities and other operational control/testing facilities that supported the testing cells

were located on the first floor. The mechanical penthouse, on the second floor, contains HVAC heating and air conditioning, air handling units for the test cell areas, and a heat exchanger for hot water. The mechanical area occupies approximately 600 square feet. Building 87 was constructed in the 1980s and underwent shut down in about 1995.

Building 87 is currently being renovated by MMCIC for use by private industry.

Building 95. Building 95, the "SM/PP Chiller" consists of one larger building (Building 95) with 2,000 square feet of floor space, and two smaller ancillary buildings (Buildings 95-A and 95-B, each having 450 square feet of floor space. Buildings 95 (collectively) was constructed in the mid-1980s, in order to supplement P Building (Power Plant) operations, and in order to satisfy the demand for a chiller on the SM/PP Hill.

Building 102. Building 102 is a 10,982 square-foot two-story office building that was constructed in 1987 to support Mound's Decontamination and Decommissioning Program (D&D Program), and to provide an administrative area to house cleanup related staff. Through time, Building 102 has continued in its mission as an office, however, the building tenants have differed, including staff members from the PST Program, Soil Project team staff, as well as D&D Program staff members.

SST Building. SST Building was constructed in the early 1970s and is located in the vicinity of the former Burn Area, just to the southwest of where that area was located, and just to the east of the former Building 21 location. SST has been used for salt storage for snow control on site.

SST Building is a one-story, 590 square-foot, slab-on grade structure with wood framing for the walls and roof. The front of SST Building is open from wall to wall and from the ground to the roof. A 3-foot high concrete wall separates the wood structure from the slab and divides the area into two sections. Wood siding and the roof are covered with tar paper. SST Building was renovated in 2000.

Magazines 80, 81, 82, 83, and 84. Magazines 80, 81, 82, 83, and 84, are smaller explosives storage bunkers (explosives magazines) that were constructed in 1985.

Magazines 80, 81, 82, 83, and 84 each contain two-units or compartments. Each of the magazines is constructed of reinforced concrete as a box-shaped structure and considered non-standard earthen-covered magazines. The configuration of Magazines 80, 81, 82, 83, and 84 appears to be one unit. These magazines were used for the storage of energetic materials, and were used for that purpose, until they were transferred to EG&G Star City (now Perkin-Elmer) under a user agreement initiated with DOE.

The transition of Magazines 80, 81, 82, 83, and 84 to private industry took place in the mid-1990s, and these magazines have continued to operate under a user lease agreement since that time.

FORMER PRODUCTION ERA BUILDING SITES

There are 24 sites where production era buildings were once located within Phase I. Included in the former buildings that were located in Phase I are 4 buildings (Buildings 13, 14, 35, and 59) in the Test Fire Area that supported detonator and explosives testing operations. In addition to the Test Fire buildings, there were six explosives storage magazines to the southwest of the Test Fire Area (Magazines 4, 5, 8, 9, 10, and 20) that supported explosive operations.

Buildings 12 and 18 were located near the current Building 87 location into the 1980s. These buildings were apparently storage warehouses that were used to support explosives operations.

There was also an explosive storage magazine (Magazine 6) that was later converted from an explosive storage magazine to a storage area for use by the security force to store weapons. Magazine 6 was located between Buildings 49 and 63.

An additional four buildings or facilities were located in an area designated as the "Burn Area." This area was located to the northwest of SST Building, and included the Pyroshed Energetic Materials Waste Storage Unit, the Open Burn Energetic Materials Treatment Unit, Building 90 and the retort unit (an explosives treatment unit), and Magazine 53 (an explosives storage area).

Other building sites in Phase I also include the location for Building 39, a maintenance building, the location for an emergency electrical generator (Electric Generator Number 7), a process material storage building (Building 21), and four modular office buildings (Buildings 77, 78, 97, and 101).

The last of the building sites in Phase I is for Building 85. Building 85 is also the last building to be demolished in Phase I. Building 85 was an explosives powder process facility that was never placed into production.

The buildings once located on the former building sites within Phase I are described below.

Buildings 12 and 18. Building 12, titled the "Detonator Storage Building" was constructed in 1960, as a 57' x 32' long "Armco" steel building. Building 18, constructed in 1963, was similar in size and construction to Building 12. Both buildings were used to support explosives operations and were located about where Building 87 is currently located. Buildings 12 and Building 18 were demolished in the 1980s.

Building 13. Building 13 was a one-story, 44 square-foot wood-framed asbestos-coated steel structure on a concrete slab. Building 13 was located to the west of Building 21, and was used to support a program for remote monitoring of energetic materials destructed in the Burn Area, located to the east. Building 13 contained a video monitor and electrical initiation equipment for firing explosive materials treatment devices. The building use, as described in 1990, was a "firing shed." Building 13 was demolished in 1997.

Building 14. Building 14 was a 42 square-foot, one-story, structure. This building was constructed with a wood and metal-frame and asbestos-coated sidewalls, with concrete deck roof on concrete footings. This building was used as an observation post in association with the former Burn Area to the east. The facility had no heating, cooling, or electrical services. The building use, as described in 1990, was metal melting. Building 14 was demolished in 1997.

Building 21. Building 21 was used for the storage of materials associated with two of Mound's processing missions, including thorium ores and protactinium ores (Cotter Concentrates). This structure was located along the south central border of the improved plant property; adjacent to the area designated as the Burn Area.

Building 21 was a 4,032 square-foot concrete structure with 10-inch thick floors and 14- to 16-inch thick walls. The roof was constructed of iron and steel. The facility was designed to ensure liquid tightness and was divided into two separate isolated bay areas. Building 21 became operational in 1964. Storage operations ended in 1987. Beginning in 1964, 1,338 drums of thorium oxalate were dumped in bulk form into the small bay area, while 3,576 drums of thorium hydroxide sludge were dumped in bulk form into the larger bay. The thorium sludge was ultimately sold to General Atomic Company for reclamation and was removed from Building 21 in 1975. Following removal of the thorium sludge, the building was cleaned and used as a staging area for Cotter Concentrates (high-level waste resulting from uranium milling). Approximately 1,258 drums of Cotter Concentrate were stored in Building 21. These drums were eventually shipped to the Nevada Test Site (NTS) in 1987 and use of Building 21 ceased. Since 1987, the building and surrounding area were maintained in a safe mode until the building was demolished in 1997.

Building 35. Building 35 was a 2,500 square-foot single-story structure built of concrete block. Building 35 was designed to provide x-ray and eddy current non-destructive testing of explosives. Building 35 was also used as the control room for the californium-252 multiplier (CFX) neutron radiography facility that was located in adjacent Building 59. Building 35 was demolished in the spring of 1998.

Building 39. Building 39, constructed in 1969, was a one-story structure constructed of prefabricated metal with a metal roof.

Initially, the eastern end of Building 39 was used by the Decontamination and Decommissioning project, which worked to produce fiberglass wooden boxes that were used for radioactive trash. The turntable used for this operation is still in place. Indications are that the facility was also used to perform gamma spectroscopy on these boxes.

From 1984 to 1988, the building was either inactive or used for storage.

In 1988, Building 39 was converted to a maintenance shop, and was divided into three sections: the east end was a machine shop; the middle was a break room; and the west

end was used primarily for storage of building materials, parts, paints, and some solvents.

Building 39 was demolished in 1998.

Building 59. Building 59, the neutron radiography facility, was a 700 square-foot, two-story reinforced concrete structure with a rolled roof. Building 59 was constructed in 1970 to provide neutron radiography capability to the site.

Building 59 housed a neutron-radiation source (californium-252) that was used to supply neutrons to an assembly of uranium plates. The californium-252 source was stored remotely from the core when not in use; when radiography operations were to be conducted, the source would be transported via a hand-cranked source transfer system into its proper location within the core assembly. The californium-252 source was removed from the facility and transported to Oak Ridge National Lab in 1995. Building 59 was demolished in the spring of 1998.

Building 77 and 78. Building 77 and 78, both located to the north of Building 39 were modular office structures that were used in the early 1980s. Both Building 77 and Building 78 contained 12 rooms, each with overall dimensions of 23.5 feet by 60 feet, and a combined square footage of 2,995. Both of these buildings were removed from service or were dismantled by the 1990s.

Building 85. Building 85 was constructed in late 1980s as a 3,160 square-foot building for the processing and blending of explosive powders. Designed much like an above ground bunker, each of the building's eight rooms had its own outside entry door. There were no passage doors between any of the rooms. There was an earthen embankment on the buildings eastern side, where the powder blending cells were located.

Building 85 was constructed as a Class I explosive powder processing facility, with reinforced interior and exterior concrete walls that vary in thickness, dependent upon the function of the rooms in the building. Wall thickness varied between 1 foot and 3.5 feet. The building was constructed on a slab that also varied in thickness dependent upon intended room function. Building 85 had a reinforced concrete roof where the thickness was also a function of the rooms.

Building 85, at the time of its demolition in 2002, existed much as it did when constructed, with the exception of the fact that some of the equipment installed at the completion of construction had been removed.

Site history indicates that Building 85 was never placed into production.

Building 97. Building 97 was a 12-room, 7,410 square-foot, 23.5 foot by 60 foot modular office structure, located to the south of Building 39. Building 97 was constructed in the early to late 1980s and was removed from service and dismantled in the 1990s.

Building 101. Building 101 was a single-story modular building with wooden exterior and Hypalon roof. The square footage of Building 101 was 1,815. Building 101 was brought

on site in 1986, and was used as offices for the area maintenance foreman and planner. It was sold and removed from the site in 1999.

Building 120. Building 120 was a 350 square-foot, one-story, wood-sided building with a metal roof. Building 120 was located just to the south of Building 102 and was used as an administrative office for the Decontamination and Decommissioning (D&D) Group. It was dismantled in 1998.

Burn Area Buildings. The Burn Area, excluding Magazine 53, described below, included three buildings and/or areas, as follows:

1. Pyroshed Energetic Materials Waste Storage Unit. This structure, known as the "Pyroshed" was used for the storage of pyrotechnic wastes and other energetic materials prior to their treatment at the Burn Area. The Pyroshed was located inside the fenced Burn Area and was constructed on a concrete pad measuring approximately 9 feet by 15 feet. The shed was approximately 7 feet high, with chain-link fence walls. A locked entry gate was located in the front side of the structure.

2. Open Burn Energetic Materials Treatment Unit. The open burn unit was used for op en burning of non-liquid explosive waste, pyrotechnic waste, and thermal treatment of explosive-contaminated material.

   The open burn unit consisted of a 12.3-foot by 18-foot base encircled by a 10-foot high composite metal wall with a sand core. The treatment zone measured approximately 12 feet by 12 feet, and the remainder of the floor space was occupied by an access-way. The entrance consisted of a 4-foot wide aisle that turned at a right angle to enter the treatment zone. The unit was developed on an 18-inch wide by 30-inch deep continuous, concrete footing developed on native soil. The enclosure's sides consisted of 0.25-inch thick milled steel plates.

3. Building 90. Building 90, constructed in 1984 and demolished in 1997, was a pre-engineered sheet metal building constructed on a reinforced concrete slab. The retort unit part of this building was located within a rectangular enclosure attached to the east side of Building 90 that was approximately 30 feet long and 15 feet wide with 9-foot high walls. Building 90 was designed to house the unit controls and waste feed operations for the Retort Unit (rotary-kiln-thermal-treatment-unit). Operations in Building 90 were suspended in January 1996, and the building was demolished in 1996-1997.

The buildings and facilities within the Burn Area were used for the destruction of pyrotechnics and energetic materials, including regulated hazardous waste explosives. Consequently, these operations underwent a RCRA closure, and as a part of that process were demolished in 1997 and 1998.

Electrical Generator 7. EG-7 (emergency generator) was constructed in 1972 to provide emergency electrical power to the Test Fire Area. The generator was an internal combustion key-starting engine generator housed in an 80-foot square metal structure,

which was located just to the north of Building 63. EG-7 remained available as an emergency generator until the 1990s, when it was taken out of use. EG-7 was sold in 1998.

Magazines 5, 8, 10, and 20. Magazines 5, 8, 10, and 20 were smaller explosive storage magazines or bunkers that were constructed in the mid-1950s and into the early 1960's. These magazines were located in the Test Fire Area, in a fenced area behind the former Building 85 site and behind Building 87. The purpose of these structures was for the storage of Mounds energetic materials. These buildings were demolished.

Magazine 53. Magazine 53 was a one-story, 239 square-foot reinforced concrete structure. The roof was made of reinforced steel, and the structure was covered with earth. Magazine 53 was constructed in 1970 and was used for the storage of pyrotechnics and energetic materials that were destroyed in the Burn Area. Magazine 53 was also used as a storage area for hazardous waste regulated explosives, and consequently underwent a RCRA closure. Magazine 53, as part of this closure, was demolished in January 1998.

Magazines 4 and 9. Magazine 4, the bulk storage magazine, was constructed in 1962 as an earthen covered magazine. Magazine 53 was constructed in an area adjacent to Magazine 9. Magazine 4 contained 4 units, with the front of the structure measuring 53 feet across. Magazine 9 was constructed in 1956, also as an earthen covered magazine. Magazine 9 contained a single cell that measured 17-feet by 14-feet. Both magazines were in the vicinity of Building 87. Magazines 4 and 9 were demolished by the 1980s.

Magazine 6. Magazine 6,constructed with reinforced concrete walls and roof, was located just to the east of Building 63E in the Test Fire Area. Magazine 6 was a 90 square-foot storage bunker or magazine that was constructed in 1956. Construction of this building appears to be associated with the construction of Building 2 located just to the south. Building 2, an explosives materials test firing facility, was the second building that was constructed on the site to support the newly assigned detonator mission.

FORMER CONSTRUCTION-ERA BUILDING SITES LOCATED IN PHASE I

There are three locations within Phase I that were used during the time that the original 1948-era buildings were constructed on the Mound site. These locations are summarized below:

Warehouse 12. Warehouse 12 was located in the approximate vicinity of the Building 39 site and was constructed by Maxon Construction Company to provide an administrative area (i.e., storage warehouse) in 1947 during the construction era for Mound's original buildings. Later plant records do not indicate any mission-related uses for Warehouse 12. Based upon comparisons of site photographs and available information, Warehouse 12 was likely demolished in the late 1940s or the early 1950s.

Tropical Huts and other Temporary Buildings. A number of shacks and tents (tropical huts) were used in conjunction with the construction of the original plant buildings in the

very early 1950s for the storage of debris and other polonium contaminated materials. Little information is available on these buildings. However, based upon early photographs, there were three of these structures located near the current location of Building 2.

Building 19 Quonset Hut. The Quonset Hut is a 40-foot by 60-foot Stransteel brand structure that was originally located at Dayton Unit III and was relocated to the Mound site. When Unit III was being cleaned up, this building was disassembled and was moved from Unit III. In 1949, it was relocated to the lower valley of the Mound Laboratory site where the existing Building 3 is now located.

The Quonset Hut was used for shipping, receiving, and storing of radioactive field materials in the 1950s.

The Quonset Hut was also used for storage of bismuth-chloride sludges from the polonium separations. At that time, 500 to 600 drums of sludge generated by the hydrolysis process were stored in the Quonset Hut awaiting a determination on potential reuse or shipment to the Oak Ridge site for burial.

The Quonset Hut was also used for the storage of thorium in 1952 and for the storage of Purex residues from 1949 to 1954.

In 1963, the Quonset Hut was again relocated when it was moved to its current location near the western property boundary.

OTHER LAND USE AREAS IN PHASE I

In addition to uses of the Test Fire Area (i.e., around Building 2) for the management of materials during the construction era and use of those same areas for early production era uses, the lands in Phase I have also been used for the following purposes:

SM/PP Pad. The SM/PP Pad is a concrete pad that was used by waste management for the management of low-level waste boxes containing soil and debris, as well as being used as a staging site for unused or empty low-level waste boxes. This pad is located to the east of the former Building 21 site and north of the SST Building.

Fenced Location for Storage of Equipment and Drums near Building 21. A fenced area to the east-southeast of Building 21 was used for the management of low-level waste drums and potentially contaminated equipment. This area was addressed as part of the Building 21 cleanup activities.

Building 21 soils management area, east of SST Building. This area was used for the management of soils excavated after the Building 21 operations ceased and was addressed as part of the Building 21 cleanup activities.

South Property Portions of Phase I. The portions of the south property included in Phase I are part of two property parcels containing 124 acres of rolling hills to the south of the main processing related areas. DOE had purchased the South Property (also

called the "New Property") in 1981 in part as a buffer and in part for possible future expansions. Despite its purchase for possible future expansion, it has for the most part remained unused since the date of purchase. The only plant uses that have taken place in the areas to be transferred in Phase I are the installation of boundary fences, the grading of the surface and the associated filling in of low-lying areas, and road installation and mobile laboratory operations in support of the Canal Removal Action.

An older unimproved road. The road running from the vicinity of Building 105 to the area behind Buildings 2, 3, and 87 was improved and the curves banked to utilize the area as a haul road in support of clean up activities in the Building 21 area and in the Burn Area.

Unidentified trailers near Building 21 and the SST Building. A grouping of office-type trailers existed in the vicinity of Building 21 and the SST Building were removed from this location by the 1990s.

Concrete Pad West of Building 35. The Building 35 concrete pad area was used by waste management for the management of low-level waste boxes of soil and debris.

P Building Soils Management Area-"Petro Piles". In the early 1990s, soil that was removed in conjunction with the removal of the P Building fuel oil tank removal were staged in the vicinity of Building 87 and Building 85 for treatment in a biodegradation facility for petroleum contaminated soils.

Management Area for Equipment. In 1996 and 1997, along the current property line for (previously transferred) Release Block D and Phase I (west of Building 100), an area was used to store portable office trailers, modular guard shacks, portable utility buildings, and various types of equipment that had been removed from an equipment management area in the Spoils Area.

Storage of Bird-Cage Drums. In the mid-1990s, empty blue transport drums that had been used for the transportation of fissile (product) material were located along the current property line for Release Block D and Phase I (west of Building 100). These drums were constructed with an internal framework that suspended the material contained in the drum in the drums' center, allowing the placement of the drums in a manner that was consistent with the criticality requirements for the contained material.

APPENDIX D

PRS Information

PRS 16. Area C (Old Building 72) was a former Hazardous Waste Storage Area dismantled in accordance with an Ohio Environmental Protection Agency approved RCRA closure plan. Core Team decided that PRS 16 requires No Further Assessment.

PRS 71. Building 85 Waste Solvent Tank was designed to store waste solvent associated with explosives processing; however, historical information indicates that the tank was never used. Core Team decided that PRS 71 requires No Further Assessment.

PRS 72. Area 13, Polonium from Dayton Unit IV, was identified as the storage site of contaminated materials brought to Mound from the former Dayton Unit operations in the 1950s. Core Team decided that PRS 72 requires No Further Assessment.

PRS 73. PRS 73, the Evaporator Storage Area, was an equipment storage area located in the Test Fire Valley. Further Assessment sampling in July 2001 identified no levels of concern. Core Team decided that PRS 73 requires No Further Assessment.

PRS 74. Quonset Hut (former), placed on a potentially contaminated concrete floor shows no indication that its shell was ever contaminated. The concrete floor was removed in 1963. Core Team decided that PRS 74 requires No Further Assessment.

PRS 83. Building 2 Propane Storage Tank (Tank 122). Core Team decided that PRS 83 requires No Further Assessment.

PRS 89. The Test Fire Residual Storage Tank is still active. Core Team decided that PRS 89 requires No Further Assessment.

PRS 258-265. PRSs 258-265 refer to the waste storage and treatment facilities formerly located in the "Burn Area" where a variety of wastes such as explosive powders, pyrotechnic materials, solid wastes contaminated with energetic materials, and non-radiological weapons components were thermally treated. Beryllium was the only COC identified as exceeding its Guideline Value during sampling events. There are no reported recent historical events to indicate other reasons for concern. Core Team decided that PRSs 258-265 require No Further Assessment.

PRS 276. Area 22, Orphan Soil from Other Areas, was a potentially contaminated site due to its use as a temporary storage area for contaminated soils. The soils were removed in accordance with the Core Team recommendation. Core Team decided that PRS 276 requires No Further Assessment.

PRS 280. Further Assessment sampling in the Waste Oil Drum Field yielded only low-level and isolated exceedances were noted above 10^{-6} RBGVs/screening levels; however, none were above cleanup objectives (10^{-5} RBGV + background). Core Team decided that PRS 280 requires No Further Assessment.

PRS 281. Area E, identified as a historical, isolated waste oil spill, produced levels of radiological contamination over Mound soils guidelines for radium-226. The area was subject to the removal action associated with the Building 21 demolition. Core Team decided that PRS 281 requires No Further Assessment.

PRS 284. The Building 21 Thorium Sludge Storage Facility held 4,914 drums of thorium

oxalate from 1966-1975 and 1,258 drums of Cotter Concentrate (high-level nuclear waste) until 1987. Cleanup and removal of Building 21 was completed 31 March 1997. Core Team decided that PRS 284 requires No Further Assessment.

PRS 304. This Excavated Material Disposal Area was created due to the dumping of low-level thorium soils. Sampling in 1984 found plutonium and thorium levels below the risk-based guideline values. Core Team decided that PRS 304 requires No Further Assessment.

PRS 311. Potential Hot Spot Location S0706 was identified during a 1983 site survey project, which discovered an isolated plutonium-238 reading of 29 pCi/g. This level is below all associated cleanup levels and guideline values. Core Team decided that PRS 311 requires No Further Assessment.

PRS 313. Potential Hot Spot Location S0982 was identified as a thorium hot spot during the Radiological Site Survey Project. Results from sampling in 1995 indicated no radioactive contamination in excess of guideline criteria. Core Team decided that PRS 313 requires No Further Assessment.

PRS 330. In 1994, qualitative hydrocarbon detections were found in the Building 2 Fuel Oil Tank (Tank 260) during the PETREX soil gas portion of the OU5, Non Area of Concern investigation. However, the 1996 sampling effort detected no contamination above the acceptable risk range. Core Team decided that PRS 330 requires No Further Assessment.

PRS 333. PRS 333 is an explosive surge tank (Tank 263) located along the southern border of Building 87,a previous explosives testing area that has since undergone Safe Shutdown. Core Team decided that PRS 333 requires No Further Assessment.

PRS 334. PRS 334 is an explosive surge tank (Tank 264) located along the southern border of Building 87,a previous explosives testing area that has since undergone Safe Shutdown. Core Team decided that PRS 334 requires No Further Assessment.

PRS 335. PRS 335 is an explosive surge tank (Tank 265) located along the southern border of Building 87,a previous explosives testing area that has since undergone Safe Shutdown. Core Team decided that PRS 335 requires No Further Assessment.

PRS 347. PRS 347 was identified according to qualitative hydrocarbon detections found during the PETREX soil gas portion of OU5, Non Area of Concern investigation. The 1996 Soil Gas confirmation sampling effort discovered no contamination above the 10^{-6} risk range. Core Team decided that PRS 347 requires No Further Assessment.

PRS 348. PRS 348 was identified according to qualitative hydrocarbon detections found during the PETREX soil gas portion of OU5, Non Area of Concern investigation. The 1996 Soil Gas confirmation sampling effort discovered no contamination above the 10^{-6} risk range. Core Team decided that PRS 348 requires No Further Assessment.

PRS 349. PRS 349 was identified due to plutonium detections found during the Mound Soil Screening Analysis performed as part of the June 1994 OU5, Operational Area Phase I Investigation. All concentrations are below the 10^{-5} Risk Based Guideline Value. Core Team decided that PRS 349 requires No Further Assessment.

PRS 350. Soil Contamination, Area West of Building 21, consists of detectable plutonium concentrations; however, concentrations were below all associated cleanup levels and guideline values. Core Team decided that PRS 350 requires No Further Assessment.

PRS 352. PRS 352 was identified as an elevated soil gas location due to an elevated PETREX passive soil gas portion of the OU5, Non Area of Concern investigation. Soil gas confirmation sampling indicated that all concentrations of volatile, semivolatile, PCBs, pesticides, metals, radionuclides, and explosives within the soil were below applicable guideline criteria. Core Team decided that PRS 352 requires No Further Assessment.

PRS 353. PRS 353 was identified as an elevated soil gas location due to an elevated PETREX passive soil gas portion of the OU5, Non Area of Concern investigation. Soil gas confirmation sampling indicated that all concentrations of volatile, semivolatile, PCBs, pesticides, metals, radionuclides, and explosives within the soil were below applicable guideline criteria. Core Team decided that PRS 353 requires No Further Assessment.

PRS 362. PRS 362 was identified as an elevated soil gas location due to an elevated PETREX passive soil gas portion of the OU5, Non Area of Concern investigation. Soil gas confirmation sampling indicated that all concentrations of volatile, semivolatile, PCBs, pesticides, metals, radionuclides, and explosives within the soil were below applicable guideline criteria. Core Team decided that PRS 362 requires No Further Assessment.

PRS 365. PRS 365 was identified as an elevated soil gas location due to an elevated PETREX passive soil gas survey result in 1994. A soil gas confirmation sample collected within 50 feet of this PRS indicated that all concentrations of volatile, semivolatile, PCBs, pesticides, metals, radionuclides, and explosives within the soil were below applicable guideline criteria. Core Team decided that PRS 365 requires No Further Assessment.

PRS 369. PRS 369 was identified as an elevated soil gas location due to elevation qualitative PETREX hydrocarbon levels. During the 1996 soil gas confirmation sampling, all concentrations of volatile, semivolatile, PCBs, pesticides, metals, radionuclides, and explosives within the soil were below applicable guideline criteria. Core Team decided that PRS 369 requires No Further Assessment.

PRS 370. PRS 370 was identified according to qualitative hydrocarbon detections found during the PETREX soil gas portion of OU5, Non Area of Concern investigation. The 1996 Soil Gas confirmation sampling effort discovered no contamination above the 10^{-6} risk range. Core Team decided that PRS 370 requires No Further Assessment.

PRS 371. PRS 371 was identified due to a single, elevated plutonium-238 detection during the OU5, Operational Area Phase I Investigation in 1994. In 1996, a sample was collected within approximately 25 feet of PRS 371 during the Soil Gas Confirmation Investigation. All concentrations of volatile, semivolatile, PCBs, pesticides, metals, radionuclides, and explosives within the soil were below applicable guideline criteria. Core Team decided that PRS 371 requires No Further Assessment.

PRS 372. PRS 372 was identified due to elevated soil gas measurements. Subsequent quantitative sampling showed that all soil samples taken in the area were at or below their respective 10^{-6} Risk Based Guideline Value. Core Team decided that PRS 372 requires No Further Assessment.

PRS 383. PRS 383 was identified as an area of possible organic contamination during the 1992 PETREX Survey. However, additional sampling in 1995 quantitatively determined that no volatile, semivolatile, PCBs, pesticides, metals, radionuclides, or explosives exceeded applicable guideline values. Core Team decided that PRS 383 requires No Further Assessment.

PRS 384. PRS 384 was identified due to elevated qualitative PETREX hydrocarbon levels. However, the soil gas confirmation investigation in 1996 determined that no volatile, semivolatile, PCBs, pesticides, metals, radionuclides, or explosives exceeded applicable guideline values. Core Team decided that PRS 384 requires No Further Assessment.

PRS 406. The southern portion of PRS 283 became a PRS due to potential thorium dust from the thorium sludge redrumming. However, radionuclides in the soils were scattered and infrequent, and all occurrences were below the 10^{-5} risk-based guideline values. Core Team decided that PRS 406 requires No Further Assessment.

PRS 407. Soil Contamination West of Building 21 resulted in a removal action in which one to two feet of soil was excavated and disposed of via railcar shipments to Envirocare. PRS 407 was later binned No Further Action in 2000. Core Team decided that PRS 407 requires No Further Assessment.

PRS 418. PRS 418, the Overflow Pond South Inlet, was created to address potential plutonium-238, thorium-228, thorium-232, and Radium-226 contamination from PRS 407. Since the PRS 407 removal action, there are no known PRSs draining into the inlet. Although sample results for benzo(a)pyrene exceed the 10^{-6} guideline value, they are below the 10^{-5} risk-based guideline value. All other constituents are below guideline criteria. Core Team decided that PRS 418 requires No Further Assessment.

PRS 419. The Mound Plant Drainage Outflow Reroute, constructed during the Miami-Erie Canal Remediation Project, is monitored for radiological parameters under DOE Order 5400.1 and the DOE Regulatory Guide. It is also monitored for non-radiological parameters in accordance with the site's NPDES permit. To address potential radiological releases, the Outflow Reroute is also monitored daily for gross alpha and tritium, and bi-weekly from flow-proportional 24-hour composite samples for multiple radionuclides. Core Team decided that PRS 419 requires No Further Assessment.

PRS 421. PRS 421 is "The Ridge" across the road south of the location of the former Building 21. It was identified as a PRS when historical sampling data indicated the presence of contaminated soil. Contamination was confirmed during the verification sampling for PRS 407. The source of the contamination was surface runoff from the PRS 407 cleanup that followed preferential and intermediate drainage pathways south to the PRS 421 area. The removal action resulted in the excavation and containerization for disposal of approximately 105,133 cubic feet of soil, concrete, and asphalt. The cleanup objectives were 55 pCi/g for plutonium-238, 2.1 pCi/g for thorium-232, and 2.6

pCi/g for thorium-228. The OSC report documented that all verification sample results were below cleanup objectives.

APPENDIX E

Threatened and Endangered Species

A NEW MUSEUM FOR A NEW CENTURY

Dayton Museum of Natural History
2629 Ridge Avenue
Dayton, Ohio 45414
Phone (513) 275-7431

April 25, 1991

Mr. Mark Gilliat
EG&G Mound Applied Technologies
P.O. Box 3000 - Mound Road Bldg. 69
Miamisburg, Ohio 45343 - 3000

Mr. Mark Gilliat:

I hope that my visit to the EG&G Mound Applied Technologies facility on Friday - April 12, 1991 was beneficial to your efforts in identifying and protecting any Shagbark Hickory (Carya ovata) trees on your site that might provide protective cover for the endangered Indiana Myotis (Myotis sodalis) bat. I commend your company for their concerns in the protection of our endangered wildlife.

After walking the EG&G Mound site to examine several woodlots, we found that the vast majority of trees on location are second growth hardwoods including: Eastern Cottonwood - Populus deltoides, Box Elder - Acer negundo, Wild Black Cherry - Prunus serotina, Ash sps., Elm sps. and others. Also various honeysuckle species were found throughout the understory. Shagbark Hickory (Carya ovata) was not found to be present in any of the wooded areas examined on the EG&G Mound site.

I found the morning to be very productive in providing you with an opportunity to better understand the vegetational cover at the EG&G Mound site. It was my pleasure to show you a Shagbark Hickory (Carya ovata) tree growing in a local park so that you could become familiar with the identification of this species. I am sure that you will now be able to identify any Shagbark Hickory (Carya ovata) that you might encounter in the future at the EG&G Mound site.

If I can ever be of further help to you please contact me any time.

Sincerely yours,

Thomas R. Hissong

Thomas R. Hissong
Curator of Education

E1/5

Bob Taft • *Governor*

Samuel W. Speck • *Dire*

Division of Natural Areas and Preserves

Stuart Lewis • *Acting C*

May 23, 2000

Roy F. Weston, Inc.
Terry Bosko
3 Hawthorn Parkway
Suite 400
Vernon Hills, IL 60061

Dear Ms. Bosko:

I have reviewed our Natural Heritage maps and files for the Mound Plant project area, including a one mile radius, on the Miamisburg and Franklin Quads in Montgomery County, Ohio. We have one record within the project area. The location for Inland Rush (*Juncus interior*), a state threatened plant, is marked by a red dot on the accompanying map.

There are no existing or proposed state nature preserves or scenic rivers at the project site. We are also unaware of any unique ecological sites, geologic features, breeding or non-breeding animal concentrations, champion trees, or state parks, forests or wildlife areas within a one mile radius of the project area.

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Please note that although we inventory all types of plant communities, we only maintain records on the highest quality areas. Also, we do not have data for all Ohio wetlands. For additional information on wetlands and National Wetlands Inventory maps, please contact Jim Given in the Division of Real Estate and Land Management at 614-265-6770.

Please contact me at 614-265-6818 if I can be of further assistance.

Sincerely,

Debbie Woischke

Debbie Woischke, Data Specialist
Division of Natural Areas & Preserves

Page Redacted

Contains Proprietary Information

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
6950 Americana Parkway, Suite H
Reynoldsburg, Ohio 43068-4127
(614) 469-6923
Fax: (614) 469-6919

May 31, 2000

JUN – 5 2000

Mr. Terry Bosko
Roy F. Weston, Inc.
Suite 400
3 Hawthorn Pkwy
Vernonn Hills, IL 60061-1450

Dear Mr. Bosko:

This is in response to your May 22, 2000 letter requesting information we may have regarding the occurrence or possible occurrence of Federally-listed threatened or endangered species within the vicinity of the proposed site. This information is being requested to prepare a Screening Level Ecological Risk Assessment for the Miami-Erie Canal and the South Property of the Mound Plant for the U.S. Department of Energy as part of CERCLA activities at the plant. The plant is located in Miamisburg, Montgomery County, Ohio.

In general, we recommend that proposed developments minimize water quality impacts and impacts to high quality fish and wildlife habitat, such as forests, streams, and wetlands. If streams and wetlands would be impacted, the Louisville District of the Corps of Engineers should be contacted for possible need of a Section 404 permit.

ENDANGERED SPECIES COMMENTS: The proposed project lies within the range of the Indiana bat, a Federally listed endangered species. Summer habitat requirements for the species are not well defined but the following are thought to be of importance:

1. Dead trees and snags (especially those with exfoliating bark) which may be used as maternity roost areas along riparian corridors.

2. Live trees (such as shagbark hickory) which have exfoliating bark.

3. Stream corridors, riparian areas, and nearby woodlots which provide forage sites.

Considering the above items, we recommend that if trees with exfoliating bark (which could be potential roost trees) are encountered along the proposed right-of-way, they should be saved wherever possible. If they must be cut, they should not be cut between April 15 and September 15.

If desirable trees are present and if the above time restriction is unacceptable, mist net or other surveys should be conducted to determine if bats are present. The survey should be designed and conducted in coordination with the endangered species coordinator for this office, Mr. Buddy Fazio. The survey should be conducted in June or July since the bats would only be expected in the project area from approximately April 15 to September 15.

The project area also lies within the range of the eastern massasauga, a docile rattlesnake that is declining throughout its national range and may soon receive status as a Federal candidate species. The snake is currently listed as endangered by the State of Ohio, and ultimately may become a Federally listed species. We encourage early project coordination to avoid potential impacts to massasaugas or their habitat.

The massasauga is often found in or near wet areas, including wetlands, wet prairie, or nearby woodland or shrub edge habitat. Wet habitat and nearby edges are utilized by the snakes especially during spring and fall. Upland areas up to 1.5 miles away are utilized during summer, if available. If crayfish holes exist in a wet area, the massasauga may live there, too. Some project management ideas include the

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following:

1. At a minimum, project evaluations should contain delineations of whether or not massasauga habitat occurs within project boundaries. Descriptions should indicate the quality and amount of massasauga habitat that may be affected by the project.

2. In cases where massasaugas are known to occur or potential habitat is rated moderate to high, massasauga surveys may be necessary. If surveys are conducted, they should be performed during the period of Spring emergence from dens (usually a narrow window in April or May).

3. In portions of projects where massasaugas will be affected, clearing and construction activities should occur during Summer when air and ground temperatures are above 65° F. Massasaugas are mobile during this period and are more likely to move to upland sites.

4. Maintenance activities (mowing, cutting, burning, etc.) should be conducted within the specified seasonal temperature periods described.

This technical assistance letter is submitted in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C.661 et seq.), the Endangered Species Act of 1973, as amended, and is consistent with the intent of the National Environmental Policy Act of 1969, and the U.S. Fish and Wildlife Service's Mitigation Policy.

If you have questions, or if we may be of further assistance in this matter, please contact Megan Sullivan at extension 21 in this office.

Sincerely,

for Kent E. Kroonemeyer
Supervisor

cc: DOW, Wildlife Environmental Section, Columbus, OH

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APPENDIX F

Ecological Scoping Checklist for Phase I

SAMPLE FORM A
Ecological Scoping Checklist

Part 1			
SITE INFORMATION			
Site Name: Phase I, US DOE Mound		Date: May 21, 2002	
Personnel:_D. Rakel (Team Leader), M. Gilliat_____ _____ (Identify team leader)		Time Arrived: 1pm (approximately) Time Departed: 3pm (approximately)	
Site Address:US DOE Mound One Mound Road Miamisburg, Ohio 45343			
Site Location:	Latitude:	Longitude:	
Site Size (acres): Phase 1 = 54 acres			
Weather Conditions (note any unusual conditions):			
Land uses at and adjacent to the site: (Circle all that apply and record at or adjacent)			
Residential N/A	Commercial N/A	Recreational N/A at Adjacent	Industrial At and adjacent
Agricultural N/A	Urban N/A	Green-Space/ At and undeveloped adjacent	Other: Land use by future owner consistent with current. More paved area/buildings planned.

Part 2		
CONTAMINANTS OF INTEREST		
Contaminants of Interest and *Ecological Stressors* (Types, names including CAS number, classes, or specific *hazardous substances* and non-chemical stressors either known or suspected)	Onsite (O) or Adjacent (A) to the site	Media (soil, sediment, surface water, groundwater (seeps/springs))
Twenty-nine projects have generated soil data in the Phase I property. On May 24, 2002 there were 58821 soil measurement records in the Mound Environmental Information Management System (MEIMS). These results are on the enclosed CD.	On and adjacent	Soil
Fifty-one projects have generated groundwater data in the Phase I property. On May 24, 2002 there were 47541 groundwater measurement records in the Mound Environmental Information Management System (MEIMS). These results are on the enclosed CD.	On and adjacent	Groundwater (no seeps or springs in Phase I, there are seeps in Parcel 4(south of Phase I, previously transfered to MMCIC), Phase III and off site

Part 3

SPECIFIC EVALUATION OF ECOLOGICAL RECEPTORS/HABITAT

Terrestrial - Wooded _42___% of site

Dominant vegetation (circle one):
Coniferous Deciduous Mixed

Dominant tree diameter (*dbh*): ___12 in__

Evidence/observation of wildlife*:
___Tracks of deer, racoon, possum, coyote

Terrestrial - Shrub/scrub/grasses _30___% of site

Dominant vegetation (circle one):
shrub/scrub grasses

vegetation density: Dense, Patchy, Sparse
Prominent height of shrub/scrub (<2', 2' to 5', >5')
Prominent height of grasses/herbs (<2', 2' to 5', >5')
Evidence/observation of wildlife*: _____

Terrestrial - *Ruderal*/Engineered _28___% of site

Dominant vegetation/surfaces (circle one):
Landscaped Agricultural Bare ground
Parking lot Artificial surfaces
Dominant vegetation height (0', >0' - 2', 2' - 5', >5')
Vegetation Density: Dense Patchy Sparse
Evidence/observation of wildlife*: _____

Aquatic - Non-Flowing (Lentic) _0___% of site

Type: Lake Pond Vernal Pool Lagoon
Engineered** Impoundment Reservoir
Water source: Surface water Groundwater
Industrial discharge Surface water runoff
Discharge Point: Surface water Groundwater
Wetlands
Bottom Substrate***: _____
Vegetation: Submerged Emergent Floating
Wetland Present: (Yes/No)
Evidence/Observation of wildlife*:_____

Aquatic - Flowing (Lotic) __0__% of site

Aquatic Life Use designation (if available) _____
Type: River Stream Intermittent Stream
Ditch
Water source: Surface water Groundwater
Industrial discharge (seeps /springs)
Storm water runoff
Discharge Point: Surface water Groundwater
Wetlands impoundment
Bottom Substrate**: _____
Vegetation: Submerged Emergent Floating
Wetland Present: (Yes/No)
Evidence/Observation of wildlife*:_____

Aquatic - Wetlands _0___% of site

Size __0.03_____ (acres)
Obvious or designated wetland: (Yes / No)
Water source: Surface water Groundwater
Industrial discharge Surface water runoff
Discharge Point: Surface water Groundwater
Wetlands impoundment
Bottom Substrate**: _____
Vegetation: Submerged Emergent Floating

Evidence/Observation of wildlife*:_____

* Wildlife includes: macroinvertebrates, reptiles, amphibians, birds, mammals and fish.
** Engineered can mean any surface water body that has been artificially created or significantly altered.
*** Bottom substrate types include but not limited to: cobble, gravel, sand, silt, clay, muck, artificial (*e.g.*, concrete).

Part 4
Ecologically Important Resources Observed
There are no ecologically important resources observed within the Phase I boundary. Specifically, Phase I does not include any surface waters or wetlands protected under federal law and state of Ohio's water quality laws, dedicated natural areas or preserves, threatened and endangered species or special interest or declining species. There is evidence wildlife in the property (deer, racoons, birds, ground hogs, squirels, mice, etc). This is consistent with the current and proposed land use in the area.

SAMPLE FORM B

EVALUATION OF POTENTIAL ECOLOGICAL HARM		Y	N	U
Are *hazardous substances* present or potentially present in:				
a	Soil?	Y		
b	Surface Waters?		N	
c	Sediment?		N	
d	Groundwater?	Y		
e	Other (biotic media)?			U
f	Are surface waters present at or potentially influenced by the site?		N	
g	Are *ecologically important* terrestrial resources located at, adjacent to, or influenced by the site?		N	

"Y" = yes; "N" = No, "U" = Unknown (counts as a "Y")

When answering the above questions, consider the following:

- Known or suspected presence of *hazardous substances* stored, used or manufactured at the site.
- Ability of *hazardous substances* to migrate from one medium to another.
- The mobility of the various media.
- Transfer of contaminants through food webs and uptake of chemicals by organisms.
- The presence of *important ecological resources* on, adjacent to, or influenced by the site.

(a) If "**Y**" or "**U**" boxes in Sample Form B are checked for row **f or g** and any other row, then a recommendation to move to Level II should be made for an assessment of the appropriate aquatic and/or terrestrial habitat. In completing this Attachment, a lack of knowledge, presence of high uncertainty, or any "unknown" circumstances should be tabulated as a "**U**".

(b) If all of the "**No**" boxes in Sample Form B are checked, or if only row **f and/or g**, or rows **a** through **e** are checked **"No"**, then the site is highly unlikely to present significant risks to important ecological receptors and a recommendation for no further ecological investigations should be made.

Note

There have been many site visits to Phase I by a variety of project personnel. In this report, we have attempted to build on information developed during the course of the Mound CERCLA process. This is consistent with the Mound 2000 process ("Based on existing information....").

The Operable Unit 9 Ecological Characterization report documents several site visits during 1992-93 and identifies the personnel involved and their credentials. The field assessments "were designed to address the following principal components:

- Identification of the flora and fauna in and around the site,
- Identification of sensitive environments in and around the site (e.g., wetlands, floodplains, wildlife breeding area, etc.), and
- Identification of endangered species and their habitats in and around the site."

The report "includes an annotated checklist of terretorial flora, mammals, reptiles and amphibians (herptiles), birds, fish, and macroinvertebrates; a map of the major vegetative habitats; and a discussion of the relative sensitivity and importance of the Mound Plant environments based on species diversity, endangered species occurrence, and the presence of ragulated habitats (e.g., wetlands, waterways, and floodplains)."

In March 2000, as part of the Ecological Assessment for Parcel 4 (immediately south of Phase I), the Parcel 4 property was resvisted by key members of the same team that performed the site visit for OU 9. The results are documented in the Parcel 4 Ecological Risk Assessment.

Representatives of MEMP and the site remediation contractor have been present in Phase I every working daysince the Mound Plant was placed on the National Priorities List.

Analytes Detected in Surface Soil for the Site Employee Scenario

Analyte (units)	CAS Number	Number of Detections	Minimum Detect	Maximum Detect	Dist.	Results >Detection Limit	% Results >Detection Limit	95% UCL of Mean	Exposure Concentration	Detection in Greater than 5%
BTEX Compounds										
Benzene (UG/KG)	71-43-2	0			O	0/ 15	0.0			NO
Ethylbenzene (UG/KG)	100-41-4	0			O	0/ 15	0.0			NO
Toluene (UG/KG)	108-88-3	0			O	0/ 15	0.0			NO
Xylenes, Total (UG/KG)	1330-20-7	0			O	0/ 15	0.0			NO
Explosives										
1,3,5-Trinitrobenzene (UG/KG)	99-35-4	0			O	0/ 53	0.0			NO
1,3-Dinitrobenzene (UG/KG)	99-65-0	0			O	0/ 53	0.0			NO
2,4,6-Trinitrotoluene (UG/KG)	118-96-7	1	1.1E+02	1.1E+02	D	1/ 59	1.7	7.4E+02	1.1E+02	NO
2,4-Dinitrotoluene (UG/KG)	121-14-2	0			O	0/ 50	0.0			NO
2,6-Dinitrotoluene (UG/KG)	606-20-2	0			O	0/ 12	0.0			NO
2-Amino-4,6-Dinitrotoluene (UG/KG)	35572-78-2	0			O	0/ 52	0.0			NO
4-Amino-2,6-Dinitrotoluene (UG/KG)	1946-51-0	0			O	0/ 1	0.0			NO
HMX (UG/KG)	2691-41-0	0			O	0/ 66	0.0			NO
Nitrobenzene (UG/KG)	98-95-3	1	3.8E+02	3.8E+02	D	1/ 12	8.3	1.3E+03	3.8E+02	YES
Nitroglycerin (UG/KG)	55-63-0	0			O	0/ 50	0.0			NO
PETN (UG/KG)	78-11-5	0			O	0/ 53	0.0			NO
RDX (UG/KG)	121-82-4	0			O	0/ 67	0.0			NO
Tetryl (UG/KG)	479-45-8	0			O	0/ 46	0.0			NO
Metals										
Aluminum (UG/KG)	7429-90-5	105	5.9E+05	2.3E+07	N	105/ 105	100.0	1.2E+07	1.2E+07	YES
Antimony (UG/KG)	7440-36-0	42	2.1E+02	4.5E+04	D	42/ 146	28.8	1.3E+04	1.3E+04	YES
Arsenic (UG/KG)	7440-38-2	104	4.9E+02	2.0E+04	X	104/ 105	99.0	8.9E+03	8.9E+03	YES
Barium (UG/KG)	7440-39-3	158	4.4E+03	4.5E+05	X	158/ 158	100.0	1.0E+05	1.0E+05	YES
Beryllium (UG/KG)	7440-41-7	155	1.2E+02	3.6E+03	X	155/ 158	98.1	1.2E+03	1.2E+03	YES
Bismuth (UG/KG)	7440-69-9	26	1.3E+04	7.3E+04	X	26/ 36	72.2	1.0E+05	7.3E+04	YES
Cadmium (UG/KG)	7440-43-9	43	2.5E+02	1.2E+04	D	43/ 158	27.2	1.2E+03	1.2E+03	YES
Calcium (UG/KG)	7440-70-2	105	1.4E+06	3.1E+08	X	105/ 105	100.0	1.3E+08	1.3E+08	YES
Chromium (UG/KG)	7440-47-3	158	1.1E+03	3.7E+04	X	158/ 158	100.0	1.8E+04	1.8E+04	YES
Cobalt (UG/KG)	7440-48-4	105	7.9E+02	2.5E+04	X	105/ 105	100.0	1.3E+04	1.3E+04	YES
Copper (UG/KG)	7440-50-8	103	2.6E+03	1.1E+06	X	103/ 105	98.1	2.3E+04	2.3E+04	YES
Cyanide (UG/KG)	57-12-5	31	1.0E+02	8.9E+03	D	31/ 126	24.6	6.7E+02	6.7E+02	YES
Iron (UG/KG)	7439-89-6	105	2.3E+04	4.3E+07	N	105/ 105	100.0	2.8E+07	2.8E+07	YES
Lead (UG/KG)	7439-92-1	179	1.6E+03	2.2E+05	X	179/ 186	96.2	1.7E+04	1.7E+04	YES
Lithium (UG/KG)	7439-93-2	31	2.3E+03	2.7E+04	N	31/ 31	100.0	1.7E+04	1.7E+04	YES
Magnesium (UG/KG)	7439-95-4	105	1.2E+04	1.2E+08	X	105/ 105	100.0	3.3E+07	3.3E+07	YES

Analytes Detected in Surface Soil for the Site Employee Scenario

Analyte (units)	CAS Number	Number of Detections	Minimum Detect	Maximum Detect	Dist.	Results >Detection Limit	% Results >Detection Limit	95% UCL of Mean	Exposure Concentration	Detection in Greater than 5%
Manganese (UG/KG)	7439-96-5	104	6.5E+04	1.3E+06	X	104/ 104	100.0	5.7E+05	5.7E+05	YES
Mercury (UG/KG)	7439-97-6	43	3.0E+01	6.5E+02	D	43/ 97	44.3	1.0E+02	1.0E+02	YES
Molybdenum (UG/KG)	7439-98-7	29	4.7E+02	9.7E+03	L	29/ 31	93.5	5.9E+03	5.9E+03	YES
Nickel (UG/KG)	7440-02-0	157	2.3E+03	2.5E+05	X	157/ 158	99.4	2.3E+04	2.3E+04	YES
Potassium (UG/KG)	7440-09-7	103	3.1E+05	5.2E+06	X	103/ 105	98.1	1.7E+06	1.7E+06	YES
Selenium (UG/KG)	7782-49-2	18	4.9E+02	2.3E+03	D	18/ 96	18.8	1.1E+03	1.1E+03	YES
Silver (UG/KG)	7440-22-4	47	1.1E+02	2.1E+04	D	47/ 158	29.7	2.7E+03	2.7E+03	YES
Sodium (UG/KG)	7440-23-5	100	4.2E+04	3.5E+06	X	100/ 105	95.2	1.3E+06	1.3E+06	YES
Thallium (UG/KG)	7440-28-0	27	2.2E+02	3.5E+03	D	27/ 100	27.0	1.8E+03	1.8E+03	YES
Tin (UG/KG)	7440-31-5	7	1.1E+03	2.2E+03	D	7/ 31	22.6	2.2E+04	2.2E+03	YES
Vanadium (UG/KG)	7440-62-2	105	1.7E+03	4.0E+04	X	105/ 105	100.0	2.6E+04	2.6E+04	YES
Zinc (UG/KG)	7440-66-6	105	5.5E+03	4.6E+05	X	105/ 105	100.0	8.4E+04	8.4E+04	YES
Pesticides and/or PCBs										
4,4'-DDD (UG/KG)	72-54-8	0			O	0/ 86	0.0			NO
4,4'-DDE (UG/KG)	72-55-9	7	2.8E-01	1.8E+00	D	7/ 85	8.2	3.1E+00	1.8E+00	YES
4,4'-DDT (UG/KG)	50-29-3	0			O	0/ 86	0.0			NO
Aldrin (UG/KG)	309-00-2	1	5.4E-02	5.4E-02	D	1/ 86	1.2	2.3E+00	5.4E-02	NO
Alpha Chlordane (UG/KG)	5103-71-9	0			O	0/ 63	0.0			NO
Alpha-BHC (UG/KG)	319-84-6	0			O	0/ 86	0.0			NO
Aroclor-1016 (UG/KG)	12674-11-2	0			O	0/ 115	0.0			NO
Aroclor-1221 (UG/KG)	11104-28-2	0			O	0/ 115	0.0			NO
Aroclor-1232 (UG/KG)	11141-16-5	1	1.2E+02	1.2E+02	D	1/ 115	0.9	3.4E+01	3.4E+01	NO
Aroclor-1242 (UG/KG)	53469-21-9	1	1.2E+02	1.2E+02	D	1/ 115	0.9	3.4E+01	3.4E+01	NO
Aroclor-1248 (UG/KG)	12672-29-6	3	7.4E+01	9.1E+02	D	3/ 114	2.6	3.8E+01	3.8E+01	NO
Aroclor-1254 (UG/KG)	11097-69-1	1	2.2E+02	2.2E+02	D	1/ 115	0.9	5.9E+01	5.9E+01	NO
Aroclor-1260 (UG/KG)	11096-82-5	0			O	0/ 114	0.0			NO
Beta-BHC (UG/KG)	319-85-7	3	1.8E-01	1.2E+02	D	3/ 86	3.5	3.9E+00	3.9E+00	NO
Chlordane (UG/KG)	57-74-9	2	1.9E+01	9.8E+01	D	2/ 23	8.7	1.6E+01	1.6E+01	YES
Delta-BHC (UG/KG)	319-86-8	1	1.7E-01	1.7E-01	D	1/ 86	1.2	4.0E+00	1.7E-01	NO
Dieldrin (UG/KG)	60-57-1	3	5.2E-01	4.4E+00	D	3/ 86	3.5	2.8E+00	2.8E+00	NO
Endosulfan I (UG/KG)	959-98-8	0			O	0/ 86	0.0			NO
Endosulfan II (UG/KG)	33213-65-9	0			O	0/ 86	0.0			NO
Endosulfan Sulfate (UG/KG)	1031-07-8	0			O	0/ 86	0.0			NO
Endrin (UG/KG)	72-20-8	2	1.5E-01	2.3E+01	D	2/ 85	2.4	5.2E+00	5.2E+00	NO
Endrin Aldehyde (UG/KG)	7421-93-4	0			O	0/ 79	0.0			NO
Endrin Ketone (UG/KG)	53494-70-5	2	5.2E-01	7.6E-01	D	2/ 86	2.3	1.9E+01	7.6E-01	NO

Analytes Detected in Surface Soil for the Site Employee Scenario

Analyte (units)	CAS Number	Number of Detections	Minimum Detect	Maximum Detect	Dist.	Results >Detection Limit	% Results >Detection Limit	95% UCL of Mean	Exposure Concentration	Detection in Greater than 5%
Gamma Chlordane (UG/KG)	5103-74-2	1	5.7E-02	5.7E-02	D	1/ 63	1.6	2.0E+01	5.7E-02	NO
Gamma-BHC (Lindane) (UG/KG)	58-89-9	0			O	0/ 86	0.0			NO
Heptachlor (UG/KG)	76-44-8	2	1.1E-01	1.3E-01	D	2/ 86	2.3	2.0E+00	1.3E-01	NO
Heptachlor Epoxide (UG/KG)	1024-57-3	2	1.1E-01	3.5E-01	D	2/ 86	2.3	2.6E+01	3.5E-01	NO
Methoxychlor (UG/KG)	72-43-5	0			O	0/ 86	0.0			NO
Toxaphene (UG/KG)	8001-35-2	0			O	0/ 86	0.0			NO
Phenols										
Phenolics (UG/KG)	64743-03-9	0			O	0/ 24	0.0			NO
Radiological										
Actinium-227 (PCI/G)	14952-40-0	36	5.0E-02	2.1E+00	D	36/ 219	16.4	3.5E-01	3.5E-01	YES
Actinium-228 (PCI/G)	14331-83-0	7	7.6E-01	1.4E+00	D	7/ 7	100.0	1.2E+00	1.4E+00	YES
Americium-241 (PCI/G)	14596-10-2	11	5.0E-02	3.8E+01	D	11/ 458	2.4	1.1E-01	1.1E-01	NO
Bismuth-207 (PCI/G)	13982-38-2	0			O	0/ 96	0.0			NO
Bismuth-210 (PCI/G)	14331-79-4	1	6.8E-02	6.8E-02	D	1/ 194	0.5	2.3E-02	2.3E-02	NO
Bismuth-210M (PCI/G)	BI-210M	3	1.4E-01	2.7E-01	D	3/ 78	3.8	5.7E-02	5.7E-02	NO
Bismuth-214 (PCI/G)	14733-03-0	10	7.0E-01	9.3E-01	N	10/ 10	100.0	8.6E-01	9.3E-01	YES
Cesium-137 (PCI/G)	10045-97-3	258	2.1E-02	1.6E+00	X	258/ 461	56.0	1.8E-01	1.8E-01	YES
Cobalt-60 (PCI/G)	10198-40-0	11	2.0E-02	5.0E-01	D	11/ 461	2.4	3.4E-02	3.4E-02	NO
Europium-152 (PCI/G)	14683-23-9	1	8.7E-02	8.7E-02	D	1/ 176	0.6	4.3E-02	4.3E-02	NO
Europium-154 (PCI/G)	15585-10-1	0			O	0/ 176	0.0			NO
Lead-210 (PCI/G)	14255-04-0	146	6.3E-01	3.7E+00	X	146/ 262	55.7	1.3E+00	1.3E+00	YES
Lead-212 (PCI/G)	15092-94-1	10	8.4E-01	1.2E+00	L	10/ 10	100.0	1.1E+00	1.2E+00	YES
Lead-214 (PCI/G)	15067-28-4	10	8.3E-01	1.1E+00	N	10/ 10	100.0	1.0E+00	1.1E+00	YES
Plutonium-238 (PCI/G)	13981-16-3	592	1.2E-02	4.0E+02	D	592/1308	45.3	2.5E+01	2.5E+01	YES
Plutonium-239 (PCI/G)	15117-48-3	83	3.5E-03	1.3E+00	X	83/ 90	92.2	6.9E-02	6.9E-02	YES
Plutonium-239/240 (PCI/G)	PU-239/240	64	3.9E-03	1.0E+00	D	64/ 230	27.8	4.4E-02	4.4E-02	YES
Plutonium-242 (PCI/G)	13982-10-0	0			O	0/ 5	0.0			NO
Potassium-40 (PCI/G)	13966-00-2	96	7.5E+00	3.6E+01	X	96/ 96	100.0	1.9E+01	1.9E+01	YES
Protactinium-231 (PCI/G)	14331-85-2	0			O	0/ 36	0.0			NO
Radium-224 (PCI/G)	13233-32-4	186	7.3E-02	6.3E+00	X	186/ 186	100.0	1.3E+00	1.3E+00	YES
Radium-226 (PCI/G)	13982-63-3	411	1.8E-01	3.7E+00	X	411/ 466	88.2	1.3E+00	1.3E+00	YES
Radium-228 (PCI/G)	15262-20-1	74	5.5E-01	2.0E+00	N	74/ 75	98.7	1.3E+00	1.3E+00	YES
Strontium-90 (PCI/G)	10098-97-2	0			O	0/ 16	0.0			NO
Thallium-208 (PCI/G)	14913-50-9	10	1.6E-01	4.0E-01	N	10/ 10	100.0	3.8E-01	4.0E-01	YES
Thorium-227 (PCI/G)	15623-47-9	17	6.0E-02	4.4E-01	L	17/ 33	51.5	1.4E-01	1.4E-01	YES
Thorium-228 (PCI/G)	14274-82-9	319	3.7E-02	4.5E+00	X	319/ 356	89.6	1.7E+00	1.7E+00	YES

Analytes Detected in Surface Soil for the Site Employee Scenario

Analyte (units)	CAS Number	Number of Detections	Minimum Detect	Maximum Detect	Dist.	Results >Detection Limit	% Results >Detection Limit	95% UCL of Mean	Exposure Concentration	Detection in Greater than 5%
Thorium-229 (PCI/G)	15594-54-4	0			O	0/ 36	0.0			NO
Thorium-230 (PCI/G)	14269-63-7	317	1.0E-01	7.5E+00	X	317/ 499	63.5	2.7E+00	2.7E+00	YES
Thorium-232 (PCI/G)	7440-29-1	675	4.5E-02	8.0E+01	D	675/1518	44.5	8.7E-01	8.7E-01	YES
Tritium (PCI/G)	10028-17-8	1	1.4E+00	1.4E+00	D	1/ 16	6.3	2.2E+00	1.4E+00	YES
Uranium-234 (PCI/G)	13966-29-5	25	3.9E-01	1.6E+00	N	25/ 29	86.2	9.8E-01	9.8E-01	YES
Uranium-235 (PCI/G)	15117-96-1	13	3.3E-02	2.1E-01	D	13/ 55	23.6	2.5E-01	2.1E-01	YES
Uranium-238 (PCI/G)	7440-61-1	50	4.8E-01	2.0E+00	X	50/ 91	54.9	2.0E+00	2.0E+00	YES
Semi-Volatile Organics										
1,2,4-Trichlorobenzene (UG/KG)	120-82-1	0			O	0/ 119	0.0			NO
1,2-Dichlorobenzene (UG/KG)	95-50-1	0			O	0/ 119	0.0			NO
1,3-Dichlorobenzene (UG/KG)	541-73-1	0			O	0/ 119	0.0			NO
1,4-Dichlorobenzene (UG/KG)	106-46-7	0			O	0/ 119	0.0			NO
1-chloro-4-phenoxybenzene (UG/KG)	7005-72-3	0			O	0/ 119	0.0			NO
2,2'-oxybis(1-chloropropane) (UG/KG)	108-60-1	0			O	0/ 119	0.0			NO
2,4,5-Trichlorophenol (UG/KG)	95-95-4	0			O	0/ 119	0.0			NO
2,4,6-Trichlorophenol (UG/KG)	88-06-2	0			O	0/ 119	0.0			NO
2,4-Dichlorophenol (UG/KG)	120-83-2	0			O	0/ 119	0.0			NO
2,4-Dimethylphenol (UG/KG)	105-67-9	0			O	0/ 119	0.0			NO
2,4-Dinitrophenol (UG/KG)	51-28-5	0			O	0/ 119	0.0			NO
2,4-Dinitrotoluene (UG/KG)	121-14-2	0			O	0/ 75	0.0			NO
2,6-Dinitrotoluene (UG/KG)	606-20-2	0			O	0/ 113	0.0			NO
2-Benzyl-4-Chlorophenol (UG/KG)	120-32-1	0			O	0/ 27	0.0			NO
2-Chloronaphthalene (UG/KG)	91-58-7	0			O	0/ 134	0.0			NO
2-Chlorophenol (UG/KG)	95-57-8	0			O	0/ 119	0.0			NO
2-Methylnaphthalene (UG/KG)	91-57-6	3	5.4E+01	9.9E+01	D	3/ 134	2.2	3.0E+02	9.9E+01	NO
2-Methylphenol (UG/KG)	95-48-7	0			O	0/ 119	0.0			NO
2-Nitroaniline (UG/KG)	88-74-4	0			O	0/ 119	0.0			NO
2-Nitrophenol (UG/KG)	88-75-5	0			O	0/ 119	0.0			NO
3,3'-Dichlorobenzidine (UG/KG)	91-94-1	0			O	0/ 119	0.0			NO
3-Nitroaniline (UG/KG)	99-09-2	0			O	0/ 117	0.0			NO
4,6-Dinitro-o-Cresol (UG/KG)	534-52-1	0			O	0/ 119	0.0			NO
4-Bromophenyl-phenyl Ether (UG/KG)	101-55-3	0			O	0/ 119	0.0			NO
4-Chloro-3-methylphenol (UG/KG)	59-50-7	0			O	0/ 119	0.0			NO
4-Chloroaniline (UG/KG)	106-47-8	0			O	0/ 119	0.0			NO
4-Methylphenol (UG/KG)	106-44-5	1	4.1E+02	4.1E+02	D	1/ 119	0.8	2.9E+02	2.9E+02	NO
4-Nitroaniline (UG/KG)	100-01-6	0			O	0/ 119	0.0			NO

Analytes Detected in Surface Soil for the Site Employee Scenario

Analyte (units)	CAS Number	Number of Detections	Minimum Detect	Maximum Detect	Dist.	Results >Detection Limit	% Results >Detection Limit	95% UCL of Mean	Exposure Concentration	Detection in Greater than 5%
4-Nitrophenol (UG/KG)	100-02-7	1	1.8E+02	1.8E+02	D	1/ 119	0.8	1.3E+03	1.8E+02	NO
Acenaphthene (UG/KG)	83-32-9	5	6.5E+01	4.3E+02	D	5/ 134	3.7	3.0E+02	3.0E+02	NO
Acenaphthylene (UG/KG)	208-96-8	0			O	0/ 134	0.0			NO
Anthracene (UG/KG)	120-12-7	11	2.2E+01	2.8E+03	D	11/ 134	8.2	3.4E+02	3.4E+02	YES
Benzidine (UG/KG)	92-87-5	0			O	0/ 21	0.0			NO
Benzo(a)anthracene (UG/KG)	56-55-3	24	2.8E+01	4.2E+03	D	24/ 134	17.9	3.5E+02	3.5E+02	YES
Benzo(a)pyrene (UG/KG)	50-32-8	22	2.4E+01	3.6E+03	D	22/ 134	16.4	3.5E+02	3.5E+02	YES
Benzo(b)fluoranthene (UG/KG)	205-99-2	28	2.5E+01	2.8E+03	D	28/ 134	20.9	3.5E+02	3.5E+02	YES
Benzo(g,h,i)perylene (UG/KG)	191-24-2	12	2.7E+01	2.1E+03	D	12/ 134	9.0	3.3E+02	3.3E+02	YES
Benzo(k)fluoranthene (UG/KG)	207-08-9	24	2.5E+01	3.4E+03	D	24/ 134	17.9	3.4E+02	3.4E+02	YES
Benzoic Acid (UG/KG)	65-85-0	5	7.8E+01	9.5E+01	D	5/ 118	4.2	1.6E+03	9.5E+01	NO
Benzyl Alcohol (UG/KG)	100-51-6	0			O	0/ 118	0.0			NO
Bis(2-chloroethoxy)methane (UG/KG)	111-91-1	0			O	0/ 119	0.0			NO
Bis(2-chloroethyl)ether (UG/KG)	111-44-4	0			O	0/ 119	0.0			NO
Bis(2-ethylhexyl)phthalate (UG/KG)	117-81-7	44	2.0E+01	6.5E+03	D	44/ 119	37.0	3.8E+02	3.8E+02	YES
Butyl Benzyl Phthalate (UG/KG)	85-68-7	3	4.8E+01	6.4E+01	D	3/ 119	2.5	2.9E+02	6.4E+01	NO
Carbazole (UG/KG)	86-74-8	2	1.5E+02	1.7E+02	D	2/ 67	3.0	2.0E+02	1.7E+02	NO
Chrysene (UG/KG)	218-01-9	23	2.0E+01	1.7E+03	D	23/ 119	19.3	3.3E+02	3.3E+02	YES
Di-n-butyl Phthalate (UG/KG)	84-74-2	48	2.1E+01	2.0E+03	D	48/ 172	27.9	3.5E+02	3.5E+02	YES
Di-n-octyl Phthalate (UG/KG)	117-84-0	1	4.0E+02	4.0E+02	D	1/ 119	0.8	2.9E+02	2.9E+02	NO
Dibenz(a,h)anthracene (UG/KG)	53-70-3	6	7.1E+01	8.0E+02	D	6/ 134	4.5	3.0E+02	3.0E+02	NO
Dibenzofuran (UG/KG)	132-64-9	6	3.2E+01	5.8E+02	D	6/ 119	5.0	2.8E+02	2.8E+02	YES
Diethyl Phthalate (UG/KG)	84-66-2	6	3.9E+01	1.1E+02	D	6/ 119	5.0	2.9E+02	1.1E+02	YES
Dimethyl Phthalate (UG/KG)	131-11-3	0			O	0/ 119	0.0			NO
Diphenylamine (UG/KG)	122-39-4	0			O	0/ 53	0.0			NO
Fluoranthene (UG/KG)	206-44-0	40	2.3E+01	1.1E+04	D	40/ 134	29.9	4.3E+02	4.3E+02	YES
Fluorene (UG/KG)	86-73-7	7	3.8E+01	1.1E+03	D	7/ 134	5.2	3.0E+02	3.0E+02	YES
Hexachlorobenzene (UG/KG)	118-74-1	0			O	0/ 119	0.0			NO
Hexachlorobutadiene (UG/KG)	87-68-3	0			O	0/ 119	0.0			NO
Hexachlorocyclopentadiene (UG/KG)	77-47-4	0			O	0/ 119	0.0			NO
Hexachloroethane (UG/KG)	67-72-1	0			O	0/ 119	0.0			NO
Indeno(1,2,3-cd)pyrene (UG/KG)	193-39-5	14	2.5E+01	1.9E+03	D	14/ 134	10.4	3.3E+02	3.3E+02	YES
Isophorone (UG/KG)	78-59-1	0			O	0/ 119	0.0			NO
N-Nitroso-di-n-propylamine (UG/KG)	621-64-7	0			O	0/ 119	0.0			NO
N-Nitrosodiphenylamine (UG/KG)	86-30-6	5	7.8E+01	2.1E+02	D	5/ 119	4.2	2.8E+02	2.1E+02	NO
Naphthalene (UG/KG)	91-20-3	4	2.6E+01	4.1E+02	D	4/ 131	3.1	3.0E+02	3.0E+02	NO

Analytes Detected in Surface Soil for the Site Employee Scenario

Analyte (units)	CAS Number	Number of Detections	Minimum Detect	Maximum Detect	Dist.	Results >Detection Limit	% Results >Detection Limit	95% UCL of Mean	Exposure Concentration	Detection in Greater than 5%
Nitrobenzene (UG/KG)	98-95-3	0			O	0/ 113	0.0			NO
Pentachlorophenol (UG/KG)	87-86-5	0			O	0/ 119	0.0			NO
Phenanthrene (UG/KG)	85-01-8	25	2.7E+01	1.1E+04	D	25/ 134	18.7	4.0E+02	4.0E+02	YES
Phenol (UG/KG)	108-95-2	1	3.2E+02	3.2E+02	D	1/ 119	0.8	2.9E+02	2.9E+02	NO
Pyrene (UG/KG)	129-00-0	37	2.8E+01	9.7E+03	D	37/ 134	27.6	4.2E+02	4.2E+02	YES
Volatile Organics										
1,1,1,2-Tetrachloroethane (UG/KG)	630-20-6	0			O	0/ 23	0.0			NO
1,1,1-Trichloroethane (UG/KG)	71-55-6	4	1.0E+00	8.0E+00	D	4/ 109	3.7	3.1E+00	3.1E+00	NO
1,1,2,2-Tetrachloroethane (UG/KG)	79-34-5	0			O	0/ 109	0.0			NO
1,1,2-Trichloroethane (UG/KG)	79-00-5	0			O	0/ 109	0.0			NO
1,1-Dichloroethane (UG/KG)	75-34-3	1	3.0E+00	3.0E+00	D	1/ 109	0.9	3.1E+00	3.0E+00	NO
1,1-Dichloroethene (UG/KG)	75-35-4	0			O	0/ 109	0.0			NO
1,1-Dichloropropene (UG/KG)	563-58-6	0			O	0/ 23	0.0			NO
1,2,3-Trichlorobenzene (UG/KG)	87-61-6	0			O	0/ 23	0.0			NO
1,2,3-Trichloropropane (UG/KG)	96-18-4	0			O	0/ 23	0.0			NO
1,2,4-Trichlorobenzene (UG/KG)	120-82-1	0			O	0/ 3	0.0			NO
1,2,4-Trimethylbenzene (UG/KG)	95-63-6	0			O	0/ 23	0.0			NO
1,2-Dibromo-3-Chloropropane (UG/KG)	96-12-8	0			O	0/ 23	0.0			NO
1,2-Dichlorobenzene (UG/KG)	95-50-1	0			O	0/ 3	0.0			NO
1,2-Dichloroethane (UG/KG)	107-06-2	0			O	0/ 109	0.0			NO
1,2-Dichloroethene (UG/KG)	540-59-0	2	2.0E+00	6.0E+00	D	2/ 86	2.3	3.1E+00	3.1E+00	NO
1,2-Dichloropropane (UG/KG)	78-87-5	0			O	0/ 109	0.0			NO
1,2-Diethylbenzene (UG/KG)	135-01-3	0			O	0/ 28	0.0			NO
1,2-cis-Dichloroethene (UG/KG)	156-59-2	0			O	0/ 34	0.0			NO
1,2-trans-Dichloroethene (UG/KG)	156-60-5	0			O	0/ 34	0.0			NO
1,3,5-Trimethylbenzene (UG/KG)	108-67-8	0			O	0/ 23	0.0			NO
1,3-Dichlorobenzene (UG/KG)	541-73-1	0			O	0/ 3	0.0			NO
1,3-Dichloropropane (UG/KG)	142-28-9	0			O	0/ 23	0.0			NO
1,3-cis-Dichloropropene (UG/KG)	10061-01-5	0			O	0/ 109	0.0			NO
1,3-trans-Dichloropropene (UG/KG)	10061-02-6	0			O	0/ 109	0.0			NO
1,4-Dichlorobenzene (UG/KG)	106-46-7	0			O	0/ 3	0.0			NO
2,2-Dichloropropane (UG/KG)	594-20-7	0			O	0/ 23	0.0			NO
2-Butanone (UG/KG)	78-93-3	7	1.0E+00	1.7E+01	D	7/ 86	8.1	6.2E+00	6.2E+00	YES
2-Chlorotoluene (UG/KG)	95-49-8	0			O	0/ 23	0.0			NO
2-Hexanone (UG/KG)	591-78-6	0			O	0/ 86	0.0			NO
4-Chlorotoluene (UG/KG)	106-43-4	0			O	0/ 23	0.0			NO

Analytes Detected in Surface Soil for the Site Employee Scenario

Analyte (units)	CAS Number	Number of Detections	Minimum Detect	Maximum Detect	Dist.	Results >Detection Limit	% Results >Detection Limit	95% UCL of Mean	Exposure Concentration	Detection in Greater than 5%
4-Methyl-2-pentanone (UG/KG)	108-10-1	5	1.0E+00	6.0E+00	D	5/ 86	5.8	6.1E+00	6.0E+00	YES
Acetone (UG/KG)	67-64-1	14	4.0E+00	1.5E+02	D	14/ 86	16.3	9.0E+00	9.0E+00	YES
Acetonitrile (UG/KG)	75-05-8	0			O	0/ 28	0.0			NO
Acrylonitrile (UG/KG)	107-13-1	0			O	0/ 28	0.0			NO
Benzene (UG/KG)	71-43-2	0			O	0/ 109	0.0			NO
Bromochloromethane (UG/KG)	74-97-5	0			O	0/ 23	0.0			NO
Bromodichloromethane (UG/KG)	75-27-4	0			O	0/ 109	0.0			NO
Bromoform (UG/KG)	75-25-2	0			O	0/ 109	0.0			NO
Bromomethane (UG/KG)	74-83-9	0			O	0/ 109	0.0			NO
Carbon Disulfide (UG/KG)	75-15-0	2	1.0E+00	2.0E+00	D	2/ 86	2.3	3.1E+00	2.0E+00	NO
Carbon Tetrachloride (UG/KG)	56-23-5	0			O	0/ 109	0.0			NO
Chlorobenzene (UG/KG)	108-90-7	0			O	0/ 109	0.0			NO
Chloroethane (UG/KG)	75-00-3	0			O	0/ 109	0.0			NO
Chloroform (Trichloromethane) (UG/KG)	67-66-3	0			O	0/ 109	0.0			NO
Chloromethane (UG/KG)	74-87-3	1	4.0E+00	4.0E+00	D	1/ 109	0.9	5.6E+00	4.0E+00	NO
Dibromochloromethane (UG/KG)	124-48-1	0			O	0/ 109	0.0			NO
Dibromomethane (UG/KG)	74-95-3	0			O	0/ 23	0.0			NO
Dichlorodifluoromethane (UG/KG)	75-71-8	0			O	0/ 23	0.0			NO
Dichloromethane (Methylene Chloride) (UG/KG)	75-09-2	49	3.0E+00	6.8E+01	D	49/ 109	45.0	1.0E+01	1.0E+01	YES
Ethylbenzene (UG/KG)	100-41-4	3	1.0E+00	3.0E+00	D	3/ 109	2.8	3.1E+00	3.0E+00	NO
Ethylene Dibromide (1,2-Dibromoethane) (UG/KG	106-93-4	0			O	0/ 23	0.0			NO
FREON-113 (UG/KG)	76-13-1	0			O	0/ 28	0.0			NO
Hexachlorobutadiene (UG/KG)	87-68-3	0			O	0/ 3	0.0			NO
Hexane (UG/KG)	110-54-3	0			O	0/ 28	0.0			NO
Iodomethane (UG/KG)	74-88-4	0			O	0/ 28	0.0			NO
Isopropyl Benzene (UG/KG)	98-82-8	0			O	0/ 23	0.0			NO
Monobromobenzene (Phenyl bromide) (UG/KG)	108-86-1	0			O	0/ 23	0.0			NO
Naphthalene (UG/KG)	91-20-3	3	1.0E+00	6.0E+00	D	3/ 6	50.0	1.0E+01	6.0E+00	YES
Styrene (UG/KG)	100-42-5	0			O	0/ 109	0.0			NO
Tetrachloroethene (UG/KG)	127-18-4	7	2.0E+00	2.8E+01	D	7/ 109	6.4	3.7E+00	3.7E+00	YES
Toluene (UG/KG)	108-88-3	18	1.0E+00	5.1E+01	D	18/ 109	16.5	3.4E+00	3.4E+00	YES
Trichloroethylene (TCE) (UG/KG)	79-01-6	2	1.8E+01	2.0E+01	D	2/ 109	1.8	3.4E+00	3.4E+00	NO
Trichlorofluoromethane (UG/KG)	75-69-4	0			O	0/ 23	0.0			NO

Analytes Detected in Surface Soil for the Site Employee Scenario

Analyte (units)	CAS Number	Number of Detections	Minimum Detect	Maximum Detect	Dist.	Results >Detection Limit	% Results >Detection Limit	95% UCL of Mean	Exposure Concentration	Detection in Greater than 5%
Vinyl Acetate (UG/KG)	108-05-4	0			O	0/ 86	0.0			NO
Vinyl Chloride (UG/KG)	75-01-4	0			O	0/ 109	0.0			NO
Xylenes, Total (UG/KG)	1330-20-7	7	1.0E+00	3.9E+01	D	7/ 86	8.1	3.5E+00	3.5E+00	YES
m-Xylene (UG/KG)	108-38-3	0			O	0/ 11	0.0			NO
mp-Xylene (UG/KG)	mp-Xylene	23	5.0E+00	6.0E+00	X	23/ 23	100.0	6.0E+00	6.0E+00	YES
n-Butylbenzene (UG/KG)	104-51-8	0			O	0/ 23	0.0			NO
n-propylbenzene (UG/KG)	103-65-1	0			O	0/ 23	0.0			NO
o-Xylene (UG/KG)	95-47-6	0			O	0/ 34	0.0			NO
p-Isopropyltoluene (UG/KG)	99-87-6	0			O	0/ 23	0.0			NO
sec-Butylbenzene (UG/KG)	135-98-8	0			O	0/ 23	0.0			NO
tert-Butylbenzene (UG/KG)	98-06-6	0			O	0/ 23	0.0			NO

Analytes Detected in Surface and Subsurface Soil for the Construction Worker Scenario

Analyte (units)	CAS Number	Number of Detections	Minimum Detect	Maximum Detect	Distribution	Results Greater than Detection Limit	% Results Greater than Detection Limit	95% UCL of Mean	Exposure Concentration	Detection in Greater than 5%
BTEX Compounds										
Benzene (UG/KG)	71-43-2	0			O	0/ 15	0.0			NO
Ethylbenzene (UG/KG)	100-41-4	0			O	0/ 15	0.0			NO
Toluene (UG/KG)	108-88-3	0			O	0/ 15	0.0			NO
Xylenes, Total (UG/KG)	1330-20-7	0			O	0/ 15	0.0			NO
Explosives										
1,3,5-Trinitrobenzene (UG/KG)	99-35-4	0			O	0/ 81	0.0			NO
1,3-Dinitrobenzene (UG/KG)	99-65-0	0			O	0/ 81	0.0			NO
2,4,6-Trinitrotoluene (UG/KG)	118-96-7	1	1.1E+02	1.1E+02	D	1/ 91	1.1	6.3E+02	1.1E+02	NO
2,4-Dinitrotoluene (UG/KG)	121-14-2	0			O	0/ 75	0.0			NO
2,6-Dinitrotoluene (UG/KG)	606-20-2	0			O	0/ 32	0.0			NO
2-Amino-4,6-Dinitrotoluene (UG/KG)	35572-78-2	0			O	0/ 61	0.0			NO
4-Amino-2,6-Dinitrotoluene (UG/KG)	1946-51-0	0			O	0/ 19	0.0			NO
HMX (UG/KG)	2691-41-0	0			O	0/ 98	0.0			NO
Nitrobenzene (UG/KG)	98-95-3	1	3.8E+02	3.8E+02	D	1/ 32	3.1	4.7E+02	3.8E+02	NO
Nitroglycerin (UG/KG)	55-63-0	0			O	0/ 76	0.0			NO
PETN (UG/KG)	78-11-5	0			O	0/ 99	0.0			NO
RDX (UG/KG)	121-82-4	0			O	0/ 99	0.0			NO
Tetryl (UG/KG)	479-45-8	0			O	0/ 71	0.0			NO
Metals										
Aluminum (UG/KG)	7429-90-5	145	5.9E+05	2.3E+07	N	145/ 146	99.3	1.5E+07	1.5E+07	YES
Antimony (UG/KG)	7440-36-0	64	2.1E+02	4.5E+04	D	64/ 209	30.6	8.5E+03	8.5E+03	YES
Arsenic (UG/KG)	7440-38-2	137	4.9E+02	2.0E+04	X	137/ 143	95.8	8.2E+03	8.2E+03	YES
Barium (UG/KG)	7440-39-3	226	4.4E+03	6.0E+05	X	226/ 227	99.6	1.0E+05	1.0E+05	YES
Beryllium (UG/KG)	7440-41-7	220	5.0E+01	3.6E+03	X	220/ 226	97.3	1.1E+03	1.1E+03	YES
Bismuth (UG/KG)	7440-69-9	33	8.2E+02	7.3E+04	X	33/ 59	55.9	1.3E+05	7.3E+04	YES
Cadmium (UG/KG)	7440-43-9	69	2.5E+02	1.2E+04	D	69/ 227	30.4	1.5E+03	1.5E+03	YES
Calcium (UG/KG)	7440-70-2	145	1.4E+06	3.4E+08	X	145/ 146	99.3	1.5E+08	1.5E+08	YES
Chromium (UG/KG)	7440-47-3	226	1.1E+03	3.7E+04	X	226/ 227	99.6	1.7E+04	1.7E+04	YES
Cobalt (UG/KG)	7440-48-4	145	7.9E+02	2.5E+04	X	145/ 146	99.3	1.3E+04	1.3E+04	YES
Copper (UG/KG)	7440-50-8	143	1.8E+03	1.1E+06	X	143/ 146	97.9	2.2E+04	2.2E+04	YES
Cyanide (UG/KG)	57-12-5	35	1.0E+02	8.9E+03	D	35/ 162	21.6	5.8E+02	5.8E+02	YES
Iron (UG/KG)	7439-89-6	145	2.3E+04	4.3E+07	N	145/ 146	99.3	3.1E+07	3.1E+07	YES
Lead (UG/KG)	7439-92-1	242	1.6E+03	2.2E+05	X	242/ 256	94.5	1.5E+04	1.5E+04	YES

Analytes Detected in Surface and Subsurface Soil for the Construction Worker Scenario

Analyte (units)	CAS Number	Number of Detections	Minimum Detect	Maximum Detect	Distribution	Results Greater than Detection Limit	% Results Greater than Detection Limit	95% UCL of Mean	Exposure Concentration	Detection in Greater than 5%
Lithium (UG/KG)	7439-93-2	53	2.3E+03	3.4E+04	N	53/ 55	96.4	1.8E+04	1.8E+04	YES
Magnesium (UG/KG)	7439-95-4	145	1.2E+04	1.2E+08	X	145/ 146	99.3	2.9E+07	2.9E+07	YES
Manganese (UG/KG)	7439-96-5	137	6.5E+04	8.2E+06	X	137/ 138	99.3	6.8E+05	6.8E+05	YES
Mercury (UG/KG)	7439-97-6	61	3.0E+01	1.4E+03	D	61/ 139	43.9	1.2E+02	1.2E+02	YES
Molybdenum (UG/KG)	7439-98-7	49	2.2E+02	9.7E+03	L	49/ 54	90.7	4.0E+03	4.0E+03	YES
Nickel (UG/KG)	7440-02-0	224	2.3E+03	2.5E+05	X	224/ 227	98.7	2.2E+04	2.2E+04	YES
Potassium (UG/KG)	7440-09-7	142	3.1E+05	3.3E+08	X	142/ 147	96.6	1.9E+06	1.9E+06	YES
Selenium (UG/KG)	7782-49-2	19	4.6E+02	2.3E+03	D	19/ 131	14.5	9.6E+02	9.6E+02	YES
Silver (UG/KG)	7440-22-4	65	1.1E+02	2.1E+04	D	65/ 227	28.6	2.4E+03	2.4E+03	YES
Sodium (UG/KG)	7440-23-5	136	4.2E+04	3.5E+06	X	136/ 146	93.2	1.1E+06	1.1E+06	YES
Thallium (UG/KG)	7440-28-0	29	2.0E+02	3.5E+03	D	29/ 142	20.4	1.1E+03	1.1E+03	YES
Tin (UG/KG)	7440-31-5	22	6.7E+02	3.3E+03	D	22/ 54	40.7	1.2E+04	3.3E+03	YES
Vanadium (UG/KG)	7440-62-2	145	1.7E+03	4.3E+04	X	145/ 146	99.3	2.5E+04	2.5E+04	YES
Zinc (UG/KG)	7440-66-6	145	5.5E+03	4.6E+05	X	145/ 146	99.3	9.3E+04	9.3E+04	YES
Pesticides and/or PCBs										
4,4'-DDD (UG/KG)	72-54-8	0			O	0/ 122	0.0			NO
4,4'-DDE (UG/KG)	72-55-9	7	2.8E-01	1.8E+00	D	7/ 121	5.8	3.3E+00	1.8E+00	YES
4,4'-DDT (UG/KG)	50-29-3	0			O	0/ 122	0.0			NO
Aldrin (UG/KG)	309-00-2	1	5.4E-02	5.4E-02	D	1/ 122	0.8	2.2E+00	5.4E-02	NO
Alpha Chlordane (UG/KG)	5103-71-9	0			O	0/ 99	0.0			NO
Alpha-BHC (UG/KG)	319-84-6	0			O	0/ 122	0.0			NO
Aroclor-1016 (UG/KG)	12674-11-2	0			O	0/ 151	0.0			NO
Aroclor-1221 (UG/KG)	11104-28-2	0			O	0/ 151	0.0			NO
Aroclor-1232 (UG/KG)	11141-16-5	1	1.2E+02	1.2E+02	D	1/ 151	0.7	3.3E+01	3.3E+01	NO
Aroclor-1242 (UG/KG)	53469-21-9	1	1.2E+02	1.2E+02	D	1/ 151	0.7	3.3E+01	3.3E+01	NO
Aroclor-1248 (UG/KG)	12672-29-6	3	7.4E+01	9.1E+02	D	3/ 150	2.0	3.7E+01	3.7E+01	NO
Aroclor-1254 (UG/KG)	11097-69-1	1	2.2E+02	2.2E+02	D	1/ 151	0.7	5.8E+01	5.8E+01	NO
Aroclor-1260 (UG/KG)	11096-82-5	0			O	0/ 150	0.0			NO
Beta-BHC (UG/KG)	319-85-7	3	1.8E-01	1.2E+02	D	3/ 120	2.5	3.1E+00	3.1E+00	NO
Chlordane (UG/KG)	57-74-9	2	1.9E+01	9.8E+01	D	2/ 23	8.7	1.6E+01	1.6E+01	YES
Delta-BHC (UG/KG)	319-86-8	1	1.7E-01	1.7E-01	D	1/ 122	0.8	3.4E+00	1.7E-01	NO
Dieldrin (UG/KG)	60-57-1	3	5.2E-01	4.4E+00	D	3/ 122	2.5	3.1E+00	3.1E+00	NO
Endosulfan I (UG/KG)	959-98-8	0			O	0/ 122	0.0			NO
Endosulfan II (UG/KG)	33213-65-9	0			O	0/ 122	0.0			NO

Analytes Detected in Surface and Subsurface Soil for the Construction Worker Scenario

Analyte (units)	CAS Number	Number of Detections	Minimum Detect	Maximum Detect	Distribution	Results Greater than Detection Limit	% Results Greater than Detection Limit	95% UCL of Mean	Exposure Concentration	Detection in Greater than 5%
Endosulfan Sulfate (UG/KG)	1031-07-8	0			O	0/ 122	0.0			NO
Endrin (UG/KG)	72-20-8	2	1.5E-01	2.3E+01	D	2/ 121	1.7	4.6E+00	4.6E+00	NO
Endrin Aldehyde (UG/KG)	7421-93-4	0			O	0/ 108	0.0			NO
Endrin Ketone (UG/KG)	53494-70-5	2	5.2E-01	7.6E-01	D	2/ 122	1.6	1.3E+01	7.6E-01	NO
Gamma Chlordane (UG/KG)	5103-74-2	1	5.7E-02	5.7E-02	D	1/ 99	1.0	1.7E+01	5.7E-02	NO
Gamma-BHC (Lindane) (UG/KG)	58-89-9	0			O	0/ 122	0.0			NO
Heptachlor (UG/KG)	76-44-8	2	1.1E-01	1.3E-01	D	2/ 122	1.6	2.0E+00	1.3E-01	NO
Heptachlor Epoxide (UG/KG)	1024-57-3	2	1.1E-01	3.5E-01	D	2/ 122	1.6	1.3E+01	3.5E-01	NO
Methoxychlor (UG/KG)	72-43-5	0			O	0/ 122	0.0			NO
Toxaphene (UG/KG)	8001-35-2	0			O	0/ 122	0.0			NO
Phenols										
Phenolics (UG/KG)	64743-03-9	0			O	0/ 24	0.0			NO
Radiological										
Actinium-227 (PCI/G)	14952-40-0	37	5.0E-02	2.1E+00	D	37/ 282	13.1	3.0E-01	3.0E-01	YES
Actinium-228 (PCI/G)	14331-83-0	7	7.6E-01	1.4E+00	D	7/ 7	100.0	1.2E+00	1.4E+00	YES
Americium-241 (PCI/G)	14596-10-2	12	5.0E-02	3.8E+01	D	12/ 558	2.2	1.1E-01	1.1E-01	NO
Bismuth-207 (PCI/G)	13982-38-2	0			O	0/ 126	0.0			
Bismuth-210 (PCI/G)	14331-79-4	1	6.8E-02	6.8E-02	D	1/ 222	0.5	2.9E-02	2.9E-02	NO
Bismuth-210M (PCI/G)	BI-210M	3	1.4E-01	2.7E-01	D	3/ 84	3.6	5.5E-02	5.5E-02	NO
Bismuth-214 (PCI/G)	14733-03-0	10	7.0E-01	9.3E-01	N	10/ 10	100.0	8.6E-01	9.3E-01	YES
Cesium-137 (PCI/G)	10045-97-3	276	2.1E-02	1.6E+00	D	276/ 564	48.9	1.6E-01	1.6E-01	YES
Cobalt-60 (PCI/G)	10198-40-0	14	2.0E-02	5.0E-01	D	14/ 575	2.4	3.6E-02	3.6E-02	NO
Europium-152 (PCI/G)	14683-23-9	1	8.7E-02	8.7E-02	D	1/ 191	0.5	4.7E-02	4.7E-02	NO
Europium-154 (PCI/G)	15585-10-1	0			O	0/ 180	0.0			NO
Lead-210 (PCI/G)	14255-04-0	180	4.9E-01	3.7E+00	X	180/ 344	52.3	1.2E+00	1.2E+00	YES
Lead-212 (PCI/G)	15092-94-1	10	8.4E-01	1.2E+00	L	10/ 10	100.0	1.1E+00	1.2E+00	YES
Lead-214 (PCI/G)	15067-28-4	20	5.7E-01	1.1E+00	N	20/ 20	100.0	9.2E-01	9.2E-01	YES
Plutonium-238 (PCI/G)	13981-16-3	665	1.2E-02	4.0E+02	D	665/1545	43.0	2.6E+01	2.6E+01	YES
Plutonium-239 (PCI/G)	15117-48-3	83	3.5E-03	1.3E+00	X	83/ 90	92.2	6.9E-02	6.9E-02	YES
Plutonium-239/240 (PCI/G)	PU-239/240	79	3.7E-03	1.0E+00	D	79/ 254	31.1	4.4E-02	4.4E-02	YES
Plutonium-242 (PCI/G)	13982-10-0	0			O	0/ 5	0.0			NO
Potassium-40 (PCI/G)	13966-00-2	122	7.2E+00	3.7E+01	X	122/ 126	96.8	2.1E+01	2.1E+01	YES
Protactinium-231 (PCI/G)	14331-85-2	0			O	0/ 36	0.0			NO
Radium-224 (PCI/G)	13233-32-4	190	7.3E-02	6.3E+00	X	190/ 190	100.0	1.3E+00	1.3E+00	YES

Analytes Detected in Surface and Subsurface Soil for the Construction Worker Scenario

Analyte (units)	CAS Number	Number of Detections	Minimum Detect	Maximum Detect	Distribution	Results Greater than Detection Limit	% Results Greater than Detection Limit	95% UCL of Mean	Exposure Concentration	Detection in Greater than 5%
Radium-226 (PCI/G)	13982-63-3	494	1.8E-01	3.7E+00	X	494/ 567	87.1	1.2E+00	1.2E+00	YES
Radium-228 (PCI/G)	15262-20-1	80	3.1E-01	2.0E+00	N	80/ 81	98.8	1.2E+00	1.2E+00	YES
Strontium-90 (PCI/G)	10098-97-2	0			O	0/ 21	0.0			NO
Thallium-208 (PCI/G)	14913-50-9	10	1.6E-01	4.0E-01	N	10/ 10	100.0	3.8E-01	4.0E-01	YES
Thorium-227 (PCI/G)	15623-47-9	17	6.0E-02	4.4E-01	L	17/ 33	51.5	1.4E-01	1.4E-01	YES
Thorium-228 (PCI/G)	14274-82-9	342	3.7E-02	4.5E+00	X	342/ 384	89.1	1.6E+00	1.6E+00	YES
Thorium-229 (PCI/G)	15594-54-4	0			O	0/ 36	0.0			NO
Thorium-230 (PCI/G)	14269-63-7	340	1.0E-01	7.5E+00	X	340/ 595	57.1	2.8E+00	2.8E+00	YES
Thorium-232 (PCI/G)	7440-29-1	789	4.5E-02	8.0E+01	D	789/1805	43.7	8.3E-01	8.3E-01	YES
Tritium (PCI/G)	10028-17-8	1	1.4E+00	1.4E+00	D	1/ 21	4.8	2.0E+00	1.4E+00	NO
Uranium-234 (PCI/G)	13966-29-5	46	3.8E-01	1.6E+00	N	46/ 54	85.2	1.0E+00	1.0E+00	YES
Uranium-235 (PCI/G)	15117-96-1	28	2.7E-02	2.1E-01	D	28/ 77	36.4	1.9E-01	1.9E-01	YES
Uranium-235/236 (PCI/G)	U-235/236	0			O	0/ 2	0.0			NO
Uranium-238 (PCI/G)	7440-61-1	72	4.1E-01	2.0E+00	X	72/ 119	60.5	1.9E+00	1.9E+00	YES
Semi-Volatile Organics										
1,2,4-Trichlorobenzene (UG/KG)	120-82-1	0			O	0/ 159	0.0			NO
1,2-Dichlorobenzene (UG/KG)	95-50-1	0			O	0/ 159	0.0			NO
1,3-Dichlorobenzene (UG/KG)	541-73-1	0			O	0/ 159	0.0			NO
1,4-Dichlorobenzene (UG/KG)	106-46-7	0			O	0/ 159	0.0			NO
1-chloro-4-phenoxybenzene (UG/KG)	7005-72-3	0			O	0/ 159	0.0			NO
2,2'-oxybis(1-chloropropane) (UG/KG)	108-60-1	0			O	0/ 159	0.0			NO
2,4,5-Trichlorophenol (UG/KG)	95-95-4	0			O	0/ 159	0.0			NO
2,4,6-Trichlorophenol (UG/KG)	88-06-2	0			O	0/ 159	0.0			NO
2,4-Dichlorophenol (UG/KG)	120-83-2	0			O	0/ 159	0.0			NO
2,4-Dimethylphenol (UG/KG)	105-67-9	0			O	0/ 159	0.0			NO
2,4-Dinitrophenol (UG/KG)	51-28-5	0			O	0/ 159	0.0			NO
2,4-Dinitrotoluene (UG/KG)	121-14-2	0			O	0/ 91	0.0			NO
2,6-Dinitrotoluene (UG/KG)	606-20-2	0			O	0/ 134	0.0			NO
2-Benzyl-4-Chlorophenol (UG/KG)	120-32-1	0			O	0/ 30	0.0			NO
2-Chloronaphthalene (UG/KG)	91-58-7	0			O	0/ 174	0.0			NO
2-Chlorophenol (UG/KG)	95-57-8	0			O	0/ 159	0.0			NO
2-Methylnaphthalene (UG/KG)	91-57-6	3	5.4E+01	9.9E+01	D	3/ 174	1.7	2.8E+02	9.9E+01	NO
2-Methylphenol (UG/KG)	95-48-7	0			O	0/ 159	0.0			NO
2-Nitroaniline (UG/KG)	88-74-4	0			O	0/ 159	0.0			NO

Analytes Detected in Surface and Subsurface Soil for the Construction Worker Scenario

Analyte (units)	CAS Number	Number of Detections	Minimum Detect	Maximum Detect	Distribution	Results Greater than Detection Limit	% Results Greater than Detection Limit	95% UCL of Mean	Exposure Concentration	Detection in Greater than 5%
2-Nitrophenol (UG/KG)	88-75-5	0			O	0/ 159	0.0			NO
3,3'-Dichlorobenzidine (UG/KG)	91-94-1	0			O	0/ 159	0.0			NO
3-Nitroaniline (UG/KG)	99-09-2	0			O	0/ 157	0.0			NO
4,6-Dinitro-o-Cresol (UG/KG)	534-52-1	0			O	0/ 159	0.0			NO
4-Bromophenyl-phenyl Ether (UG/KG)	101-55-3	0			O	0/ 159	0.0			NO
4-Chloro-3-methylphenol (UG/KG)	59-50-7	0			O	0/ 159	0.0			NO
4-Chloroaniline (UG/KG)	106-47-8	0			O	0/ 159	0.0			NO
4-Methylphenol (UG/KG)	106-44-5	1	4.1E+02	4.1E+02	D	1/ 159	0.6	2.8E+02	2.8E+02	NO
4-Nitroaniline (UG/KG)	100-01-6	0			O	0/ 159	0.0			NO
4-Nitrophenol (UG/KG)	100-02-7	1	1.8E+02	1.8E+02	D	1/ 159	0.6	1.2E+03	1.8E+02	NO
Acenaphthene (UG/KG)	83-32-9	6	2.7E+01	4.3E+02	D	6/ 174	3.4	2.9E+02	2.9E+02	NO
Acenaphthylene (UG/KG)	208-96-8	0			O	0/ 174	0.0			NO
Anthracene (UG/KG)	120-12-7	13	2.2E+01	2.8E+03	D	13/ 174	7.5	3.1E+02	3.1E+02	YES
Benzidine (UG/KG)	92-87-5	0			O	0/ 21	0.0			NO
Benzo(a)anthracene (UG/KG)	56-55-3	31	2.3E+01	4.2E+03	D	31/ 174	17.8	3.2E+02	3.2E+02	YES
Benzo(a)pyrene (UG/KG)	50-32-8	29	2.3E+01	3.6E+03	D	29/ 174	16.7	3.2E+02	3.2E+02	YES
Benzo(b)fluoranthene (UG/KG)	205-99-2	35	2.5E+01	2.8E+03	D	35/ 174	20.1	3.2E+02	3.2E+02	YES
Benzo(g,h,i)perylene (UG/KG)	191-24-2	16	2.7E+01	2.1E+03	D	16/ 174	9.2	3.0E+02	3.0E+02	YES
Benzo(k)fluoranthene (UG/KG)	207-08-9	27	2.1E+01	3.4E+03	D	27/ 174	15.5	3.2E+02	3.2E+02	YES
Benzoic Acid (UG/KG)	65-85-0	5	7.8E+01	9.5E+01	D	5/ 139	3.6	1.5E+03	9.5E+01	NO
Benzyl Alcohol (UG/KG)	100-51-6	0			O	0/ 139	0.0			NO
Bis(2-chloroethoxy)methane (UG/KG)	111-91-1	0			O	0/ 159	0.0			NO
Bis(2-chloroethyl)ether (UG/KG)	111-44-4	0			O	0/ 159	0.0			NO
Bis(2-ethylhexyl)phthalate (UG/KG)	117-81-7	59	1.9E+01	6.5E+03	D	59/ 159	37.1	3.3E+02	3.3E+02	YES
Butyl Benzyl Phthalate (UG/KG)	85-68-7	3	4.8E+01	6.4E+01	D	3/ 159	1.9	2.8E+02	6.4E+01	NO
Carbazole (UG/KG)	86-74-8	2	1.5E+02	1.7E+02	D	2/ 89	2.2	2.0E+02	1.7E+02	NO
Chrysene (UG/KG)	218-01-9	30	2.0E+01	1.7E+03	D	30/ 159	18.9	3.0E+02	3.0E+02	YES
Di-n-butyl Phthalate (UG/KG)	84-74-2	61	2.1E+01	2.0E+03	D	61/ 240	25.4	3.1E+02	3.1E+02	YES
Di-n-octyl Phthalate (UG/KG)	117-84-0	1	4.0E+02	4.0E+02	D	1/ 159	0.6	2.8E+02	2.8E+02	NO
Dibenz(a,h)anthracene (UG/KG)	53-70-3	6	7.1E+01	8.0E+02	D	6/ 174	3.4	2.8E+02	2.8E+02	NO
Dibenzofuran (UG/KG)	132-64-9	6	3.2E+01	5.8E+02	D	6/ 159	3.8	2.7E+02	2.7E+02	NO
Diethyl Phthalate (UG/KG)	84-66-2	6	3.9E+01	1.1E+02	D	6/ 159	3.8	2.8E+02	1.1E+02	NO
Dimethyl Phthalate (UG/KG)	131-11-3	0			O	0/ 159	0.0			NO
Diphenylamine (UG/KG)	122-39-4	0			O	0/ 81	0.0			NO

Analytes Detected in Surface and Subsurface Soil for the Construction Worker Scenario

Analyte (units)	CAS Number	Number of Detections	Minimum Detect	Maximum Detect	Distribution	Results Greater than Detection Limit	% Results Greater than Detection Limit	95% UCL of Mean	Exposure Concentration	Detection in Greater than 5%
Fluoranthene (UG/KG)	206-44-0	48	2.3E+01	1.1E+04	D	48/ 174	27.6	3.7E+02	3.7E+02	YES
Fluorene (UG/KG)	86-73-7	7	3.8E+01	1.1E+03	D	7/ 174	4.0	2.9E+02	2.9E+02	NO
Hexachlorobenzene (UG/KG)	118-74-1	0			O	0/ 159	0.0			NO
Hexachlorobutadiene (UG/KG)	87-68-3	0			O	0/ 159	0.0			NO
Hexachlorocyclopentadiene (UG/KG)	77-47-4	0			O	0/ 159	0.0			NO
Hexachloroethane (UG/KG)	67-72-1	0			O	0/ 159	0.0			NO
Indeno(1,2,3-cd)pyrene (UG/KG)	193-39-5	18	2.5E+01	1.9E+03	D	18/ 174	10.3	3.0E+02	3.0E+02	YES
Isophorone (UG/KG)	78-59-1	0			O	0/ 159	0.0			NO
N-Nitroso-di-n-propylamine (UG/KG)	621-64-7	0			O	0/ 159	0.0			NO
N-Nitrosodiphenylamine (UG/KG)	86-30-6	8	5.7E+01	2.1E+02	D	8/ 159	5.0	2.7E+02	2.1E+02	YES
Naphthalene (UG/KG)	91-20-3	5	2.6E+01	4.1E+02	D	5/ 171	2.9	2.9E+02	2.9E+02	NO
Nitrobenzene (UG/KG)	98-95-3	0			O	0/ 134	0.0			NO
Pentachlorophenol (UG/KG)	87-86-5	0			O	0/ 159	0.0			NO
Phenanthrene (UG/KG)	85-01-8	32	2.7E+01	1.1E+04	D	32/ 174	18.4	3.5E+02	3.5E+02	YES
Phenol (UG/KG)	108-95-2	2	8.5E+01	3.2E+02	D	2/ 159	1.3	2.8E+02	2.8E+02	NO
Pyrene (UG/KG)	129-00-0	45	2.6E+01	9.7E+03	D	45/ 174	25.9	3.6E+02	3.6E+02	YES
Volatile Organics										
1,1,1,2-Tetrachloroethane (UG/KG)	630-20-6	0			O	0/ 23	0.0			NO
1,1,1-Trichloroethane (UG/KG)	71-55-6	4	1.0E+00	8.0E+00	D	4/ 200	2.0	3.4E+00	3.4E+00	NO
1,1,2,2-Tetrachloroethane (UG/KG)	79-34-5	0			O	0/ 200	0.0			NO
1,1,2-Trichloroethane (UG/KG)	79-00-5	0			O	0/ 200	0.0			NO
1,1-Dichloroethane (UG/KG)	75-34-3	1	3.0E+00	3.0E+00	D	1/ 200	0.5	3.4E+00	3.0E+00	NO
1,1-Dichloroethene (UG/KG)	75-35-4	0			O	0/ 200	0.0			NO
1,1-Dichloropropene (UG/KG)	563-58-6	0			O	0/ 23	0.0			NO
1,2,3-Trichlorobenzene (UG/KG)	87-61-6	0			O	0/ 23	0.0			NO
1,2,3-Trichloropropane (UG/KG)	96-18-4	0			O	0/ 23	0.0			NO
1,2,4-Trichlorobenzene (UG/KG)	120-82-1	0			O	0/ 3	0.0			NO
1,2,4-Trimethylbenzene (UG/KG)	95-63-6	0			O	0/ 23	0.0			NO
1,2-Dibromo-3-Chloropropane (UG/KG)	96-12-8	0			O	0/ 23	0.0			NO
1,2-Dichlorobenzene (UG/KG)	95-50-1	0			O	0/ 3	0.0			NO
1,2-Dichloroethane (UG/KG)	107-06-2	0			O	0/ 200	0.0			NO
1,2-Dichloroethene (UG/KG)	540-59-0	5	2.0E+00	2.1E+02	D	5/ 177	2.8	4.1E+00	4.1E+00	NO
1,2-Dichloropropane (UG/KG)	78-87-5	0			O	0/ 200	0.0			NO
1,2-Diethylbenzene (UG/KG)	135-01-3	0			O	0/ 31	0.0			NO

Analytes Detected in Surface and Subsurface Soil for the Construction Worker Scenario

Analyte (units)	CAS Number	Number of Detections	Minimum Detect	Maximum Detect	Distribution	Results Greater than Detection Limit	% Results Greater than Detection Limit	95% UCL of Mean	Exposure Concentration	Detection in Greater than 5%
1,2-cis-Dichloroethene (UG/KG)	156-59-2	0			O	0/ 34	0.0			NO
1,2-trans-Dichloroethene (UG/KG)	156-60-5	0			O	0/ 34	0.0			NO
1,3,5-Trimethylbenzene (UG/KG)	108-67-8	0			O	0/ 23	0.0			NO
1,3-Dichlorobenzene (UG/KG)	541-73-1	0			O	0/ 3	0.0			NO
1,3-Dichloropropane (UG/KG)	142-28-9	0			O	0/ 23	0.0			NO
1,3-cis-Dichloropropene (UG/KG)	10061-01-5	0			O	0/ 200	0.0			NO
1,3-trans-Dichloropropene (UG/KG)	10061-02-6	0			O	0/ 200	0.0			NO
1,4-Dichlorobenzene (UG/KG)	106-46-7	0			O	0/ 3	0.0			NO
2,2-Dichloropropane (UG/KG)	594-20-7	0			O	0/ 23	0.0			NO
2-Butanone (UG/KG)	78-93-3	18	1.0E+00	3.1E+01	D	18/ 177	10.2	6.8E+00	6.8E+00	YES
2-Chlorotoluene (UG/KG)	95-49-8	0			O	0/ 23	0.0			NO
2-Hexanone (UG/KG)	591-78-6	0			O	0/ 177	0.0			NO
4-Chlorotoluene (UG/KG)	106-43-4	0			O	0/ 23	0.0			NO
4-Methyl-2-pentanone (UG/KG)	108-10-1	9	1.0E+00	7.0E+00	D	9/ 177	5.1	6.0E+00	6.0E+00	YES
Acetone (UG/KG)	67-64-1	48	4.0E+00	1.7E+02	D	48/ 177	27.1	1.4E+01	1.4E+01	YES
Acetonitrile (UG/KG)	75-05-8	0			O	0/ 31	0.0			NO
Acrylonitrile (UG/KG)	107-13-1	0			O	0/ 31	0.0			NO
Benzene (UG/KG)	71-43-2	2	2.0E+00	5.0E+00	D	2/ 200	1.0	3.4E+00	3.4E+00	NO
Bromochloromethane (UG/KG)	74-97-5	0			O	0/ 23	0.0			NO
Bromodichloromethane (UG/KG)	75-27-4	1	5.0E+00	5.0E+00	D	1/ 200	0.5	3.4E+00	3.4E+00	NO
Bromoform (UG/KG)	75-25-2	0			O	0/ 200	0.0			NO
Bromomethane (UG/KG)	74-83-9	0			O	0/ 200	0.0			NO
Carbon Disulfide (UG/KG)	75-15-0	4	1.0E+00	3.0E+00	D	4/ 177	2.3	3.4E+00	3.0E+00	NO
Carbon Tetrachloride (UG/KG)	56-23-5	0			O	0/ 200	0.0			NO
Chlorobenzene (UG/KG)	108-90-7	0			O	0/ 200	0.0			NO
Chloroethane (UG/KG)	75-00-3	0			O	0/ 200	0.0			NO
Chloroform (Trichloromethane) (UG/KG	67-66-3	1	2.4E+01	2.4E+01	D	1/ 200	0.5	3.4E+00	3.4E+00	NO
Chloromethane (UG/KG)	74-87-3	2	1.0E+00	4.0E+00	D	2/ 200	1.0	5.7E+00	4.0E+00	NO
Dibromochloromethane (UG/KG)	124-48-1	1	1.0E+00	1.0E+00	D	1/ 200	0.5	3.4E+00	1.0E+00	NO
Dibromomethane (UG/KG)	74-95-3	0			O	0/ 23	0.0			NO
Dichlorodifluoromethane (UG/KG)	75-71-8	0			O	0/ 23	0.0			NO
Dichloromethane (Methylene Chloride) (UG/KG)	75-09-2	96	3.0E+00	6.8E+01	D	96/ 200	48.0	1.0E+01	1.0E+01	YES
Ethylbenzene (UG/KG)	100-41-4	9	1.0E+00	1.1E+01	D	9/ 200	4.5	3.4E+00	3.4E+00	NO

Analytes Detected in Surface and Subsurface Soil for the Construction Worker Scenario

Analyte (units)	CAS Number	Number of Detections	Minimum Detect	Maximum Detect	Distribution	Results Greater than Detection Limit	% Results Greater than Detection Limit	95% UCL of Mean	Exposure Concentration	Detection in Greater than 5%
Ethylene Dibromide (1,2-Dibromoethane) (UG/KG	106-93-4	0			O	0/ 23	0.0			NO
FREON-113 (UG/KG)	76-13-1	0			O	0/ 39	0.0			NO
Hexachlorobutadiene (UG/KG)	87-68-3	0			O	0/ 3	0.0			NO
Hexane (UG/KG)	110-54-3	0			O	0/ 39	0.0			NO
Iodomethane (UG/KG)	74-88-4	0			O	0/ 31	0.0			NO
Isopropyl Benzene (UG/KG)	98-82-8	0			O	0/ 23	0.0			NO
Monobromobenzene (Phenyl bromide) (UG/KG)	108-86-1	0			O	0/ 23	0.0			NO
Naphthalene (UG/KG)	91-20-3	3	1.0E+00	6.0E+00	D	3/ 6	50.0	1.0E+01	6.0E+00	YES
Styrene (UG/KG)	100-42-5	0			O	0/ 200	0.0			NO
Tetrachloroethene (UG/KG)	127-18-4	13	2.0E+00	4.1E+01	D	13/ 200	6.5	3.9E+00	3.9E+00	YES
Toluene (UG/KG)	108-88-3	35	1.0E+00	5.1E+01	D	35/ 200	17.5	3.8E+00	3.8E+00	YES
Trichloroethylene (TCE) (UG/KG)	79-01-6	7	3.0E+00	7.4E+01	D	7/ 200	3.5	3.8E+00	3.8E+00	NO
Trichlorofluoromethane (UG/KG)	75-69-4	0			O	0/ 23	0.0			NO
Vinyl Acetate (UG/KG)	108-05-4	0			O	0/ 149	0.0			NO
Vinyl Chloride (UG/KG)	75-01-4	0			O	0/ 200	0.0			NO
Xylenes, Total (UG/KG)	1330-20-7	16	1.0E+00	3.9E+01	D	16/ 177	9.0	3.7E+00	3.7E+00	YES
m-Xylene (UG/KG)	108-38-3	0			O	0/ 11	0.0			NO
mp-Xylene (UG/KG)	mp-Xylene	23	5.0E+00	6.0E+00	X	23/ 23	100.0	6.0E+00	6.0E+00	YES
n-Butylbenzene (UG/KG)	104-51-8	0			O	0/ 23	0.0			NO
n-propylbenzene (UG/KG)	103-65-1	0			O	0/ 23	0.0			NO
o-Xylene (UG/KG)	95-47-6	0			O	0/ 34	0.0			NO
p-Isopropyltoluene (UG/KG)	99-87-6	0			O	0/ 23	0.0			NO
sec-Butylbenzene (UG/KG)	135-98-8	0			O	0/ 23	0.0			NO
tert-Butylbenzene (UG/KG)	98-06-6	0			O	0/ 23	0.0			NO

Analytes Detected in Groundwater in the Mound Production Wells

Analyte (units)	CAS Number	Minimum Detect	Maximum Detect	Dist.	Results >Detection Limit	% Results >Detection Limit	95% UCL of Mean	Exposure Concentration	Detection in Greater than 5%
Common Anions									
Nitrate (UG/L)	7697-37-2	738.00	2550.00	D	2/ 2	100.0		2550.00	YES
Nitrate/Nitrite (UG/L)	1497-55-8	680.00	4900.00	L	11/ 11	100.0	3510.00	4900.00	YES
Nitrite (UG/L)	14797-65-0			O	0/ 2	0.0			NO
Explosives									
1,3,5-Trinitrobenzene (UG/L)	99-35-4			O	0/ 2	0.0			NO
1,3-Dinitrobenzene (UG/L)	99-65-0			O	0/ 4	0.0			NO
2,4,6-Trinitrotoluene (UG/L)	118-96-7			O	0/ 2	0.0			NO
2,4-Dinitrotoluene (UG/L)	121-14-2			O	0/ 2	0.0			NO
2,6-Dinitrotoluene (UG/L)	606-20-2			O	0/ 2	0.0			NO
2-Amino-4,6-Dinitrotoluene (UG/L)	35572-78-2			O	0/ 4	0.0			NO
HMX (UG/L)	2691-41-0			O	0/ 4	0.0			NO
Nitrobenzene (UG/L)	98-95-3			O	0/ 4	0.0			NO
PETN (UG/L)	78-11-5			O	0/ 3	0.0			NO
RDX (UG/L)	121-82-4			O	0/ 4	0.0			NO
Tetryl (UG/L)	479-45-8			O	0/ 4	0.0			NO
Metals									
Aluminum (UG/L)	7429-90-5	68.80	148.00	D	6/ 22	27.3	163.00	148.00	YES
Antimony (UG/L)	7440-36-0	2.80	14.40	D	3/ 20	15.0	43.60	14.40	YES
Arsenic (UG/L)	7440-38-2			O	0/ 25	0.0			NO
Barium (UG/L)	7440-39-3	75.00	115.00	L	20/ 22	90.9	93.60	93.60	YES
Beryllium (UG/L)	7440-41-7			O	0/ 25	0.0			NO
Bismuth (UG/L)	7440-69-9			O	0/ 4	0.0			NO
Cadmium (UG/L)	7440-43-9	4.60	7.70	D	5/ 25	20.0	6.56	6.56	YES
Calcium (UG/L)	7440-70-2	94300.00	126000.00	L	24/ 24	100.0	110000.00	110000.00	YES
Chromium (UG/L)	7440-47-3	18.30	23.80	D	5/ 25	20.0	20.20	20.20	YES
Cobalt (UG/L)	7440-48-4			O	0/ 22	0.0			NO
Copper (UG/L)	7440-50-8	1.60	593.00	X	15/ 25	60.0	41.60	41.60	YES
Cyanide (UG/L)	57-12-5			O	0/ 4	0.0			NO
Iron (UG/L)	7439-89-6	19.00	1890.00	L	13/ 24	54.2	437.00	437.00	YES
Lead (UG/L)	7439-92-1	3.40	40.00	D	5/ 25	20.0	13.00	13.00	YES
Lithium (UG/L)	7439-93-2	2.90	2.90	D	2/ 4	50.0	604.00	2.90	YES
Magnesium (UG/L)	7439-95-4	29100.00	39600.00	L	24/ 24	100.0	34500.00	34500.00	YES
Manganese (UG/L)	7439-96-5	2.80	224.00	X	22/ 24	91.7	26.90	26.90	YES
Mercury (UG/L)	7439-97-6			O	0/ 22	0.0			NO
Molybdenum (UG/L)	7439-98-7	2.00	2.70	D	2/ 4	50.0	3980000.00	2.70	YES

Analytes Detected in Groundwater in the Mound Production Wells

Analyte (units)	CAS Number	Minimum Detect	Maximum Detect	Dist.	Results >Detection Limit	% Results >Detection Limit	95% UCL of Mean	Exposure Concentration	Detection in Greater than 5%
Nickel (UG/L)	7440-02-0	2.10	27.10	D	5/ 25	20.0	16.30	16.30	YES
Potassium (UG/L)	7440-09-7	2390.00	3650.00	X	20/ 26	76.9	4540.00	3650.00	YES
Selenium (UG/L)	7782-49-2	1.50	1.50	D	1/ 25	4.0	1.63	1.50	NO
Silver (UG/L)	7440-22-4	16.90	24.20	D	5/ 22	22.7	18.00	18.00	YES
Sodium (UG/L)	7440-23-5	46600.00	84200.00	L	24/ 24	100.0	66400.00	66400.00	YES
Thallium (UG/L)	7440-28-0	2.40	2.40	D	1/ 22	4.5	2.00	2.00	NO
Tin (UG/L)	7440-31-5	8.70	8.70	D	1/ 4	25.0	134.00	8.70	YES
Vanadium (UG/L)	7440-62-2	7.80	14.60	D	7/ 22	31.8	21.90	14.60	YES
Zinc (UG/L)	7440-66-6	4.50	57.70	D	9/ 25	36.0	73.70	57.70	YES
Pesticides and/or PCBs									
4,4'-DDD (UG/L)	72-54-8			O	0/ 18	0.0			NO
4,4'-DDE (UG/L)	72-55-9			O	0/ 18	0.0			NO
4,4'-DDT (UG/L)	50-29-3			O	0/ 18	0.0			NO
Aldrin (UG/L)	309-00-2			O	0/ 18	0.0			NO
Alpha Chlordane (UG/L)	5103-71-9			O	0/ 18	0.0			NO
Alpha-BHC (UG/L)	319-84-6			O	0/ 18	0.0			NO
Aroclor-1016 (UG/L)	12674-11-2			O	0/ 18	0.0			NO
Aroclor-1221 (UG/L)	11104-28-2			O	0/ 18	0.0			NO
Aroclor-1232 (UG/L)	11141-16-5			O	0/ 18	0.0			NO
Aroclor-1242 (UG/L)	53469-21-9			O	0/ 18	0.0			NO
Aroclor-1248 (UG/L)	12672-29-6			O	0/ 18	0.0			NO
Aroclor-1254 (UG/L)	11097-69-1			O	0/ 18	0.0			NO
Aroclor-1260 (UG/L)	11096-82-5			O	0/ 18	0.0			NO
Beta-BHC (UG/L)	319-85-7			O	0/ 18	0.0			NO
Delta-BHC (UG/L)	319-86-8			O	0/ 18	0.0			NO
Dieldrin (UG/L)	60-57-1			O	0/ 18	0.0			NO
Endosulfan I (UG/L)	959-98-8			O	0/ 18	0.0			NO
Endosulfan II (UG/L)	33213-65-9			O	0/ 18	0.0			NO
Endosulfan Sulfate (UG/L)	1031-07-8			O	0/ 18	0.0			NO
Endrin (UG/L)	72-20-8			O	0/ 18	0.0			NO
Endrin Aldehyde (UG/L)	7421-93-4			O	0/ 10	0.0			NO
Endrin Ketone (UG/L)	53494-70-5			O	0/ 18	0.0			NO
Gamma Chlordane (UG/L)	5103-74-2			O	0/ 18	0.0			NO
Gamma-BHC (Lindane) (UG/L)	58-89-9			O	0/ 18	0.0			NO
Heptachlor (UG/L)	76-44-8			O	0/ 18	0.0			NO
Heptachlor Epoxide (UG/L)	1024-57-3			O	0/ 18	0.0			NO

Analytes Detected in Groundwater in the Mound Production Wells

Analyte (units)	CAS Number	Minimum Detect	Maximum Detect	Dist.	Results >Detection Limit	% Results >Detection Limit	95% UCL of Mean	Exposure Concentration	Detection in Greater than 5%
Methoxychlor (UG/L)	72-43-5			O	0/ 18	0.0			NO
Toxaphene (UG/L)	8001-35-2			O	0/ 18	0.0			NO
Radiological									
Americium-241 (PCI/L)	14596-10-2			O	0/ 8	0.0			NO
Antimony-124 (PCI/L)	14683-10-4			O	0/ 2	0.0			NO
Antimony-125 (PCI/L)	14234-35-6			O	0/ 2	0.0			NO
Barium-133 (PCI/L)	13981-41-4			O	0/ 2	0.0			NO
Barium-140 (PCI/L)	14798-08-4			O	0/ 2	0.0			NO
Beryllium-7 (PCI/L)	13966-02-4			O	0/ 2	0.0			NO
Bismuth-207 (PCI/L)	13982-38-2			O	0/ 6	0.0			NO
Bismuth-210 (PCI/L)	14331-79-4	0.11	0.39	D	2/ 18	11.1	21.60	0.39	YES
Bismuth-211 (PCI/L)	15229-37-5			O	0/ 2	0.0			NO
Bismuth-212 (PCI/L)	14913-49-6			O	0/ 2	0.0			NO
Bismuth-214 (PCI/L)	14733-03-0			O	0/ 2	0.0			NO
Cerium-139 (PCI/L)	CE-139			O	0/ 2	0.0			NO
Cerium-141 (PCI/L)	13967-74-3			O	0/ 2	0.0			NO
Cerium-144 (PCI/L)	14762-78-8			O	0/ 2	0.0			NO
Cesium-134 (PCI/L)	13967-70-9			O	0/ 4	0.0			NO
Cesium-137 (PCI/L)	10045-97-3			O	0/ 14	0.0			NO
Cobalt-57 (PCI/L)	13981-50-5			O	0/ 2	0.0			NO
Cobalt-58 (PCI/L)	13981-38-9			O	0/ 2	0.0			NO
Cobalt-60 (PCI/L)	10198-40-0			O	0/ 11	0.0			NO
Europium-152 (PCI/L)	14683-23-9			O	0/ 4	0.0			NO
Europium-154 (PCI/L)	15585-10-1			O	0/ 4	0.0			NO
Europium-155 (PCI/L)	14391-16-3			O	0/ 4	0.0			NO
Iodine-131 (PCI/L)	24267-56-9			O	0/ 2	0.0			NO
Iridium-192 (PCI/L)	12154-84-6			O	0/ 2	0.0			NO
Iron-59 (PCI/L)	14596-12-4			O	0/ 2	0.0			NO
Lanthanum-140 (PCI/L)	13981-28-7			O	0/ 2	0.0			NO
Lead-212 (PCI/L)	15092-94-1			O	0/ 2	0.0			NO
Lead-214 (PCI/L)	15067-28-4			O	0/ 2	0.0			NO
Manganese-54 (PCI/L)	13966-31-9			O	0/ 2	0.0			NO
Mercury-203 (PCI/L)	13982-78-0			O	0/ 2	0.0			NO
Neptunium-237 (PCI/L)	13994-20-2			O	0/ 2	0.0			NO
Niobium-95 (PCI/L)	13967-76-5			O	0/ 2	0.0			NO
Plutonium-238 (PCI/L)	13981-16-3	0.01	0.25	D	8/ 57	14.0	0.18	0.18	YES

Analytes Detected in Groundwater in the Mound Production Wells

Analyte (units)	CAS Number	Minimum Detect	Maximum Detect	Dist.	Results >Detection Limit	% Results >Detection Limit	95% UCL of Mean	Exposure Concentration	Detection in Greater than 5%
Plutonium-238/239 (PCI/L)	PU-238/239	0.01	0.01	D	1/ 6	16.7	0.01	0.01	YES
Plutonium-239 (PCI/L)	15117-48-3			O	0/ 38	0.0			NO
Plutonium-239/240 (PCI/L)	PU-239/240	0.00	2.00	D	5/ 19	26.3	9.64	2.00	YES
Potassium-40 (PCI/L)	13966-00-2			O	0/ 10	0.0			NO
Protactinium-233 (PCI/L)	13981-14-1			O	0/ 2	0.0			NO
Protactinium-234 (PCI/L)	15100-28-4			O	0/ 2	0.0			NO
Radium-223 (PCI/L)	15623-45-7			O	0/ 2	0.0			NO
Radium-225 (PCI/L)	13981-53-8			O	0/ 2	0.0			NO
Radium-226 (PCI/L)	13982-63-3	0.10	0.52	D	6/ 18	33.3	0.54	0.52	YES
Ruthenium-103 (PCI/L)	13968-53-1			O	0/ 2	0.0			NO
Ruthenium-106 (PCI/L)	13967-48-1			O	0/ 2	0.0			NO
Scandium-46 (PCI/L)	13967-63-0			O	0/ 2	0.0			NO
Sodium-22 (PCI/L)	13966-32-0			O	0/ 2	0.0			NO
Strontium-85 (PCI/L)	13967-73-2	25.00	25.00	D	1/ 2	50.0		25.00	YES
Strontium-89 (PCI/L)	14158-27-1			O	0/ 2	0.0			NO
Strontium-90 (PCI/L)	10098-97-2	0.50	0.50	D	3/ 18	16.7	2.13	0.50	YES
Thallium-208 (PCI/L)	14913-50-9			O	0/ 2	0.0			NO
Thorium-227 (PCI/L)	15623-47-9	0.01	0.23	X	16/ 22	72.7	84.00	0.23	YES
Thorium-228 (PCI/L)	14274-82-9	0.01	2.17	D	17/ 46	37.0	25.60	2.17	YES
Thorium-230 (PCI/L)	14269-63-7	0.01	1.99	D	19/ 43	44.2	0.48	0.48	YES
Thorium-232 (PCI/L)	7440-29-1	0.00	0.10	D	8/ 44	18.2	0.34	0.10	YES
Thorium-234 (PCI/L)	15065-10-8			O	0/ 2	0.0			NO
Tin-126 (PCI/L)	15832-50-5			O	0/ 2	0.0			NO
Tritium (PCI/L)	10028-17-8	30.00	7200.00	X	123/ 139	88.5	799.00	799.00	YES
Uranium-233/234 (PCI/L)	U-233/234	0.17	0.36	L	36/ 36	100.0	0.25	0.25	YES
Uranium-234 (PCI/L)	13966-29-5	0.20	8.14	X	19/ 24	79.2	2.02	2.02	YES
Uranium-235 (PCI/L)	15117-96-1	0.01	2.30	X	30/ 53	56.6	0.47	0.47	YES
Uranium-235/236 (PCI/L)	U-235/236			O	0/ 7	0.0			NO
Uranium-238 (PCI/L)	7440-61-1	0.13	8.25	X	52/ 59	88.1	0.41	0.41	YES
Yttrium-88 (PCI/L)	7440-65-5			O	0/ 2	0.0			NO
Zirconium-95 (PCI/L)	13967-71-0			O	0/ 2	0.0			NO
Semi-Volatile Organics									
1,2,4-Trichlorobenzene (UG/L)	120-82-1			O	0/ 18	0.0			NO
1,2-Dichlorobenzene (UG/L)	95-50-1			O	0/ 32	0.0			NO
1,3-Dichlorobenzene (UG/L)	541-73-1			O	0/ 30	0.0			NO
1,4-Dichlorobenzene (UG/L)	106-46-7			O	0/ 32	0.0			NO

Analytes Detected in Groundwater in the Mound Production Wells

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1-chloro-4-phenoxybenzene (UG/L)	7005-72-3			O	0/ 18	0.0			NO
2,2'-oxybis(1-chloropropane) (UG/L)	108-60-1			O	0/ 29	0.0			NO
2,4,5-Trichlorophenol (UG/L)	95-95-4			O	0/ 18	0.0			NO
2,4,6-Trichlorophenol (UG/L)	88-06-2			O	0/ 18	0.0			NO
2,4-Dichlorophenol (UG/L)	120-83-2			O	0/ 18	0.0			NO
2,4-Dimethylphenol (UG/L)	105-67-9			O	0/ 18	0.0			NO
2,4-Dinitrophenol (UG/L)	51-28-5			O	0/ 18	0.0			NO
2,4-Dinitrotoluene (UG/L)	121-14-2			O	0/ 16	0.0			NO
2,6-Dinitrotoluene (UG/L)	606-20-2			O	0/ 16	0.0			NO
2-Benzyl-4-Chlorophenol (UG/L)	120-32-1			O	0/ 4	0.0			NO
2-Chloronaphthalene (UG/L)	91-58-7			O	0/ 18	0.0			NO
2-Chlorophenol (UG/L)	95-57-8			O	0/ 18	0.0			NO
2-Methylnaphthalene (UG/L)	91-57-6			O	0/ 18	0.0			NO
2-Methylphenol (UG/L)	95-48-7			O	0/ 18	0.0			NO
2-Nitroaniline (UG/L)	88-74-4			O	0/ 18	0.0			NO
2-Nitrophenol (UG/L)	88-75-5			O	0/ 18	0.0			NO
3,3'-Dichlorobenzidine (UG/L)	91-94-1			O	0/ 18	0.0			NO
3-Nitroaniline (UG/L)	99-09-2			O	0/ 18	0.0			NO
4,6-Dinitro-o-Cresol (UG/L)	534-52-1			O	0/ 18	0.0			NO
4-Bromophenyl-phenyl Ether (UG/L)	101-55-3			O	0/ 18	0.0			NO
4-Chloro-3-methylphenol (UG/L)	59-50-7			O	0/ 18	0.0			NO
4-Chloroaniline (UG/L)	106-47-8			O	0/ 18	0.0			NO
4-Methylphenol (UG/L)	106-44-5			O	0/ 18	0.0			NO
4-Nitroaniline (UG/L)	100-01-6			O	0/ 18	0.0			NO
4-Nitrophenol (UG/L)	100-02-7			O	0/ 18	0.0			NO
Acenaphthene (UG/L)	83-32-9			O	0/ 18	0.0			NO
Acenaphthylene (UG/L)	208-96-8			O	0/ 18	0.0			NO
Anthracene (UG/L)	120-12-7			O	0/ 18	0.0			NO
Benzo(a)anthracene (UG/L)	56-55-3			O	0/ 18	0.0			NO
Benzo(a)pyrene (UG/L)	50-32-8			O	0/ 18	0.0			NO
Benzo(b)fluoranthene (UG/L)	205-99-2			O	0/ 18	0.0			NO
Benzo(g,h,i)perylene (UG/L)	191-24-2			O	0/ 18	0.0			NO
Benzo(k)fluoranthene (UG/L)	207-08-9			O	0/ 18	0.0			NO
Benzoic Acid (UG/L)	65-85-0			O	0/ 13	0.0			NO
Benzyl Alcohol (UG/L)	100-51-6			O	0/ 13	0.0			NO
Bis(2-chloroethoxy)methane (UG/L)	111-91-1			O	0/ 18	0.0			NO

Analytes Detected in Groundwater in the Mound Production Wells

Analyte (units)	CAS Number	Minimum Detect	Maximum Detect	Dist.	Results >Detection Limit	% Results >Detection Limit	95% UCL of Mean	Exposure Concentration	Detection in Greater than 5%
Bis(2-chloroethyl)ether (UG/L)	111-44-4			O	0/ 18	0.0			NO
Bis(2-ethylhexyl)phthalate (UG/L)	117-81-7			O	0/ 21	0.0			NO
Butyl Benzyl Phthalate (UG/L)	85-68-7			O	0/ 18	0.0			NO
Carbazole (UG/L)	86-74-8			O	0/ 9	0.0			NO
Chrysene (UG/L)	218-01-9			O	0/ 18	0.0			NO
Di-n-butyl Phthalate (UG/L)	84-74-2			O	0/ 21	0.0			NO
Di-n-octyl Phthalate (UG/L)	117-84-0			O	0/ 18	0.0			NO
Dibenz(a,h)anthracene (UG/L)	53-70-3			O	0/ 18	0.0			NO
Dibenzofuran (UG/L)	132-64-9			O	0/ 18	0.0			NO
Diethyl Phthalate (UG/L)	84-66-2			O	0/ 18	0.0			NO
Dimethyl Phthalate (UG/L)	131-11-3			O	0/ 18	0.0			NO
Fluoranthene (UG/L)	206-44-0			O	0/ 18	0.0			NO
Fluorene (UG/L)	86-73-7			O	0/ 18	0.0			NO
Hexachlorobenzene (UG/L)	118-74-1			O	0/ 18	0.0			NO
Hexachlorobutadiene (UG/L)	87-68-3			O	0/ 18	0.0			NO
Hexachlorocyclopentadiene (UG/L)	77-47-4			O	0/ 18	0.0			NO
Hexachloroethane (UG/L)	67-72-1			O	0/ 18	0.0			NO
Indeno(1,2,3-cd)pyrene (UG/L)	193-39-5			O	0/ 18	0.0			NO
Isophorone (UG/L)	78-59-1			O	0/ 18	0.0			NO
N-Nitroso-di-n-propylamine (UG/L)	621-64-7			O	0/ 18	0.0			NO
N-Nitrosodiphenylamine (UG/L)	86-30-6			O	0/ 18	0.0			NO
Naphthalene (UG/L)	91-20-3			O	0/ 18	0.0			NO
Nitrobenzene (UG/L)	98-95-3			O	0/ 14	0.0			NO
Pentachlorophenol (UG/L)	87-86-5			O	0/ 21	0.0			NO
Phenanthrene (UG/L)	85-01-8			O	0/ 18	0.0			NO
Phenol (UG/L)	108-95-2			O	0/ 21	0.0			NO
Pyrene (UG/L)	129-00-0			O	0/ 18	0.0			NO
Volatile Organics									
1,1,1,2-Tetrachloroethane (UG/L)	630-20-6			O	0/ 202	0.0			NO
1,1,1-Trichloroethane (UG/L)	71-55-6	0.30	3.30	D	91/ 215	42.3	0.90	0.90	YES
1,1,2,2-Tetrachloroethane (UG/L)	79-34-5			O	0/ 213	0.0			NO
1,1,2-Trichloroethane (UG/L)	79-00-5			O	0/ 217	0.0			NO
1,1-Dichloroethane (UG/L)	75-34-3	3.50	3.50	D	1/ 213	0.5	0.34	0.34	NO
1,1-Dichloroethene (UG/L)	75-35-4	1.70	1.70	D	1/ 215	0.5	0.39	0.39	NO
1,1-Dichloropropene (UG/L)	563-58-6			O	0/ 167	0.0			NO
1,2,3-Trichlorobenzene (UG/L)	87-61-6			O	0/ 167	0.0			NO

Analytes Detected in Groundwater in the Mound Production Wells

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1,2,3-Trichloropropane (UG/L)	96-18-4			O	0/ 192	0.0			NO
1,2,4-Trichlorobenzene (UG/L)	120-82-1			O	0/ 167	0.0			NO
1,2,4-Trimethylbenzene (UG/L)	95-63-6			O	0/ 167	0.0			NO
1,2-Dibromo-3-Chloropropane (UG/L)	96-12-8			O	0/ 2	0.0			NO
1,2-Dichlorobenzene (UG/L)	95-50-1			O	0/ 177	0.0			NO
1,2-Dichloroethane (UG/L)	107-06-2			O	0/ 219	0.0			NO
1,2-Dichloroethene (UG/L)	540-59-0	1.30	7.20	L	10/ 13	76.9	5.57	7.20	YES
1,2-Dichloropropane (UG/L)	78-87-5			O	0/ 213	0.0			NO
1,2-Diethylbenzene (UG/L)	135-01-3			O	0/ 4	0.0			NO
1,2-cis-Dichloroethene (UG/L)	156-59-2	0.50	4.00	X	102/ 182	56.0	1.08	1.08	YES
1,2-trans-Dichloroethene (UG/L)	156-60-5	1.00	3.00	D	7/ 217	3.2	0.39	0.39	NO
1,3,5-Trimethylbenzene (UG/L)	108-67-8			O	0/ 167	0.0			NO
1,3-Dichlorobenzene (UG/L)	541-73-1			O	0/ 177	0.0			NO
1,3-Dichloropropane (UG/L)	142-28-9			O	0/ 167	0.0			NO
1,3-Dichloropropene (UG/L)	542-75-6			O	0/ 167	0.0			NO
1,3-Diethylbenzene (UG/L)	141-93-5			O	0/ 4	0.0			NO
1,3-cis-Dichloropropene (UG/L)	10061-01-5	0.50	1.20	D	2/ 215	0.9	0.55	0.55	NO
1,3-trans-Dichloropropene (UG/L)	10061-02-6			O	0/ 215	0.0			NO
1,4-Dichlorobenzene (UG/L)	106-46-7			O	0/ 177	0.0			NO
1,4-Diethylbenzene (UG/L)	105-05-5			O	0/ 4	0.0			NO
1-Chlorohexane (UG/L)	544-10-5			O	0/ 33	0.0			NO
2,2-Dichloropropane (UG/L)	594-20-7			O	0/ 167	0.0			NO
2-Butanone (UG/L)	78-93-3	7.00	41.00	D	3/ 13	23.1	16.80	41.00	YES
2-Chloroethylvinylether (UG/L)	110-75-8			O	0/ 40	0.0			NO
2-Chlorotoluene (UG/L)	95-49-8			O	0/ 183	0.0			NO
2-Hexanone (UG/L)	591-78-6			O	0/ 7	0.0			NO
4-Chlorotoluene (UG/L)	106-43-4			O	0/ 173	0.0			NO
4-Methyl-2-pentanone (UG/L)	108-10-1			O	0/ 11	0.0			NO
Acetone (UG/L)	67-64-1	2.00	12.00	D	6/ 11	54.5	11.90	12.00	YES
Acetonitrile (UG/L)	75-05-8			O	0/ 4	0.0			NO
Acrolein (UG/L)	107-02-8			O	0/ 3	0.0			NO
Acrylonitrile (UG/L)	107-13-1			O	0/ 7	0.0			NO
Benzene (UG/L)	71-43-2			O	0/ 215	0.0			NO
Benzyl Chloride (UG/L)	100-44-7			O	0/ 4	0.0			NO
Bromochloromethane (UG/L)	74-97-5			O	0/ 167	0.0			NO
Bromodichloromethane (UG/L)	75-27-4	0.50	3.70	D	3/ 215	1.4	0.38	0.38	NO

Analytes Detected in Groundwater in the Mound Production Wells

Analyte (units)	CAS Number	Minimum Detect	Maximum Detect	Dist.	Results >Detection Limit	% Results >Detection Limit	95% UCL of Mean	Exposure Concentration	Detection in Greater than 5%
Bromoform (UG/L)	75-25-2			O	0/ 214	0.0			NO
Bromomethane (UG/L)	74-83-9			O	0/ 185	0.0			NO
Carbon Disulfide (UG/L)	75-15-0			O	0/ 11	0.0			NO
Carbon Tetrachloride (UG/L)	56-23-5			O	0/ 215	0.0			NO
Chlorobenzene (UG/L)	108-90-7			O	0/ 213	0.0			NO
Chloroethane (UG/L)	75-00-3			O	0/ 185	0.0			NO
Chloroform (Trichloromethane) (UG/L)	67-66-3	0.50	7.00	D	13/ 219	5.9	0.42	0.42	YES
Chloromethane (UG/L)	74-87-3			O	0/ 187	0.0			NO
Chlorotoluene (UG/L)	25168-05-2			O	0/ 19	0.0			NO
Dibromochloromethane (UG/L)	124-48-1			O	0/ 215	0.0			NO
Dibromomethane (UG/L)	74-95-3			O	0/ 204	0.0			NO
Dichlorodifluoromethane (UG/L)	75-71-8			O	0/ 175	0.0			NO
Dichloromethane (Methylene Chloride) (U	75-09-2	3.00	13.00	D	8/ 217	3.7	0.70	0.70	NO
Ethylbenzene (UG/L)	100-41-4	0.50	0.60	D	2/ 219	0.9	0.48	0.48	NO
Ethylene Dibromide (1,2-Dibromoethane)	106-93-4			O	0/ 2	0.0			NO
FREON-113 (UG/L)	76-13-1	2.00	34.00	X	12/ 19	63.2	29.60	34.00	YES
Hexachlorobutadiene (UG/L)	87-68-3			O	0/ 167	0.0			NO
Isopropyl Benzene (UG/L)	98-82-8			O	0/ 167	0.0			NO
Monobromobenzene (Phenyl bromide) (U	108-86-1			O	0/ 202	0.0			NO
Naphthalene (UG/L)	91-20-3			O	0/ 167	0.0			NO
Styrene (UG/L)	100-42-5			O	0/ 174	0.0			NO
Tert-butyl methyl ether (UG/L)	1634-04-4	1.20	2.40	D	4/ 24	16.7	0.61	0.61	YES
Tetrachloroethene (UG/L)	127-18-4	0.29	2.20	X	114/ 218	52.3	0.96	0.96	YES
Toluene (UG/L)	108-88-3	0.60	3.00	D	4/ 219	1.8	0.50	0.50	NO
Trichloroethylene (TCE) (UG/L)	79-01-6	0.50	5.90	X	189/ 219	86.3	2.31	2.31	YES
Trichlorofluoromethane (UG/L)	75-69-4	2.20	2.20	D	1/ 210	0.5	0.43	0.43	NO
Vinyl Acetate (UG/L)	108-05-4			O	0/ 11	0.0			NO
Vinyl Chloride (UG/L)	75-01-4			O	0/ 219	0.0			NO
Xylenes, Total (UG/L)	1330-20-7	0.50	3.60	D	9/ 212	4.2	0.56	0.56	NO
mp-Xylene (UG/L)	mp-Xylene	0.60	2.40	D	8/ 167	4.8	0.31	0.31	NO
n-Butylbenzene (UG/L)	104-51-8			O	0/ 167	0.0			NO
n-propylbenzene (UG/L)	103-65-1			O	0/ 167	0.0			NO
o-Xylene (UG/L)	95-47-6	0.40	1.30	D	5/ 167	3.0	0.27	0.27	NO
p-Isopropyltoluene (UG/L)	99-87-6			O	0/ 167	0.0			NO
sec-Butylbenzene (UG/L)	135-98-8			O	0/ 167	0.0			NO
tert-Butylbenzene (UG/L)	98-06-6			O	0/ 167	0.0			NO

Analytes Detected in Groundwater in the Bedrock Wells

Analyte (units)	CAS Number	Minimum Detect	Maximum Detect	Dist.	Results >Detection Limit	% Results >Detection Limit	95% UCL of Mean	Exposure Concentration	Detection in Greater than 5%
Common Anions									
Nitrate (UG/L)	7697-37-2	1.7E+02	9.4E+03	D	5/ 10	50.0	1.1E+16	9.4E+03	YES
Nitrate/Nitrite (UG/L)	1497-55-8	6.3E+00	2.0E+04	X	76/ 113	67.3	3.1E+04	2.0E+04	YES
Nitrite (UG/L)	14797-65-0	1.0E+01	7.0E+01	D	2/ 21	9.5	1.4E+01	1.4E+01	YES
Explosives									
1,3,5-Trinitrobenzene (UG/L)	99-35-4	1.1E+00	1.1E+00	D	1/ 23	4.3	1.2E+00	1.1E+00	NO
1,3-Dinitrobenzene (UG/L)	99-65-0			O	0/ 43	0.0			NO
2,4,6-Trinitrotoluene (UG/L)	118-96-7	2.6E-01	2.6E-01	D	1/ 24	4.2	9.2E-01	2.6E-01	NO
2,4-Dinitrotoluene (UG/L)	121-14-2			O	0/ 23	0.0			NO
2,6-Dinitrotoluene (UG/L)	606-20-2			O	0/ 34	0.0			NO
2-Amino-4,6-Dinitrotoluene (UG/L)	35572-78-2			O	0/ 43	0.0			NO
HMX (UG/L)	2691-41-0			O	0/ 43	0.0			NO
Nitrobenzene (UG/L)	98-95-3			O	0/ 42	0.0			NO
PETN (UG/L)	78-11-5			O	0/ 40	0.0			NO
RDX (UG/L)	121-82-4			O	0/ 41	0.0			NO
Tetryl (UG/L)	479-45-8			O	0/ 43	0.0			NO
Metals									
Aluminum (UG/L)	7429-90-5	1.2E+01	3.2E+04	X	141/ 151	93.4	4.7E+03	4.7E+03	YES
Antimony (UG/L)	7440-36-0	3.5E-01	4.2E+01	D	47/ 158	29.7	3.2E+00	3.2E+00	YES
Arsenic (UG/L)	7440-38-2	3.0E-01	9.3E+02	D	35/ 150	23.3	7.3E+00	7.3E+00	YES
Barium (UG/L)	7440-39-3	1.8E+01	3.1E+03	X	148/ 150	98.7	1.4E+02	1.4E+02	YES
Beryllium (UG/L)	7440-41-7	3.0E-02	2.3E+00	D	56/ 151	37.1	3.8E-01	3.8E-01	YES
Bismuth (UG/L)	7440-69-9	8.2E-01	2.6E+02	D	29/ 139	20.9	2.1E+01	2.1E+01	YES
Boron (UG/L)	7440-42-8	5.7E+01	1.3E+02	D	7/ 8	87.5	1.1E+02	1.3E+02	YES
Cadmium (UG/L)	7440-43-9	1.4E-01	1.3E+01	D	17/ 161	10.6	7.0E-01	7.0E-01	YES
Calcium (UG/L)	7440-70-2	1.2E+02	1.5E+06	X	198/ 198	100.0	2.0E+05	2.0E+05	YES
Chromium (UG/L)	7440-47-3	2.0E-01	4.5E+04	X	106/ 155	68.4	1.6E+03	1.6E+03	YES
Cobalt (UG/L)	7440-48-4	3.1E-01	3.0E+02	D	63/ 151	41.7	1.7E+01	1.7E+01	YES
Copper (UG/L)	7440-50-8	3.8E-01	5.1E+02	X	118/ 153	77.1	1.8E+01	1.8E+01	YES
Cyanide (UG/L)	57-12-5	5.5E+00	1.4E+01	D	3/ 46	6.5	4.7E+00	4.7E+00	YES
Iron (UG/L)	7439-89-6	1.5E-01	1.9E+05	X	186/ 199	93.5	3.2E+04	3.2E+04	YES
Lead (UG/L)	7439-92-1	4.0E-01	4.0E+01	D	62/ 162	38.3	3.9E+00	3.9E+00	YES
Lithium (UG/L)	7439-93-2	1.2E+01	4.6E+03	X	123/ 138	89.1	1.4E+02	1.4E+02	YES
Magnesium (UG/L)	7439-95-4	2.7E+01	7.2E+05	X	199/ 199	100.0	7.7E+04	7.7E+04	YES
Manganese (UG/L)	7439-96-5	3.7E-02	3.0E+03	X	190/ 199	95.5	6.2E+02	6.2E+02	YES
Mercury (UG/L)	7439-97-6	1.0E-01	1.4E+00	D	3/ 151	2.0	6.1E-02	6.1E-02	NO

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Molybdenum (UG/L)	7439-98-7	4.3E-01	4.7E+02	X	82/ 134	61.2	2.0E+01	2.0E+01	YES
Nickel (UG/L)	7440-02-0	4.4E-01	1.2E+04	X	114/ 154	74.0	4.8E+02	4.8E+02	YES
Potassium (UG/L)	7440-09-7	2.1E+00	2.1E+05	X	186/ 200	93.0	1.6E+04	1.6E+04	YES
Selenium (UG/L)	7782-49-2	1.3E+00	9.1E+00	D	11/ 149	7.4	1.7E+00	1.7E+00	YES
Silicon (UG/L)	7440-21-3	2.2E+03	1.2E+04	D	6/ 6	100.0	1.7E+04	1.2E+04	YES
Silver (UG/L)	7440-22-4	1.8E-01	2.9E+01	D	13/ 153	8.5	1.1E+00	1.1E+00	YES
Sodium (UG/L)	7440-23-5	6.8E+01	7.3E+06	X	197/ 197	100.0	3.4E+05	3.4E+05	YES
Thallium (UG/L)	7440-28-0	1.1E+00	6.9E+00	D	10/ 147	6.8	3.4E+00	3.4E+00	YES
Tin (UG/L)	7440-31-5	1.4E+00	3.6E+02	D	29/ 136	21.3	7.5E+00	7.5E+00	YES
Vanadium (UG/L)	7440-62-2	1.5E-01	2.8E+02	D	72/ 151	47.7	2.3E+01	2.3E+01	YES
Zinc (UG/L)	7440-66-6	6.1E-01	4.0E+02	X	114/ 153	74.5	4.9E+01	4.9E+01	YES
Pesticides and/or PCBs									
4,4'-DDD (UG/L)	72-54-8			O	0/ 62	0.0			NO
4,4'-DDE (UG/L)	72-55-9			O	0/ 62	0.0			NO
4,4'-DDT (UG/L)	50-29-3			O	0/ 62	0.0			NO
Aldrin (UG/L)	309-00-2			O	0/ 62	0.0			NO
Alpha Chlordane (UG/L)	5103-71-9	3.2E-02	6.9E-02	D	3/ 62	4.8	1.1E-01	6.9E-02	NO
Alpha-BHC (UG/L)	319-84-6			O	0/ 62	0.0			NO
Aroclor-1016 (UG/L)	12674-11-2			O	0/ 62	0.0			NO
Aroclor-1221 (UG/L)	11104-28-2			O	0/ 62	0.0			NO
Aroclor-1232 (UG/L)	11141-16-5			O	0/ 62	0.0			NO
Aroclor-1242 (UG/L)	53469-21-9			O	0/ 62	0.0			NO
Aroclor-1248 (UG/L)	12672-29-6			O	0/ 62	0.0			NO
Aroclor-1254 (UG/L)	11097-69-1			O	0/ 62	0.0			NO
Aroclor-1260 (UG/L)	11096-82-5			O	0/ 62	0.0			NO
Beta-BHC (UG/L)	319-85-7			O	0/ 62	0.0			NO
Delta-BHC (UG/L)	319-86-8			O	0/ 62	0.0			NO
Dieldrin (UG/L)	60-57-1			O	0/ 62	0.0			NO
Endosulfan I (UG/L)	959-98-8			O	0/ 62	0.0			NO
Endosulfan II (UG/L)	33213-65-9			O	0/ 62	0.0			NO
Endosulfan Sulfate (UG/L)	1031-07-8			O	0/ 59	0.0			NO
Endrin (UG/L)	72-20-8			O	0/ 62	0.0			NO
Endrin Aldehyde (UG/L)	7421-93-4			O	0/ 48	0.0			NO
Endrin Ketone (UG/L)	53494-70-5			O	0/ 62	0.0			NO
Gamma Chlordane (UG/L)	5103-74-2			O	0/ 62	0.0			NO
Gamma-BHC (Lindane) (UG/L)	58-89-9			O	0/ 62	0.0			NO

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Heptachlor (UG/L)	76-44-8			O	0/ 62	0.0			NO
Heptachlor Epoxide (UG/L)	1024-57-3			O	0/ 62	0.0			NO
Methoxychlor (UG/L)	72-43-5			O	0/ 62	0.0			NO
Toxaphene (UG/L)	8001-35-2			O	0/ 62	0.0			NO
Radiological									
Americium-241 (PCI/L)	14596-10-2	6.8E-02	1.7E-01	D	6/ 43	14.0	2.9E+00	1.7E-01	YES
Bismuth-207 (PCI/L)	13982-38-2			O	0/ 50	0.0			NO
Bismuth-210 (PCI/L)	14331-79-4	1.2E-01	2.6E-01	D	2/ 55	3.6	8.0E+00	2.6E-01	NO
Bismuth-211 (PCI/L)	15229-37-5			O	0/ 4	0.0			NO
Bismuth-212 (PCI/L)	14913-49-6			O	0/ 4	0.0			NO
Bismuth-214 (PCI/L)	14733-03-0			O	0/ 4	0.0			NO
Cesium-134 (PCI/L)	13967-70-9			O	0/ 4	0.0			NO
Cesium-137 (PCI/L)	10045-97-3			O	0/ 56	0.0			NO
Cobalt-60 (PCI/L)	10198-40-0			O	0/ 56	0.0			NO
Europium-152 (PCI/L)	14683-23-9			O	0/ 4	0.0			NO
Europium-154 (PCI/L)	15585-10-1			O	0/ 4	0.0			NO
Europium-155 (PCI/L)	14391-16-3			O	0/ 4	0.0			NO
Lead-212 (PCI/L)	15092-94-1			O	0/ 4	0.0			NO
Lead-214 (PCI/L)	15067-28-4			O	0/ 4	0.0			NO
Neptunium-237 (PCI/L)	13994-20-2			O	0/ 4	0.0			NO
Plutonium-238 (PCI/L)	13981-16-3	9.0E-03	1.9E+00	D	8/ 62	12.9	2.4E-01	2.4E-01	YES
Plutonium-238/239 (PCI/L)	PU-238/239			O	0/ 2	0.0			NO
Plutonium-239 (PCI/L)	15117-48-3			O	0/ 5	0.0			NO
Plutonium-239/240 (PCI/L)	PU-239/240	3.0E-03	1.8E-01	D	12/ 52	23.1	5.4E-01	1.8E-01	YES
Plutonium-242 (PCI/L)	13982-10-0	1.1E-01	1.1E-01	D	1/ 2	50.0		1.1E-01	YES
Potassium-40 (PCI/L)	13966-00-2	1.3E+02	2.6E+02	D	5/ 54	9.3	1.4E+02	1.4E+02	YES
Protactinium-233 (PCI/L)	13981-14-1			O	0/ 4	0.0			NO
Protactinium-234 (PCI/L)	15100-28-4			O	0/ 4	0.0			NO
Radium-223 (PCI/L)	15623-45-7			O	0/ 4	0.0			NO
Radium-225 (PCI/L)	13981-53-8			O	0/ 4	0.0			NO
Radium-226 (PCI/L)	13982-63-3	1.3E-01	3.9E+01	X	50/ 66	75.8	2.4E+00	2.4E+00	YES
Radium-228 (PCI/L)	15262-20-1	5.7E-01	1.7E+01	L	8/ 8	100.0	4.5E+01	1.7E+01	YES
Strontium-89 (PCI/L)	14158-27-1			O	0/ 4	0.0			NO
Strontium-90 (PCI/L)	10098-97-2	7.5E-01	4.2E+01	D	8/ 57	14.0	2.2E+00	2.2E+00	YES
Thallium-208 (PCI/L)	14913-50-9			O	0/ 4	0.0			NO
Thorium-227 (PCI/L)	15623-47-9	5.8E-02	5.8E-02	D	1/ 5	20.0	2.4E+18	5.8E-02	YES

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Thorium-228 (PCI/L)	14274-82-9	2.0E-02	8.5E+00	X	42/ 57	73.7	6.9E+01	8.5E+00	YES
Thorium-230 (PCI/L)	14269-63-7	4.4E-03	4.1E+00	L	45/ 59	76.3	5.4E-01	5.4E-01	YES
Thorium-232 (PCI/L)	7440-29-1	5.0E-04	2.1E+00	L	33/ 66	50.0	7.2E-01	7.2E-01	YES
Thorium-234 (PCI/L)	15065-10-8			O	0/ 4	0.0			NO
Tritium (PCI/L)	10028-17-8	3.0E+00	2.8E+06	X	4473/4488	99.7	2.1E+05	2.1E+05	YES
Uranium-233 (PCI/L)	13968-55-3	2.7E-02	1.6E+01	D	3/ 3	100.0	1.6E+62	1.6E+01	YES
Uranium-233/234 (PCI/L)	U-233/234	1.5E-01	9.3E-01	D	5/ 5	100.0	2.7E+00	9.3E-01	YES
Uranium-234 (PCI/L)	13966-29-5	3.3E-02	6.7E+01	X	61/ 70	87.1	2.1E+00	2.1E+00	YES
Uranium-235 (PCI/L)	15117-96-1	7.8E-03	8.3E+00	D	20/ 43	46.5	6.9E+00	6.9E+00	YES
Uranium-235/236 (PCI/L)	U-235/236	3.7E-02	4.7E-02	D	2/ 26	7.7	9.6E-02	4.7E-02	YES
Uranium-238 (PCI/L)	7440-61-1	2.9E-02	6.6E+00	L	59/ 77	76.6	5.9E-01	5.9E-01	YES
Semi-Volatile Organics									
1,2,4-Trichlorobenzene (UG/L)	120-82-1			O	0/ 65	0.0			NO
1,2-Dichlorobenzene (UG/L)	95-50-1			O	0/ 99	0.0			NO
1,3-Dichlorobenzene (UG/L)	541-73-1	3.0E+00	3.0E+00	D	1/ 98	1.0	2.7E+00	2.7E+00	NO
1,4-Dichlorobenzene (UG/L)	106-46-7			O	0/ 99	0.0			NO
1-chloro-4-phenoxybenzene (UG/L)	7005-72-3			O	0/ 65	0.0			NO
2,2'-oxybis(1-chloropropane) (UG/L)	108-60-1			O	0/ 119	0.0			NO
2,4,5-Trichlorophenol (UG/L)	95-95-4			O	0/ 65	0.0			NO
2,4,6-Trichlorophenol (UG/L)	88-06-2			O	0/ 65	0.0			NO
2,4-Dichlorophenol (UG/L)	120-83-2			O	0/ 65	0.0			NO
2,4-Dimethylphenol (UG/L)	105-67-9			O	0/ 65	0.0			NO
2,4-Dinitrophenol (UG/L)	51-28-5			O	0/ 65	0.0			NO
2,4-Dinitrotoluene (UG/L)	121-14-2			O	0/ 42	0.0			NO
2,6-Dinitrotoluene (UG/L)	606-20-2			O	0/ 31	0.0			NO
2-Benzyl-4-Chlorophenol (UG/L)	120-32-1			O	0/ 44	0.0			NO
2-Chloronaphthalene (UG/L)	91-58-7			O	0/ 65	0.0			NO
2-Chlorophenol (UG/L)	95-57-8			O	0/ 65	0.0			NO
2-Methylnaphthalene (UG/L)	91-57-6	6.0E+00	6.0E+00	D	1/ 69	1.4	5.2E+00	5.2E+00	NO
2-Methylphenol (UG/L)	95-48-7			O	0/ 65	0.0			NO
2-Nitroaniline (UG/L)	88-74-4			O	0/ 65	0.0			NO
2-Nitrophenol (UG/L)	88-75-5			O	0/ 65	0.0			NO
3,3'-Dichlorobenzidine (UG/L)	91-94-1			O	0/ 66	0.0			NO
3-Nitroaniline (UG/L)	99-09-2			O	0/ 65	0.0			NO
4,6-Dinitro-o-Cresol (UG/L)	534-52-1			O	0/ 65	0.0			NO
4-Bromophenyl-phenyl Ether (UG/L)	101-55-3			O	0/ 65	0.0			NO

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4-Chloro-3-methylphenol (UG/L)	59-50-7			O	0/ 65	0.0			NO
4-Chloroaniline (UG/L)	106-47-8			O	0/ 65	0.0			NO
4-Methylphenol (UG/L)	106-44-5	1.2E+01	6.1E+01	D	2/ 65	3.1	6.2E+00	6.2E+00	NO
4-Nitroaniline (UG/L)	100-01-6			O	0/ 64	0.0			NO
4-Nitrophenol (UG/L)	100-02-7			O	0/ 65	0.0			NO
Acenaphthene (UG/L)	83-32-9	1.0E+00	1.0E+00	D	1/ 72	1.4	5.6E+00	1.0E+00	NO
Acenaphthylene (UG/L)	208-96-8			O	0/ 72	0.0			NO
Anthracene (UG/L)	120-12-7			O	0/ 72	0.0			NO
Benzo(a)anthracene (UG/L)	56-55-3			O	0/ 73	0.0			NO
Benzo(a)pyrene (UG/L)	50-32-8			O	0/ 73	0.0			NO
Benzo(b)fluoranthene (UG/L)	205-99-2			O	0/ 73	0.0			NO
Benzo(g,h,i)perylene (UG/L)	191-24-2			O	0/ 73	0.0			NO
Benzo(k)fluoranthene (UG/L)	207-08-9			O	0/ 73	0.0			NO
Benzoic Acid (UG/L)	65-85-0	1.0E+00	8.9E+02	D	2/ 62	3.2	3.7E+01	3.7E+01	NO
Benzyl Alcohol (UG/L)	100-51-6			O	0/ 62	0.0			NO
Bis(2-chloroethoxy)methane (UG/L)	111-91-1			O	0/ 65	0.0			NO
Bis(2-chloroethyl)ether (UG/L)	111-44-4			O	0/ 65	0.0			NO
Bis(2-ethylhexyl)phthalate (UG/L)	117-81-7	1.0E+00	9.5E+02	D	12/ 66	18.2	1.8E+01	1.8E+01	YES
Butyl Benzyl Phthalate (UG/L)	85-68-7			O	0/ 66	0.0			NO
Carbazole (UG/L)	86-74-8			O	0/ 50	0.0			NO
Chrysene (UG/L)	218-01-9			O	0/ 73	0.0			NO
Di-n-butyl Phthalate (UG/L)	84-74-2	6.0E-01	3.0E+00	D	5/ 65	7.7	5.6E+00	3.0E+00	YES
Di-n-octyl Phthalate (UG/L)	117-84-0			O	0/ 66	0.0			NO
Dibenz(a,h)anthracene (UG/L)	53-70-3			O	0/ 73	0.0			NO
Dibenzofuran (UG/L)	132-64-9			O	0/ 69	0.0			NO
Diethyl Phthalate (UG/L)	84-66-2	5.0E-01	5.0E-01	D	1/ 65	1.5	5.6E+00	5.0E-01	NO
Dimethyl Phthalate (UG/L)	131-11-3			O	0/ 65	0.0			NO
Fluoranthene (UG/L)	206-44-0	9.0E-01	9.0E-01	D	1/ 72	1.4	5.5E+00	9.0E-01	NO
Fluorene (UG/L)	86-73-7	2.0E+00	2.0E+00	D	1/ 72	1.4	5.4E+00	2.0E+00	NO
Hexachlorobenzene (UG/L)	118-74-1			O	0/ 65	0.0			NO
Hexachlorobutadiene (UG/L)	87-68-3			O	0/ 65	0.0			NO
Hexachlorocyclopentadiene (UG/L)	77-47-4			O	0/ 65	0.0			NO
Hexachloroethane (UG/L)	67-72-1			O	0/ 65	0.0			NO
Indeno(1,2,3-cd)pyrene (UG/L)	193-39-5			O	0/ 73	0.0			NO
Isophorone (UG/L)	78-59-1			O	0/ 65	0.0			NO
N-Nitroso-di-n-propylamine (UG/L)	621-64-7			O	0/ 65	0.0			NO

Analytes Detected in Groundwater in the Bedrock Wells

Analyte (units)	CAS Number	Minimum Detect	Maximum Detect	Dist.	Results >Detection Limit	% Results >Detection Limit	95% UCL of Mean	Exposure Concentration	Detection in Greater than 5%
N-Nitrosodiphenylamine (UG/L)	86-30-6			O	0/ 65	0.0			NO
Naphthalene (UG/L)	91-20-3	5.0E+00	5.0E+00	D	1/ 72	1.4	5.5E+00	5.0E+00	NO
Nitrobenzene (UG/L)	98-95-3			O	0/ 23	0.0			NO
Pentachlorophenol (UG/L)	87-86-5			O	0/ 65	0.0			NO
Phenanthrene (UG/L)	85-01-8	3.0E+00	3.0E+00	D	1/ 72	1.4	5.2E+00	3.0E+00	NO
Phenol (UG/L)	108-95-2	1.0E+00	2.0E+00	D	2/ 65	3.1	5.4E+00	2.0E+00	NO
Pyrene (UG/L)	129-00-0	6.0E-01	6.0E-01	D	1/ 72	1.4	5.5E+00	6.0E-01	NO
Volatile Organics									
1,1,1,2-Tetrachloroethane (UG/L)	630-20-6			O	0/ 211	0.0			NO
1,1,1-Trichloroethane (UG/L)	71-55-6	4.0E-01	7.0E+00	D	20/ 264	7.6	5.3E-01	5.3E-01	YES
1,1,2,2-Tetrachloroethane (UG/L)	79-34-5			O	0/ 261	0.0			NO
1,1,2-Trichloroethane (UG/L)	79-00-5			O	0/ 264	0.0			NO
1,1-Dichloroethane (UG/L)	75-34-3	2.0E+00	2.0E+00	D	1/ 263	0.4	6.5E-01	6.5E-01	NO
1,1-Dichloroethene (UG/L)	75-35-4			O	0/ 264	0.0			NO
1,2,3-Trichloropropane (UG/L)	96-18-4			O	0/ 185	0.0			NO
1,2-Dichlorobenzene (UG/L)	95-50-1			O	0/ 154	0.0			NO
1,2-Dichloroethane (UG/L)	107-06-2			O	0/ 265	0.0			NO
1,2-Dichloroethene (UG/L)	540-59-0	1.8E+00	3.5E+01	D	10/ 33	30.3	7.4E+00	7.4E+00	YES
1,2-Dichloropropane (UG/L)	78-87-5			O	0/ 263	0.0			NO
1,2-Diethylbenzene (UG/L)	135-01-3			O	0/ 47	0.0			NO
1,2-cis-Dichloroethene (UG/L)	156-59-2	9.1E-01	1.7E+01	D	46/ 166	27.7	1.3E+00	1.3E+00	YES
1,2-trans-Dichloroethene (UG/L)	156-60-5	8.5E-01	1.0E+01	D	13/ 248	5.2	7.3E-01	7.3E-01	YES
1,3-Dichlorobenzene (UG/L)	541-73-1			O	0/ 154	0.0			NO
1,3-Diethylbenzene (UG/L)	141-93-5			O	0/ 43	0.0			NO
1,3-cis-Dichloropropene (UG/L)	10061-01-5			O	0/ 254	0.0			NO
1,3-trans-Dichloropropene (UG/L)	10061-02-6			O	0/ 264	0.0			NO
1,4-Dichlorobenzene (UG/L)	106-46-7			O	0/ 154	0.0			NO
1,4-Diethylbenzene (UG/L)	105-05-5			O	0/ 43	0.0			NO
1-Chlorohexane (UG/L)	544-10-5			O	0/ 160	0.0			NO
2,2'-oxybis(1-chloropropane) (UG/L)	108-60-1			O	0/ 4	0.0			NO
2-Butanone (UG/L)	78-93-3	6.0E+00	6.5E+01	D	12/ 130	9.2	5.1E+00	5.1E+00	YES
2-Chloroethylvinylether (UG/L)	110-75-8			O	0/ 187	0.0			NO
2-Chlorotoluene (UG/L)	95-49-8			O	0/ 161	0.0			NO
2-Hexanone (UG/L)	591-78-6	1.0E+00	1.0E+00	D	1/ 33	3.0	5.4E+00	1.0E+00	NO
4-Chlorotoluene (UG/L)	106-43-4			O	0/ 139	0.0			NO
4-Methyl-2-pentanone (UG/L)	108-10-1			O	0/ 76	0.0			NO

Analytes Detected in Groundwater in the Bedrock Wells

Analyte (units)	CAS Number	Minimum Detect	Maximum Detect	Dist.	Results >Detection Limit	% Results >Detection Limit	95% UCL of Mean	Exposure Concentration	Detection in Greater than 5%
Acetone (UG/L)	67-64-1	1.0E+00	1.7E+01	D	23/ 75	30.7	9.2E+00	9.2E+00	YES
Acetonitrile (UG/L)	75-05-8			O	0/ 48	0.0			NO
Acrylonitrile (UG/L)	107-13-1			O	0/ 48	0.0			NO
Benzene (UG/L)	71-43-2	2.5E+00	2.5E+00	D	1/ 275	0.4	1.2E+00	1.2E+00	NO
Benzyl Chloride (UG/L)	100-44-7			O	0/ 11	0.0			NO
Bromochloromethane (UG/L)	74-97-5	2.6E+01	2.6E+01	D	1/ 1	100.0		2.6E+01	YES
Bromodichloromethane (UG/L)	75-27-4			O	0/ 264	0.0			NO
Bromoform (UG/L)	75-25-2			O	0/ 264	0.0			NO
Bromomethane (UG/L)	74-83-9			O	0/ 65	0.0			NO
Carbon Disulfide (UG/L)	75-15-0			O	0/ 76	0.0			NO
Carbon Tetrachloride (UG/L)	56-23-5	1.5E+00	1.5E+00	D	1/ 264	0.4	8.6E-01	8.6E-01	NO
Chlorobenzene (UG/L)	108-90-7	1.0E+00	1.0E+00	D	1/ 266	0.4	1.2E+00	1.0E+00	NO
Chloroethane (UG/L)	75-00-3			O	0/ 81	0.0			NO
Chloroform (Trichloromethane) (UG/L)	67-66-3	5.8E-01	1.1E+00	D	4/ 265	1.5	5.5E-01	5.5E-01	NO
Chloromethane (UG/L)	74-87-3	3.4E+00	3.4E+00	D	1/ 80	1.3	3.7E+00	3.4E+00	NO
Chlorotoluene (UG/L)	25168-05-2			O	0/ 50	0.0			NO
Dibromochloromethane (UG/L)	124-48-1			O	0/ 259	0.0			NO
Dibromomethane (UG/L)	74-95-3	2.8E+00	2.8E+00	D	1/ 213	0.5	1.0E+00	1.0E+00	NO
Dichlorodifluoromethane (UG/L)	75-71-8			O	0/ 34	0.0			NO
Dichloromethane (Methylene Chloride)	75-09-2	1.0E+00	6.1E+02	D	46/ 264	17.4	3.3E+00	3.3E+00	YES
Ethylbenzene (UG/L)	100-41-4			O	0/ 276	0.0			NO
FREON-113 (UG/L)	76-13-1	2.2E+00	2.2E+00	D	1/ 149	0.7	1.1E+00	1.1E+00	NO
Fluorobenzene (UG/L)	462-06-6	3.9E+01	3.9E+01	D	1/ 1	100.0		3.9E+01	YES
Hexane (UG/L)	110-54-3			O	0/ 4	0.0			NO
Iodomethane (UG/L)	74-88-4			O	0/ 4	0.0			NO
Monobromobenzene (Phenyl bromide)	108-86-1			O	0/ 210	0.0			NO
O-Chloroflurobenzene (UG/L)	348-51-6	3.2E+01	3.2E+01	D	1/ 1	100.0		3.2E+01	YES
Styrene (UG/L)	100-42-5			O	0/ 33	0.0			NO
Tetrachloroethene (UG/L)	127-18-4	3.0E-01	2.5E+01	D	50/ 264	18.9	2.4E+00	2.4E+00	YES
Toluene (UG/L)	108-88-3	1.0E+00	8.0E+00	D	8/ 276	2.9	1.2E+00	1.2E+00	NO
Trichloroethylene (TCE) (UG/L)	79-01-6	6.0E-01	4.6E+01	X	139/ 273	50.9	4.7E+00	4.7E+00	YES
Trichlorofluoromethane (UG/L)	75-69-4			O	0/ 221	0.0			NO
Vinyl Acetate (UG/L)	108-05-4			O	0/ 76	0.0			NO
Vinyl Chloride (UG/L)	75-01-4			O	0/ 265	0.0			NO
Xylenes, Total (UG/L)	1330-20-7			O	0/ 270	0.0			NO

APPENDIX G

Office of Federal Facilities Oversight OEPA Procedure for Determining if Ecological Assessment is Warranted at a Site

File: C:\Laurie\Erag\OFFO Eco Scoping Recommendations.wpd
Created: July 12, 2000
Latest Revision: September 27, 2001

Recommended Procedure For Determining If Ecological Assessment is Warranted at a Site
Level I
Office of Federal Facilities Oversight
Ohio Environmental Protection Agency
April 2001

PLEASE NOTE: This information has been compiled to help assist the user in determining if an ecological risk assessment is warranted at a *site*. This procedure is not a requirement or established policy of Ohio EPA.

Italics refer to terms that are defined in a glossary.

Reference: USEPA. June 1997. Appendix A of the *Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessment*, Interim Final.

OBJECTIVE - To determine if an ecological risk assessment is warranted at a *site*.

The overall objective is to evaluate if an ecological risk assessment is needed at a *site*. This is accomplished by determining whether there are any reasons to believe that *important ecological resources* are present or potentially present at or in the *locality of the site,* and to report the possibility of release(s) or potential release(s) of *ecological stressors*. Scoping is intended to identify *sites* that are obviously devoid of *important ecological resources*, and/or where available data indicate that *hazardous substances* were not potentially released at the *site*.

Sites that:

- do not have *important ecological resources*; or
- for which there is no reason to believe a release of *ecological stressors* has occurred

will not be required to continue the ecological risk assessment (ERA) process.

Habitat evaluation is required to determine whether the *site* contains, is in contact with, or has influence on *important ecological resources*. Habitat is assessed to determine the quality and quantity of the environment, and the likelihood that *important ecological resources* could be affected by potential releases from a *site*. All available data should be evaluated to determine the potential for releases of *ecological stressors* that may have occurred at a *site*.

TASKS

(1) Assess existing data: The following information should be, when possible, obtained prior to the *site* visit:

(a) Surface area of the *site*;
(b) Present and historical uses of the *site* and nearby properties;
(c) Current and potential future land and/or water use(s);
(d) *Important ecological resources* at, adjacent to, or in the *locality of the site*;
(e) Known or suspected presence of threatened and/or endangered species, or any state or federal special status species, or their habitat in the *locality of the site* (as evidenced by response letters from the U.S. Fish & Wildlife Service (U.S.FWS) and the Ohio Department of Natural Resources (ODNR), Ohio Division of Wildlife (ODW), and the Ohio EPA Division of Surface Water-Ecological Assessment Unit
(f) Accurate *site* and regional maps showing structures, sampling locations, land use, wetlands, surface water bodies, and *sensitive environments*;
(g) Types of *ecological stressors* potentially released at the *site*; and
(h) Biological Water Quality studies performed by Ohio EPA.

(2) ***Site* information and identification of *important ecological resources***: A *site* visit is required to directly assess ecological features and conditions and the presence of *important ecological resources*. An ecologist or biologist with risk assessment experience should be consulted and conduct the site inspection. The site visit should be conducted at a time of the year when ecological features are most apparent (*e.g.*, spring, summer). The following items should be considered during the site visit:

(a) Look for any signs (*e.g.*, visual, olfactory) of a chemical release;
(b) Produce a site map identifying relevant surface features such as water and potential *hazardous substances* migration pathways, location of buildings, green space etc. Additional maps should be included such as US Geological Society (USGS) quadrangle maps, National Wetland Inventory maps, and National Resource Conservation Service (NRCS) maps, if appropriate, or available;
(c) Note any signs (*e.g.*, visual, olfactory) of hazardous substance migration within the *site* or offsite;
(d) Look for signs of habitat within or adjacent to the *site* that could contain or be used by threatened and/or endangered species or other important ecological receptors;
(e) As appropriate, note any signs for groundwater discharge (*e.g.*, seeps, springs) to the surface;
(f) Note any natural or anthropogenic disturbances onsite;
(g) Make a photographic record of the site with emphasis on ecological features and potential exposure pathways. Photographs should also be identified by date, time, direction, latitude and longitude and if possible, identified on a US Geological Society (USGS) quadrangle map; and,
(h) Complete the Ecological Scoping Checklist (Sample Form A).

(3) Identify potential chemical and non-chemical stressors:
Based on all of the available data for the *site*, summarize any potential chemical and non-chemical stressors that may have been released at the site. Please note that identification of chemical and non-chemical stressors for ecological receptors may necessitate a separate

identification process than that used for any human health evaluation, since a contaminant not generally considered a threat to human health may be a threat to *biota*. When gathering information on potential chemical and non-chemical stressors, the focus should not be solely on *hazardous substances*. The investigation should also consider whether or not non-chemical stressors, such as mechanical disturbances, abnormal soil/sediment conditions, or other water quality parameters (*e.g.*, elevated Total Dissolved Solids (TDS), low Dissolved Oxygen (DO), extremes in pH, etc.), are potentially contributing to adverse ecological effects. These non-chemical stressors should be identified along with the chemical stressors to provide an insight into the general ecological situation at and surrounding the site.

(4) **Level I Assessment:**
Make an estimate, based on the site-specific information gathered in the previous three tasks and professional judgment, as to whether *important ecological resources* are, or potentially could be impacted by site related *ecological stressors*.

(5) **Submit Level I deliverable** This deliverable is a report detailing the results of the data review, site visit, the evaluation of the presence or absence of *important ecological resources*, and the potential releases of *ecological stressors*. It should present information in sufficient depth to give risk managers confidence in determining whether *important ecological resources* and uncontrolled *ecological stressors* are or are not likely to exist at the *site*.

(6) **Decision 1: Are Ecological Risks Suspected?** Based on information presented in the Level I deliverable, do *important ecological resources* exist at or in the *locality of the site*, and has there been a release or suspected release of *ecological stressors*?

SAMPLE FORM A
Ecological Scoping Checklist

Part 1			
SITE INFORMATION			
Site Name:		Date:	
Personnel:_____		Time Arrived:	
_____ (Identify team leader)		Time Departed:	
Site Address:			
Site Location:	Latitude:	Longitude:	
Site Size (acres):			
Weather Conditions (note any unusual conditions):			
Land uses at and adjacent to the site: (Circle all that apply and record at or adjacent)			
Residential	Commercial	Recreational	Industrial
Agricultural	Urban	Green-Space/ undeveloped	Other:_____

Part 2		
CONTAMINANTS OF INTEREST		
Contaminants of Interest and *Ecological Stressors* (Types, names including CAS number, classes, or specific *hazardous substances* and non-chemical stressors either known or suspected)	Onsite (O) or Adjacent (A) to the site	Media (soil, sediment, surface water, groundwater (seeps/springs))

65/13

Part 3

SPECIFIC EVALUATION OF ECOLOGICAL RECEPTORS/HABITAT

Terrestrial - Wooded ____% of site

Dominant vegetation (circle one):
Coniferous Deciduous Mixed.

Dominant tree diameter (*dbh*): _____

Evidence/observation of wildlife*:
_____
_____
_____

Terrestrial - Shrub/scrub/grasses ____% of site

Dominant vegetation (circle one):
shrub/scrub grasses

vegetation density: Dense, Patchy, Sparse
Prominent height of shrub/scrub (<2', 2' to 5', >5')
Prominent height of grasses/herbs (<2', 2' to 5', >5')
Evidence/observation of wildlife*: _____
_____
_____

Terrestrial - *Ruderal*/Engineered ____% of site

Dominant vegetation/surfaces (circle one):
Landscaped Agricultural Bare ground
Parking lot Artificial surfaces
Dominant vegetation height (0', >0' - 2', 2' - 5', >5')
Vegetation Density: Dense Patchy Sparse
Evidence/observation of wildlife*: _____
_____
_____
_____

Aquatic - Non-Flowing (Lentic) ____% of site

Type: Lake Pond Vernal Pool Lagoon
Engineered** Impoundment Reservoir
Water source: Surface water Groundwater
Industrial discharge Surface water runoff
Discharge Point: Surface water Groundwater
Wetlands
Bottom Substrate***: _____
Vegetation: Submerged Emergent Floating
Wetland Present: (Yes/No)
Evidence/Observation of wildlife*: _____
_____

Aquatic - Flowing (Lotic) ____% of site

Aquatic Life Use designation (if available) _____
Type: River Stream Intermittent Stream
Ditch
Water source: Surface water Groundwater
Industrial discharge (seeps /springs)
Storm water runoff
Discharge Point: Surface water Groundwater
Wetlands impoundment
Bottom Substrate**: _____
Vegetation: Submerged Emergent Floating
Wetland Present: (Yes/No)
Evidence/Observation of wildlife*: _____
_____
_____

Aquatic - Wetlands ____% of site

Size _____ (acres)
Obvious or designated wetland: (Yes / No)
Water source: Surface water Groundwater
Industrial discharge Surface water runoff
Discharge Point: Surface water Groundwater
Wetlands impoundment
Bottom Substrate**: _____
Vegetation: Submerged Emergent Floating

Evidence/Observation of wildlife*: _____
_____
_____
_____

* Wildlife includes: macroinvertebrates, reptiles, amphibians, birds, mammals and fish.

** Engineered can mean any surface water body that has been artificially created or significantly altered.

*** Bottom substrate types include but not limited to: cobble, gravel, sand, silt, clay, muck, artificial (*e.g.*, concrete).

Part 4
Ecologically Important Resources Observed

6/7/13

SAMPLE FORM B

EVALUATION OF POTENTIAL ECOLOGICAL HARM		Y	N	U
Are *hazardous substances* present or potentially present in:				
a	Soil?			
b	Surface Waters?			
c	Sediment?			
d	Groundwater?			
e	Other (biotic media)?			
f	Are surface waters present at or potentially influenced by the site?			
g	Are *ecologically important* terrestrial resources located at, adjacent to, or influenced by the site?			

"Y" = yes; "N" = No, "U" = Unknown (counts as a "Y")

When answering the above questions, consider the following:

- Known or suspected presence of *hazardous substances* stored, used or manufactured at the site.
- Ability of *hazardous substances* to migrate from one medium to another.
- The mobility of the various media.
- Transfer of contaminants through food webs and uptake of chemicals by organisms.
- The presence of *important ecological resources* on, adjacent to, or influenced by the site.

(a) If "**Y**" or "**U**" boxes in Sample Form B are checked for row **f or g** and any other row, then a recommendation to move to Level II should be made for an assessment of the appropriate aquatic and/or terrestrial habitat. In completing this Attachment, a lack of knowledge, presence of high uncertainty, or any "unknown" circumstances should be tabulated as a "**U**".

(b) If all of the "**No**" boxes in Sample Form B are checked, or if only row **f and/or g**, or rows **a** through **e** are checked **"No"**, then the site is highly unlikely to present significant risks to important ecological receptors and a recommendation for no further ecological investigations should be made.

SAMPLE C REPORT FORMAT

Level I Deliverable - Site Ecology Scoping Report
Outline

(1) EXISTING DATA SUMMARY

- (a) Site location (Part 1, Sample Form A)
- (b) Site history (Summary of all available data)
- (c) Site land and/or water use(s)
  - (i) Current
  - (ii) Future (list all potential uses)
- (d) Known or suspected hazardous substance releases
- (e) *Sensitive environments*
- (f) Threatened and/or endangered species (USFWS/ODNR/DOW data)

(2) SITE VISIT SUMMARY

- (a) *Contaminants of Interest* (Part 2, Sample Form A)
- (b) Ecological features (Part 3, Sample Form A)
- (c) *Ecologically important* species/habitats (Part 4, Sample Form A)
  - (i) Threatened and/or endangered species
  - (ii) Threatened and/or endangered species habitat
- (d) Exposure pathways (Sample Form B)

(3) RECOMMENDATIONS

(4) ATTACHMENTS

- (a) Regional map showing location of site
- (b) Local map showing site in relation to adjacent property
- (c) Site map
- (d) Sketch/develop a map of ecological features as an overlay to the site map or as a separate map.
- (e) Sketch/develop a map of known or suspected extent of *hazardous substances* as an overlay to the site map or as a separate map
- (f) Summary of available site data
- (g) Site photograph(s)
- (h) Copies of letters from USFWS and ODNR, responding to queries about threatened and endangered species

(5) REFERENCES / DATA SOURCES

DEFINITIONS

1) "*Areas surrounding the property*"means all areas located within one half-mile of the property boundaries.

2) "*Biota*" means the animal or plant life of a particular region.

3) "*Contaminant of Interest (COI)*" means any chemical suspected to be present due to past use, storage, or disposal practices that may have occurred at a site.

4) "*Ecological stressor*" means any physical, chemical (including petroleum) or, biological entity that can induce an adverse response to an ecological receptor including hazardous substances.

5) "*dbh*" means diameter of a tree trunk measured at breast height.

6) "Hazardous substance" includes all of the following;

   (a) Any substance identified or listed in rules adopted under division (B)(1)(c) of section 3750.02 of the Revised Code;

   (b) Any product registered as a pesticide under section 921.02 of the Revised Code when the product is used in a manner inconsistent with its required labeling;

   (c) Any product formerly registered as a pesticide under that section for which the registration was suspended or canceled under section 921.05 of the Revised Code; and

   (d) Any mixture of a substance described in paragraphs (A)(20)(a) to (A)(20)(c) of this Rule with radioactive material.

   (e) Any pollution as defined under division (A) of section 6111.01 of the Revised Code.

7) "*Important Ecological Resources*" means specific ecological communities, populations or individual organisms protected by federal, state or local laws and regulations, or ecological resources that provide important natural or economic resource functions and values, or *sensitive environments*. *Important ecological resources* include, but are not limited to: surface waters and wetlands protected under federal law and state of Ohio's water quality laws; dedicated natural areas and preserves; threatened and endangered species and their associated habitats that are designated by the federal government or the state of Ohio; special interest or declining species, and their associated habitats, designated by the state of Ohio; Wildlife populations and their associated important nesting areas and food

resources, taking into consideration land use and the quality and extent of habitat on and in the vicinity of the property.

(a) For purposes of filing out Sample Form B, any of the following are considered "*ecologically important*":
  (a) Individual listed threatened and endangered species;
  (ii) Local populations of species that are recreational and/or commercial resources;
  (iii) Local populations of any species with a known or suspected susceptibility to the hazardous substance(s);
  (iv) Local populations of invertebrate species that:
  Provide a critical (*i.e.*, not replaceable) food resource for higher organisms and whose function as such would not be replaced by more tolerant species; or
  Perform a critical ecological function (such as organic matter decomposition) and whose function would not be replaced by other species; or
  Can be used as a surrogate measure of adverse effects for individuals or populations of other species.

(b) "*ecologically important*" plants are those that form the habitat for an ecologically important species as defined above, or are themselves listed as threatened and endangered species.

(c) Because they are not members of natural communities, any of the following should not be considered "ecologically important" species:
  (i) Pest and opportunistic species that populate an area entirely because of artificial or anthropogenic conditions;
  (ii) Domestic animals (*e.g.*, pets and livestock);
  (iii) Plants or animals whose existence is maintained by continuous human intervention (*e.g.*, agricultural crops).

Thus, determining whether or not a particular site contains or could potentially impact an important ecological resource, requires an evaluation of factors such as life history, habitat utilization, behavioral characteristics, and physiological parameters of potential receptors. For example, some small areas (<0.5 acre) may be considered *important ecological resources* if important functions are provided by the area (*e.g.*, vernal pools that provide breeding habitat for amphibians). Larger maintained areas (*e.g.*, areas mowed regularly) may also function as an *important ecological resources* (*e.g.*, green space for wide ranging predators) . The definition of *important ecological resources* is, however, meant to exclude areas such as mowed, maintained (*e.g.*, manicured lawns) or other areas that do not exhibit or exhibit only minimal important ecological resource functions.

8) "*Locality of the site*" means any point where a human or ecological receptor contacts, or is reasonably likely to come into contact with, facility-related *ecological stressors,* considering:

(a) The chemical and physical characteristics of the hazardous substance;

(b) Physical, meteorological, hydrogeological, and ecological characteristics that govern the tendency for hazardous substances to migrate through environmental media or to move and accumulate through food webs;

(c) Any human activities and biological processes that govern the tendency for hazardous substances to move into and through environmental media or to move and accumulate through food webs; and,

(d) The time required for contaminant migration to occur based on factors described in subsections (a) through (c).

9) "*Ruderal*" means compacted, plowed, paved, or otherwise disturbed ground usually related to industrial or commercial activities.

10) "*Sensitive Environment*" The following is a list of sensitive environments as used in the Hazard Ranking system:

Critical habitat for designated endangered or threatened species; Marine Sanctuary; National Park; Designated Federal Wilderness Area, Critical areas identified under the Clean Lakes Program; National Monument; National Lakeshore Recreational Area; Habitat known to be used by Federal designated or proposed endangered or threatened species; National Preserve; National or State Wildlife Refuge; Federal land designated for the protection of natural ecosystems; Administratively Proposed Federal Wilderness Area; Spawning areas critical for the maintenance fish/shellfish species within a river, lake, or coastal waters; Migratory pathways and feeding areas critical for maintenance of anadromous fish species within river reaches or areas of lakes or costal tidal waters in which the fish spend extended periods of time; Terrestrial areas utilized for breeding by large or dense aggregations of animals; National river reach designated as Recreational; Habitat known to be used by state designated endangered or threatened species; Habitat known to be used by species under review as to its Federal endangered or threatened status; Federally-designated Scenic or Wild River; State land designated for wildlife or game management; State-designated Scenic or Wild River; State-designated Natural Areas; Particular areas, relatively small in size, important to maintenance of unique biotic communities; State-designated areas for the protection or maintenance of aquatic life; Wetlands.

See Federal Register, vol. 55, pp. 51624 and 51648 for additional information regarding definitions. Under the Hazardous Ranking System, wetlands are ranked on the basis of size. See Federal Register, vol. 55, pp. 51625 and 51662 for additional information. The OEPA designate wetlands based on quality and size. The OEPA Division of Surface Water should contacted regarding the classification of wetlands.

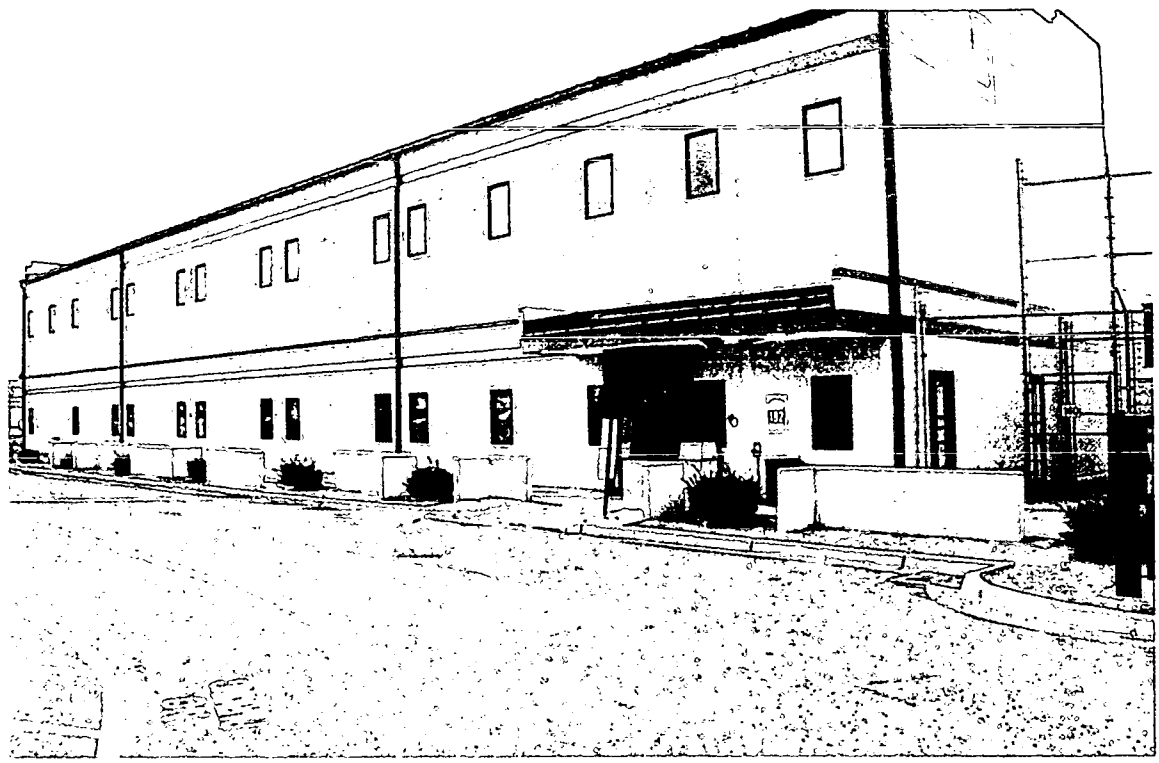
11) "*Site*" means any parcel or multiple parcels of real property, contiguous or non-contiguous, or portion of such property or properties, where the treatment, storage,

disposal and/or the discharge into the waters of the state of industrial waste or other wastes or hazardous substances and petroleum, has occurred, including any other area where these hazardous substances and petroleum have migrated or threatened to migrate.

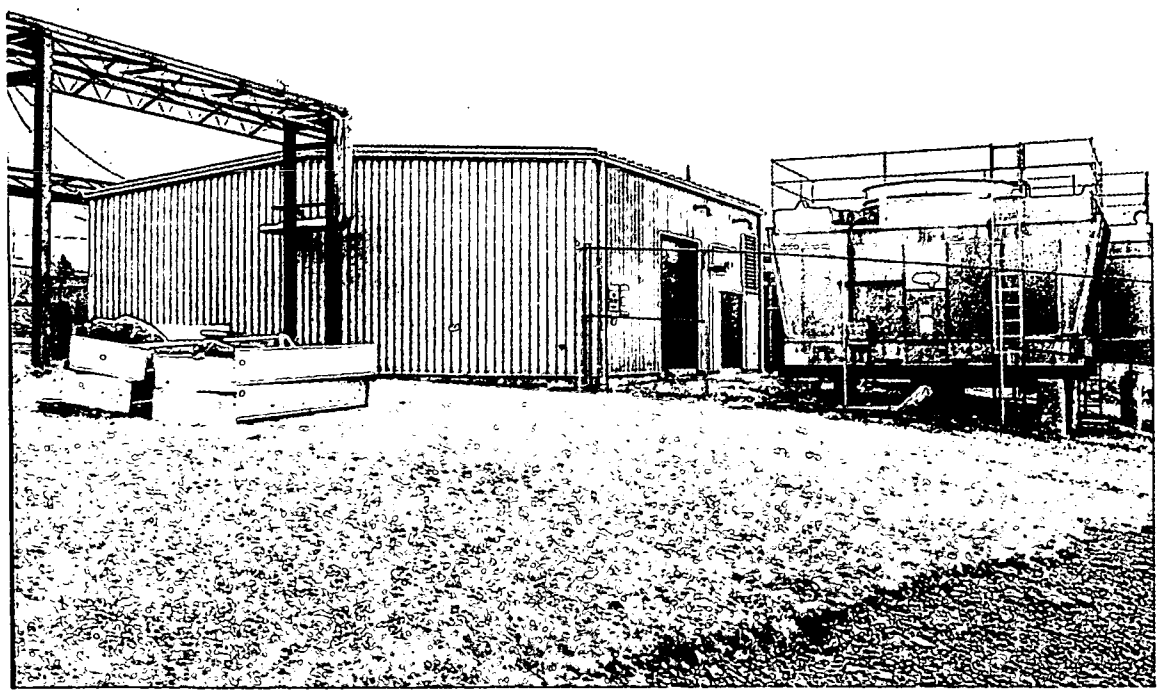
6/3/13

APPENDIX H

Photos



Bldg 102
File Photo



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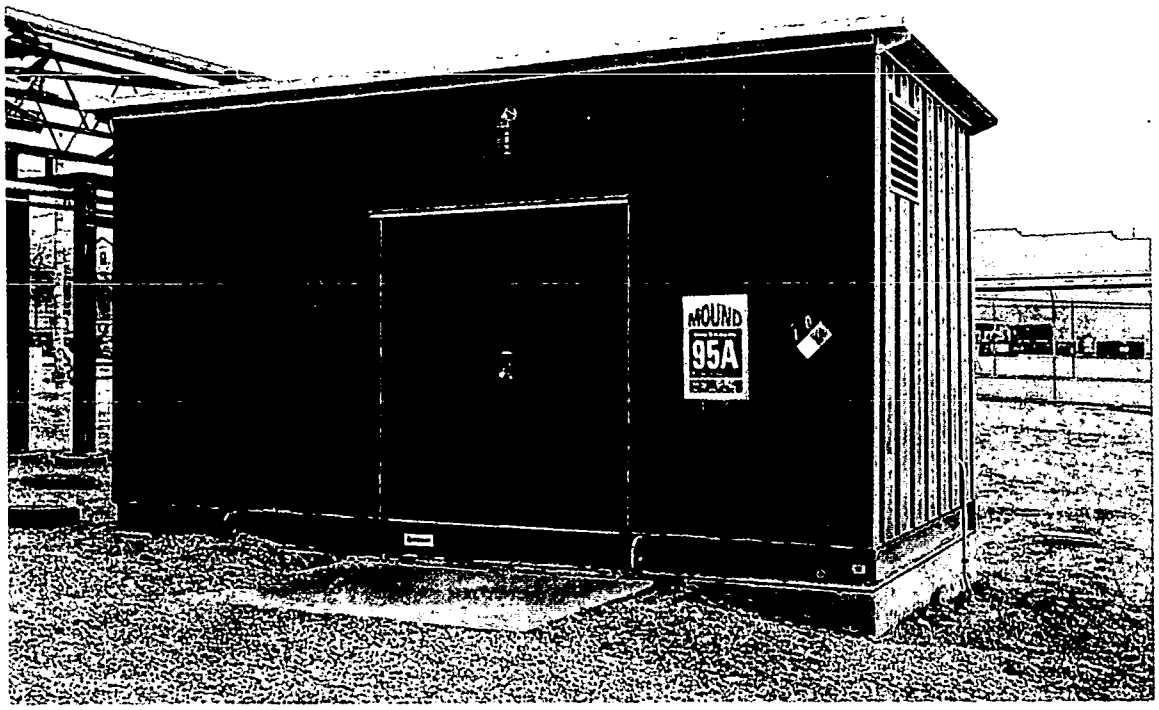

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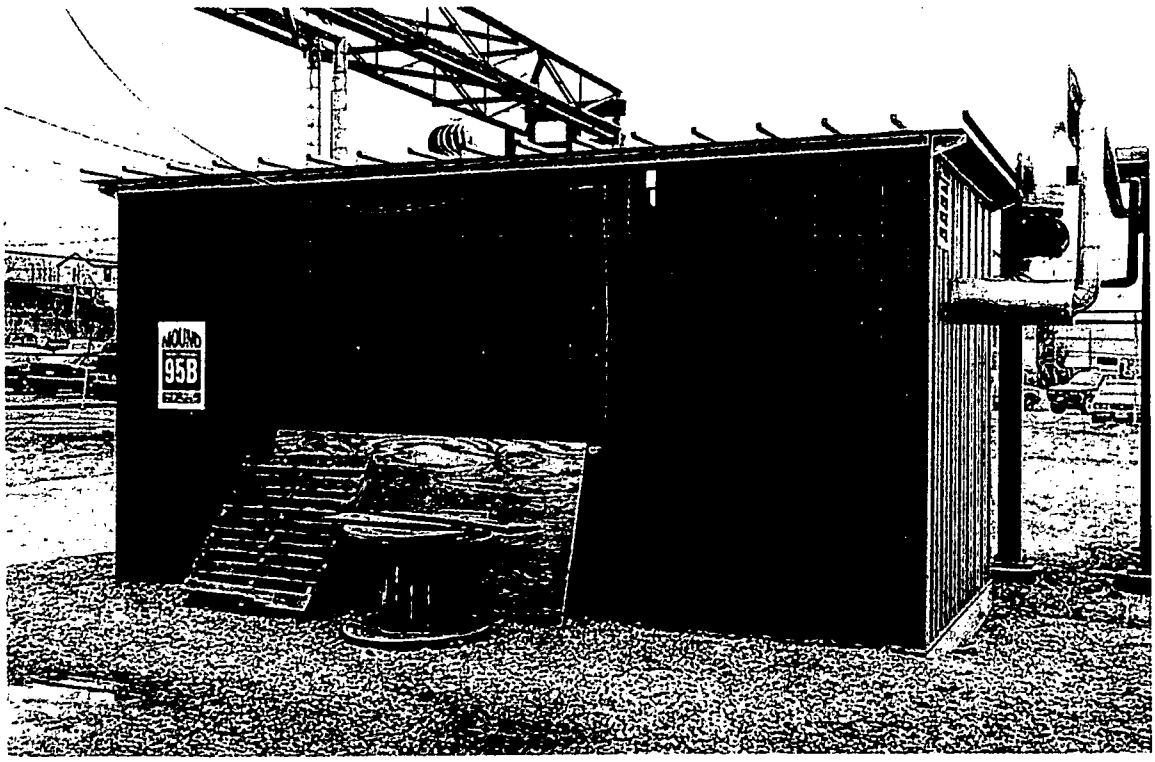

Bldg 95B
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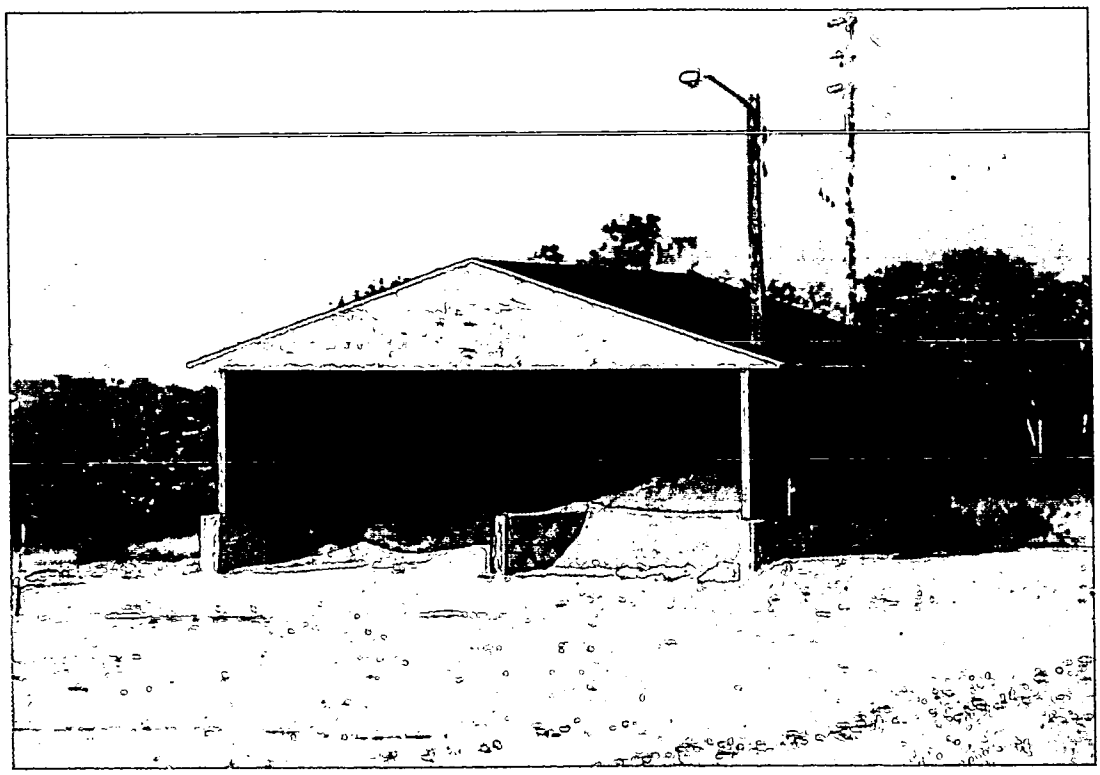
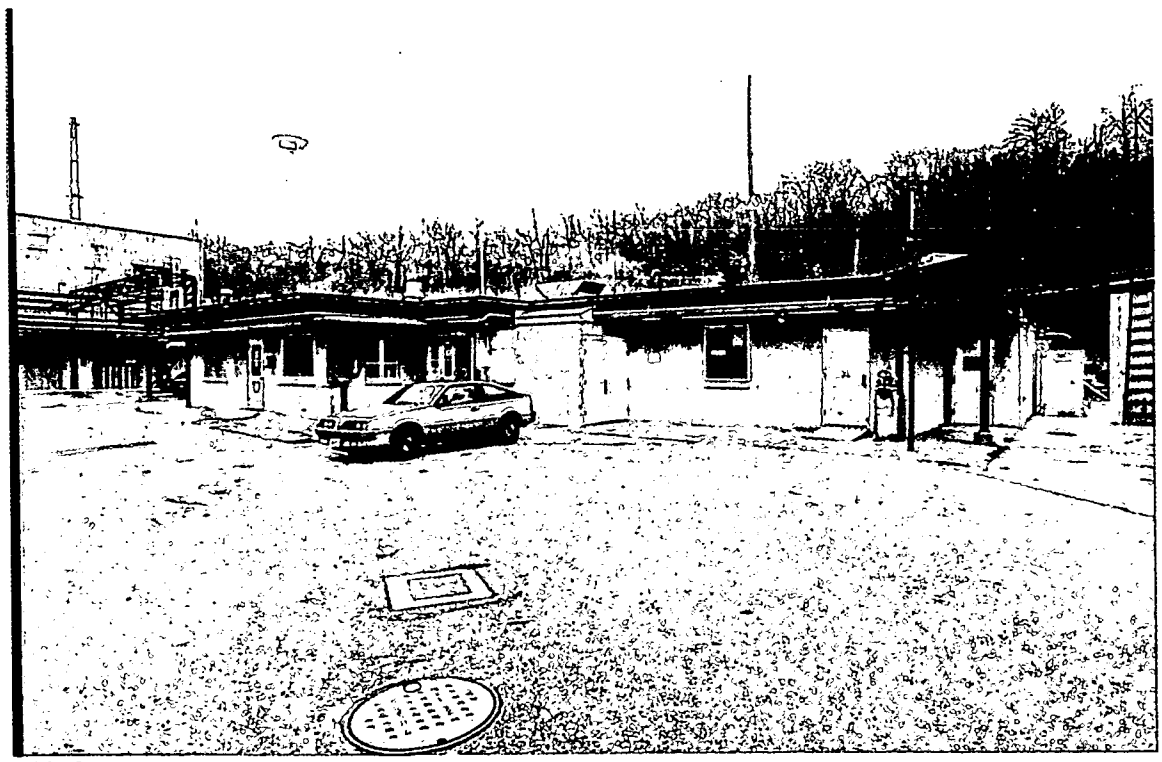


Salt Storage Shed
File Photo



Bldg 2
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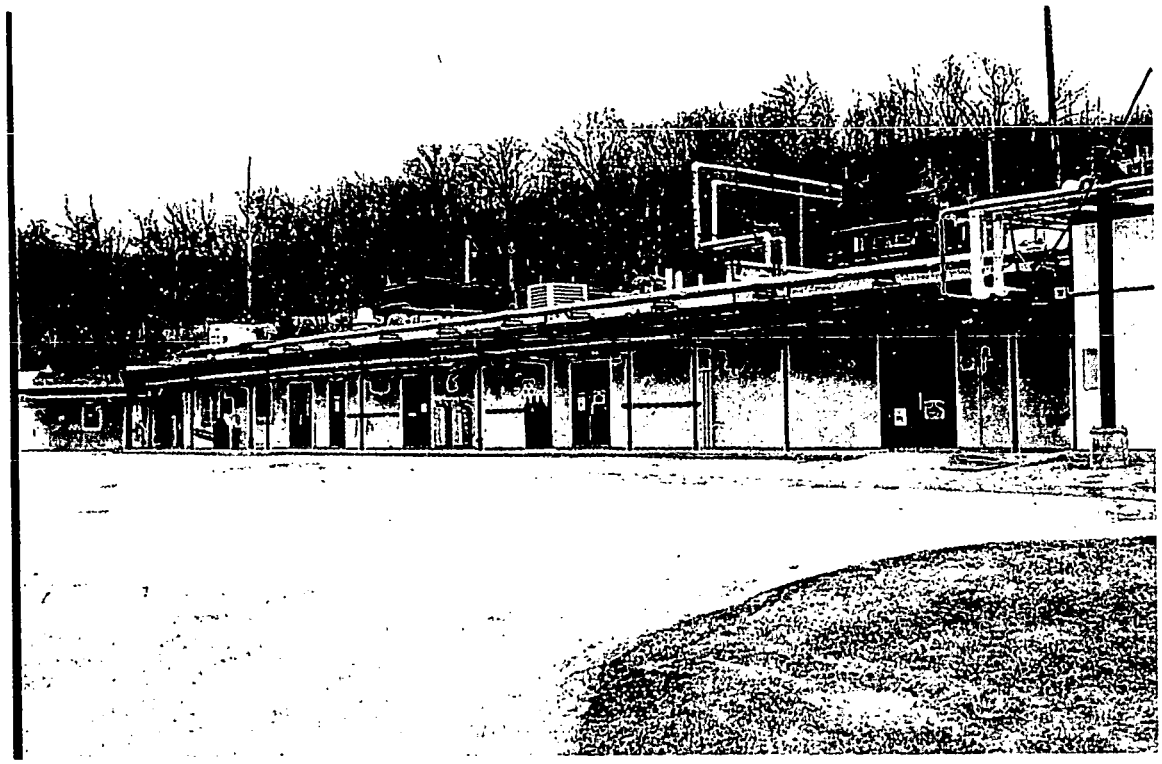

Bldg 3
File Photo

Bldg 63
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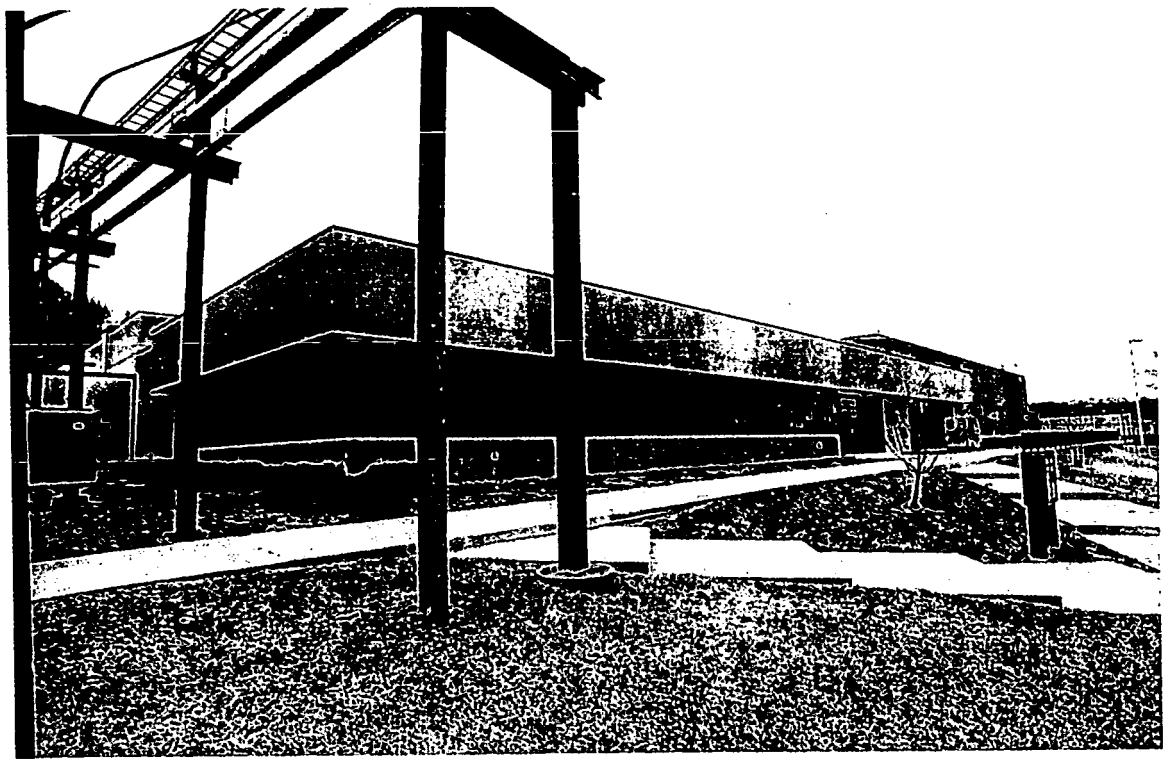
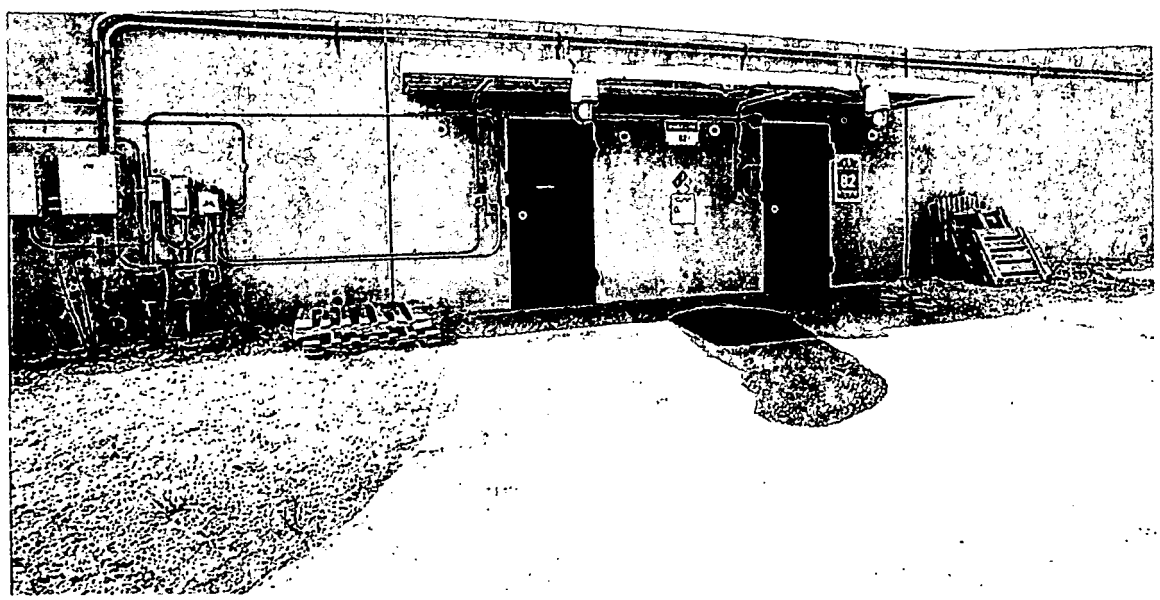


Bldg 87
File Photo

Mag 80
File Photo

Mag 81
File Photo



Mag 82
File Photo

Mag 83
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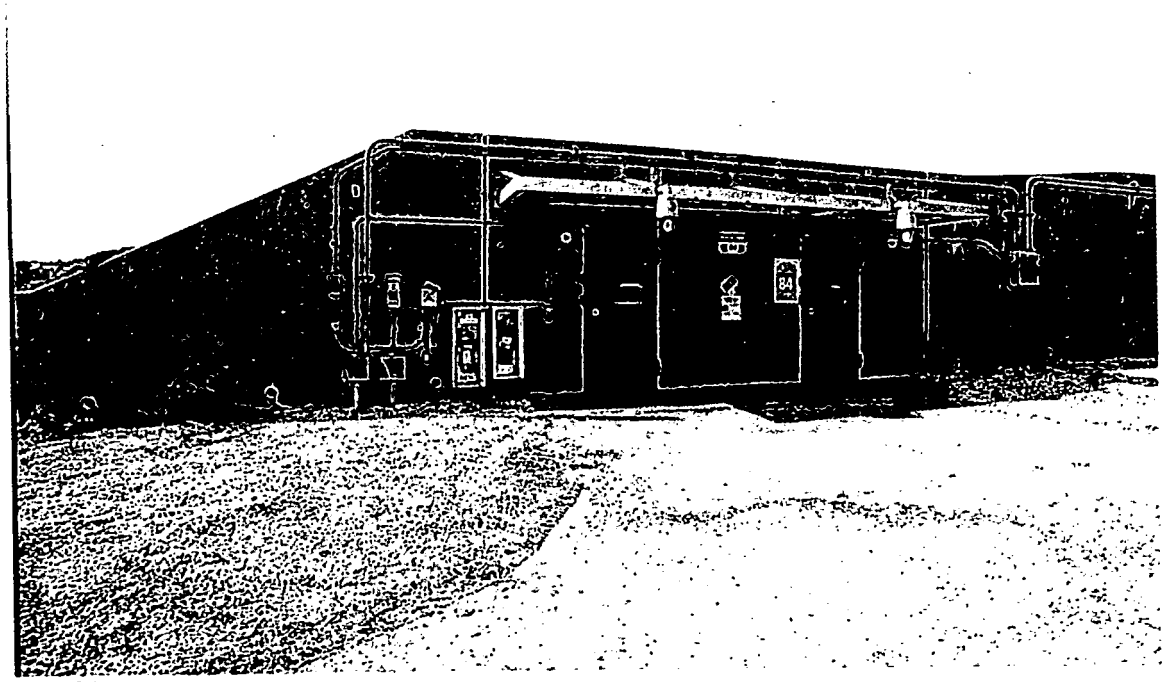

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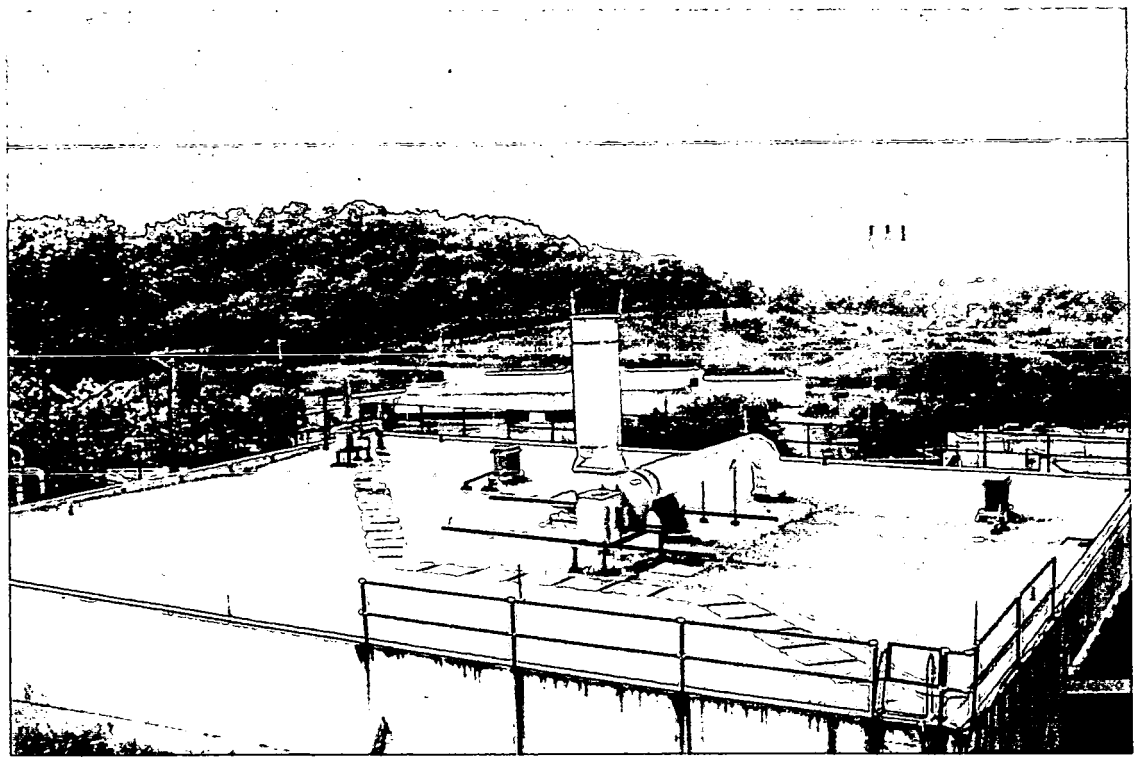
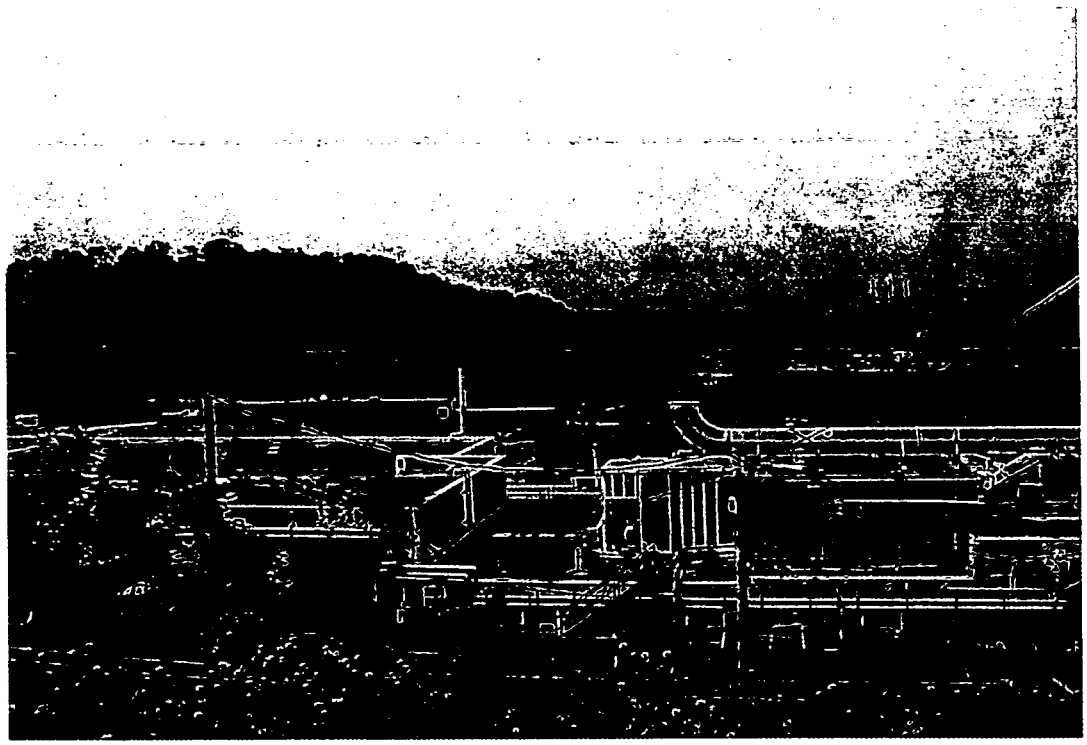
File Photo

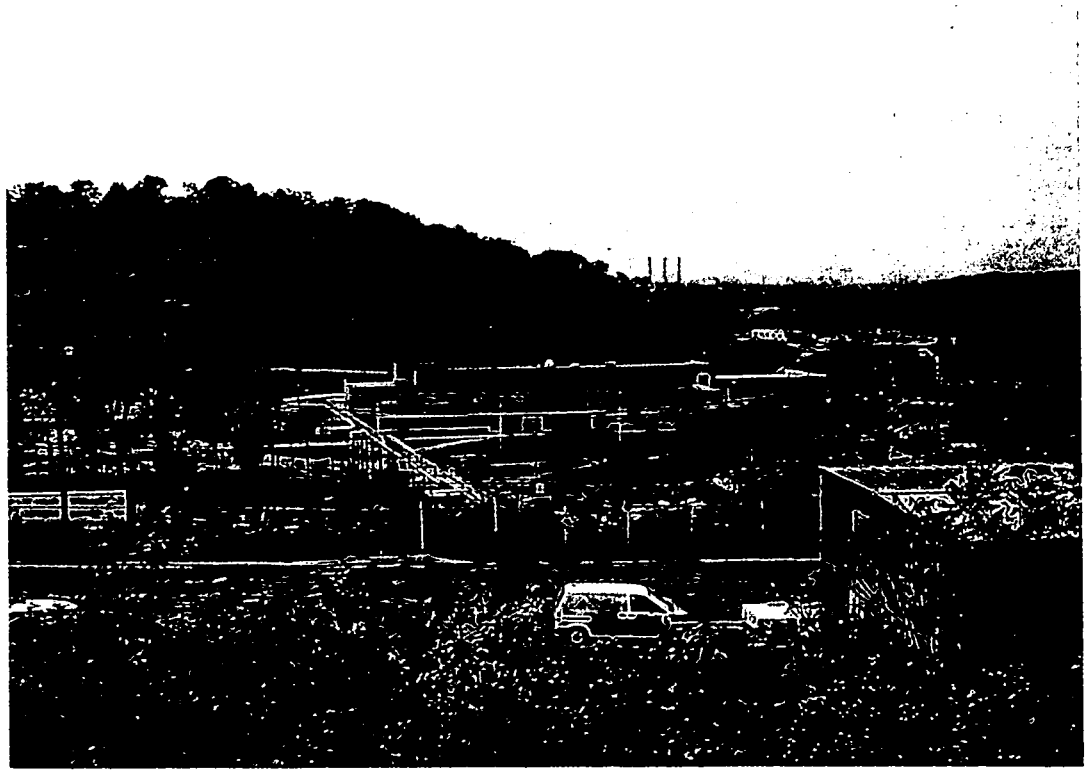


MVC-115F
May 29, 2002 View of Building 87 and north facing slope of Phase I as seen from Main Hill road above Building 48 (in foreground).

MVC-016F
May 29, 2002 Another view of north facing slope of Phase I and Test Fire Valley Buildings (87, 49, 63) as seen from Main Hill above Building 23 (in foreground).



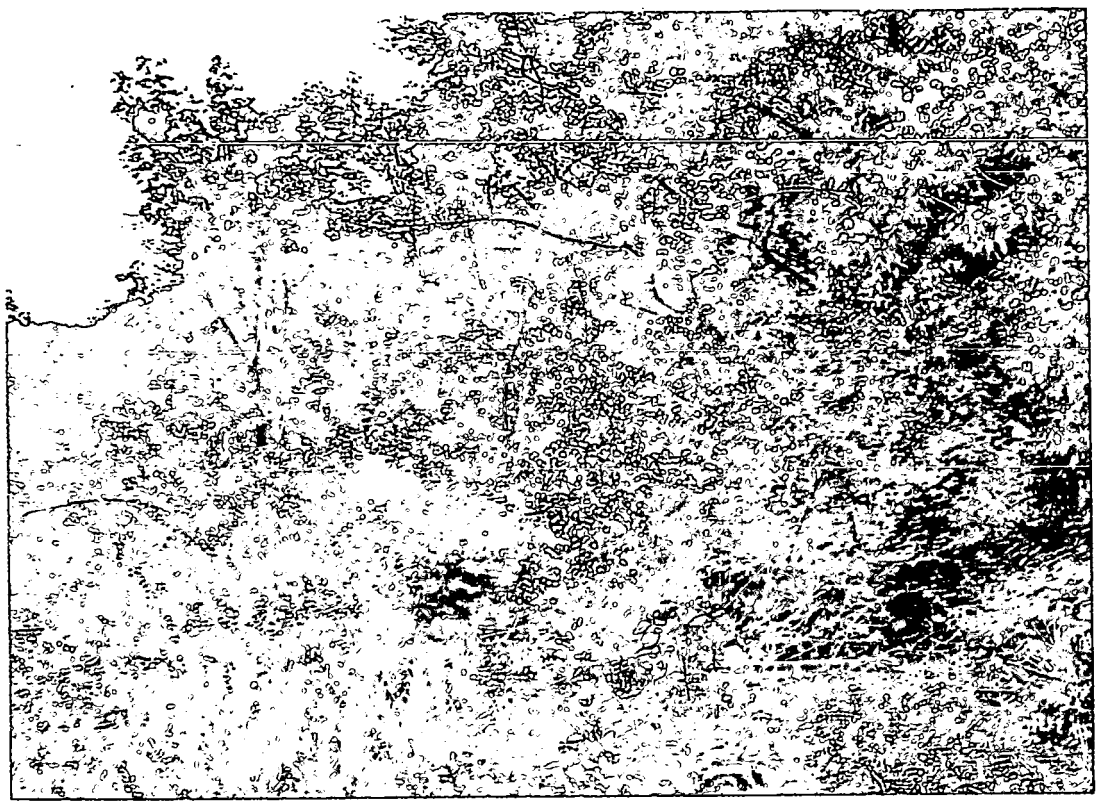
MVC-017F
May 29, 2002 North facing slope of Phase I and Building 87 as seen from Main Hill above WD Building (in foreground)



MVC-018F
May 29, 2002 North facing slope of Phase I and Building 87

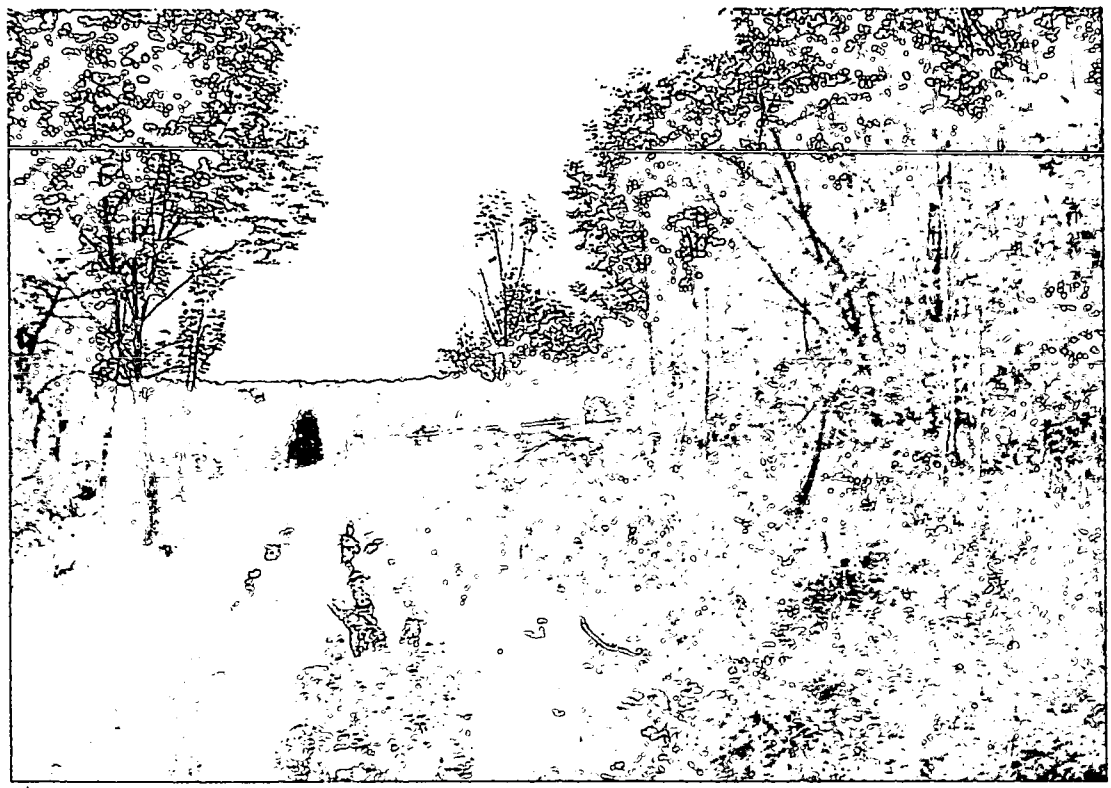
MCV-009F
May 21, 2002 East-west path in Phase I, South of road, Looking west

MCV-010F
May 21, 2002 View to the south from spot photo MCV-009F was taken.

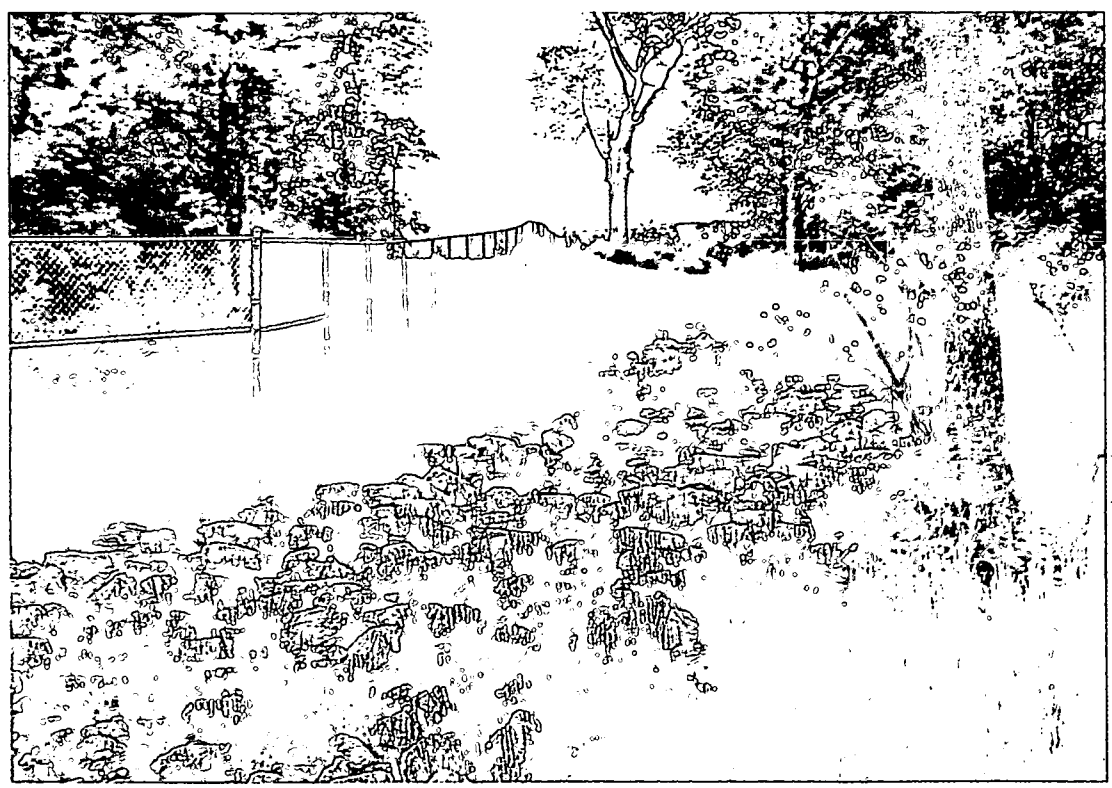


MCV-011F
May 21, 2002 View to north from spot MCV-009F was taken

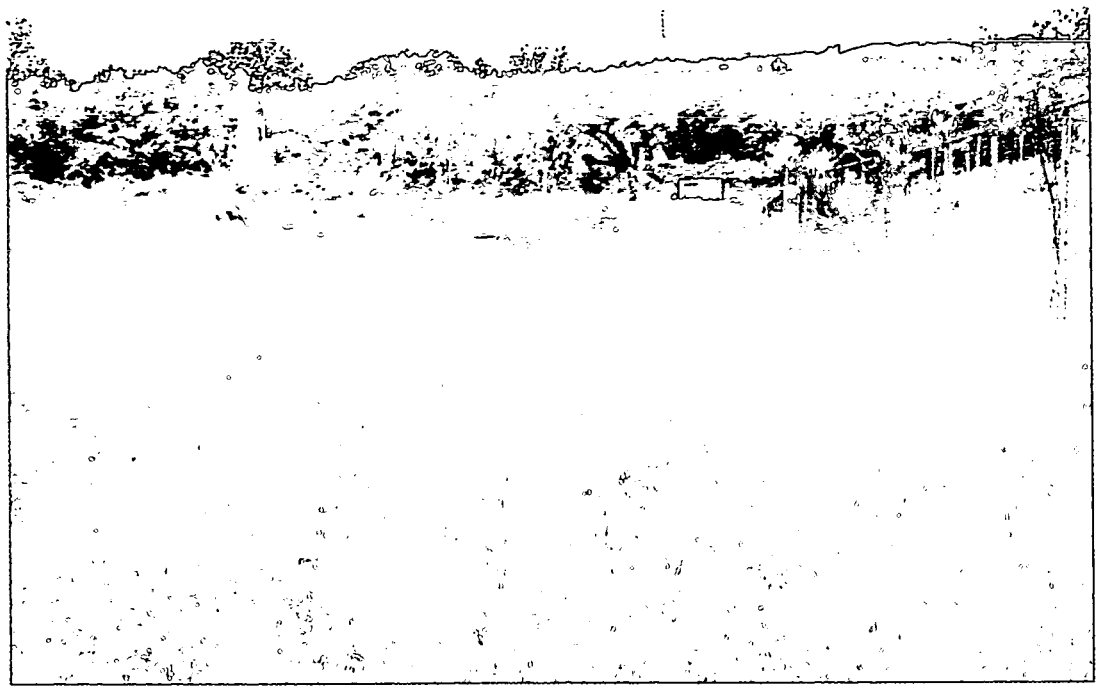
MCV-012F
May 21, 2002 View from path in southern portion of Phase I, looking southwest



MCV-013F
May 21, 2002 Looking west along path in southern portion of Phase I. Fence is PRS 421-project fence.

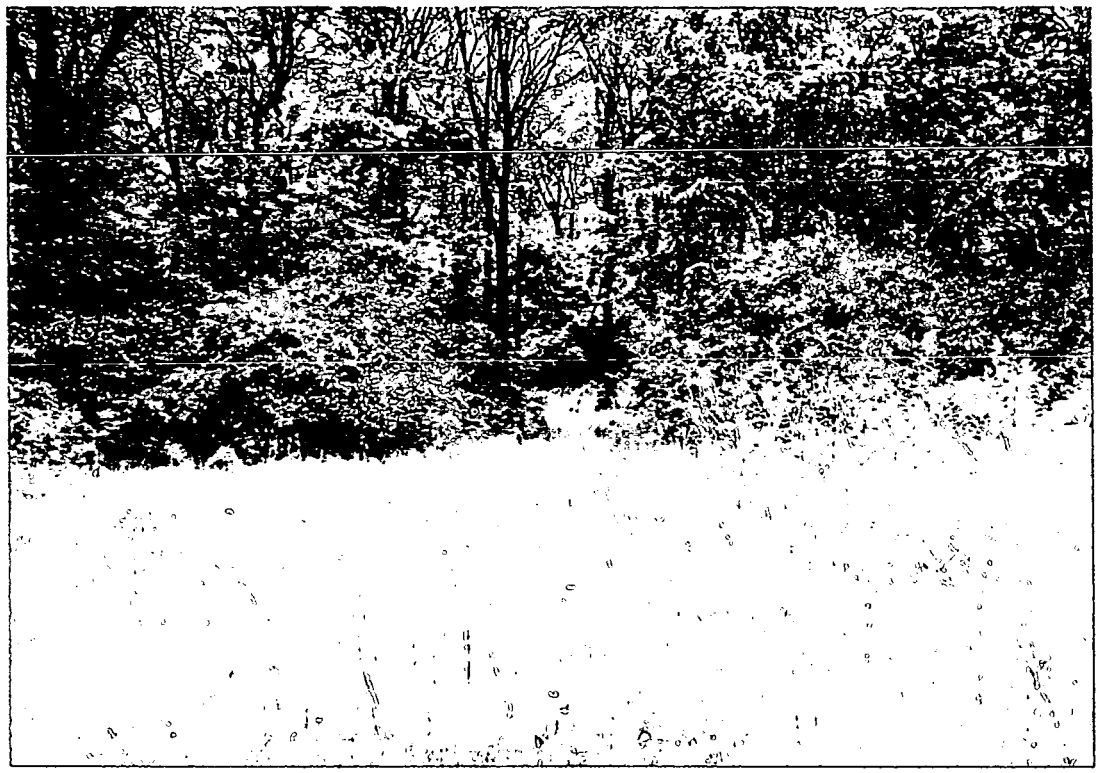


MCV-014F
May 21, 2002 Looking north (uphill) along eastern edge of PRS 421 project fence



MCV-002F
May 21, 2002 Portion of Phase I south of Spoils Area. Looking west. White building is WH3.

MCV-003F
May 21, 2002 Monitoring well 445 in Phase I.

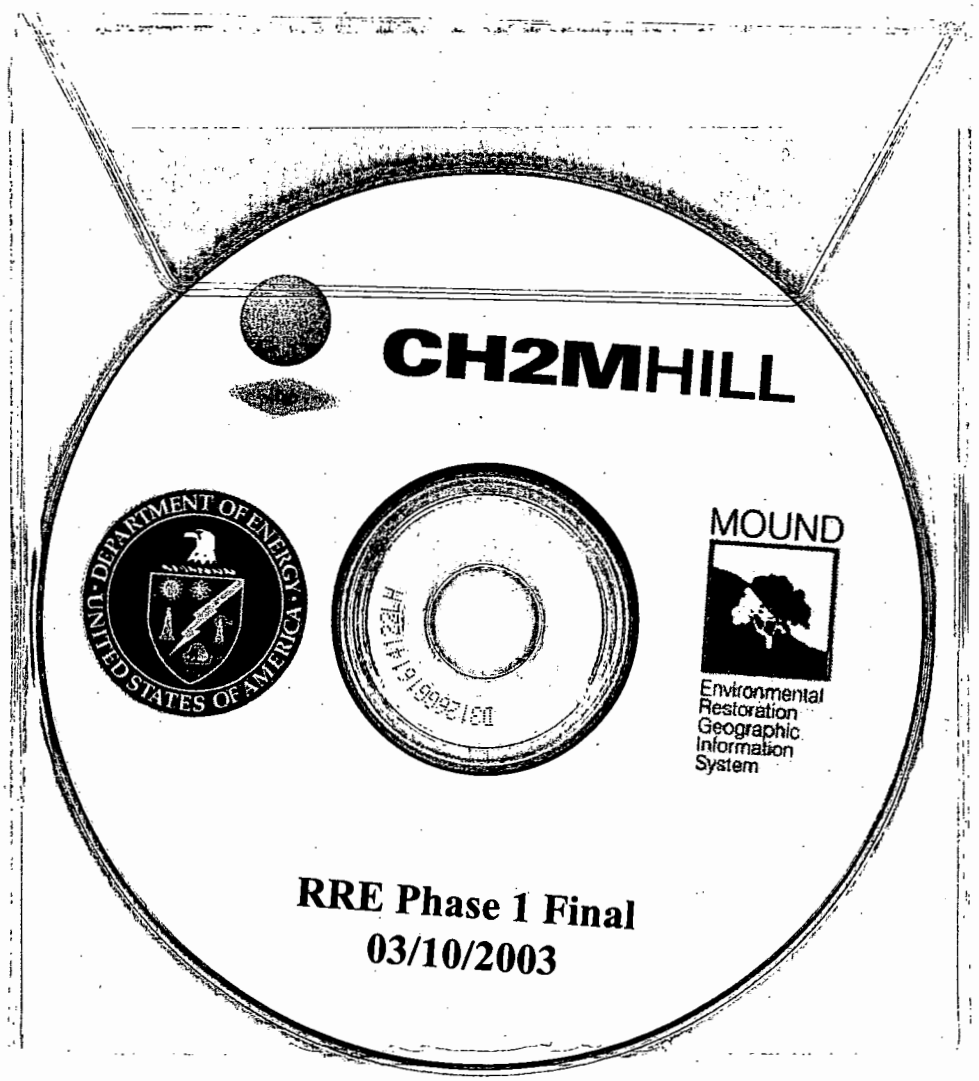


MCV-004F
May 21, 2002 Phase I area south of spoils area.

MCV-005F
May 21, 2002 Phase I area south of spoils area. Looking south west. White building is WH3.

MCV-006F
May 21, 2002 Approaching the western edge of Phase I. White building is WH3.

CD of Phase I Database Information



Legend

- Gm-Mesic grassland
- Gx-Subxeric grassland
- S/Sb-Late successional scrub/shrub
- SF1-High gradient upland forest dominated by North and West aspects
- SF2a-Low gradient upland forest with level or nearly level topography
- SF2-Low gradient upland forest dominated by south and west aspects
- L-Maintained lawn
- D-Disturbed
- P/B-Paved lot or building
- W-Wetland

0 100 200 400 600 800 1000
Scale in Feet

1. The electronic base map data file was obtained from Woolpert Consultants, Inc., Dayton, Ohio. The data were photogrammetrically compiled from aerial photography dated 04/04/94.

Coordinate Datum is based on the Ohio State Plane Coordinate System, South Zone . Horizontal Ground Control is based on NAD 1983. Vertical Ground Control is based on NAVD 1988.

1981 magnetic north declination at center of plant. Magnetic north is 3 degrees west of true north. Declination between state plane (grid) north is 1. 13 degrees west of true north.

TN
GN
MN

MOUND
Environmental Restoration Geographic Information System

ISS	DATE	REVISION	BY	CHKR	ENG	M
	06/26/02	*	SSP			

DRAWING NUMBER phaselhabitat.dgn

SHEET	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27					
ISSUE																										
SHEET	1	2	3	4	5	6																				
ISSUE																										

PART CLASSIFICATION

Figure 3
Habitats of Mound Plant
Phase I

DRAWING CLASSIFICATION	SIZE	DRAWING NUMBER	JOB NUMBER
UNCLASSIFIED	E	phaselhabitat.dgn	

DWG TYPE	Site	PRMG	CAGEC	SCALE	Graph	SHEET 1 OF
STATUS	MD-REL-05/07/02		ORIGIN	MSTATION / J		

BOX 28144

D 3006XXXXXX-04060 30001 #1