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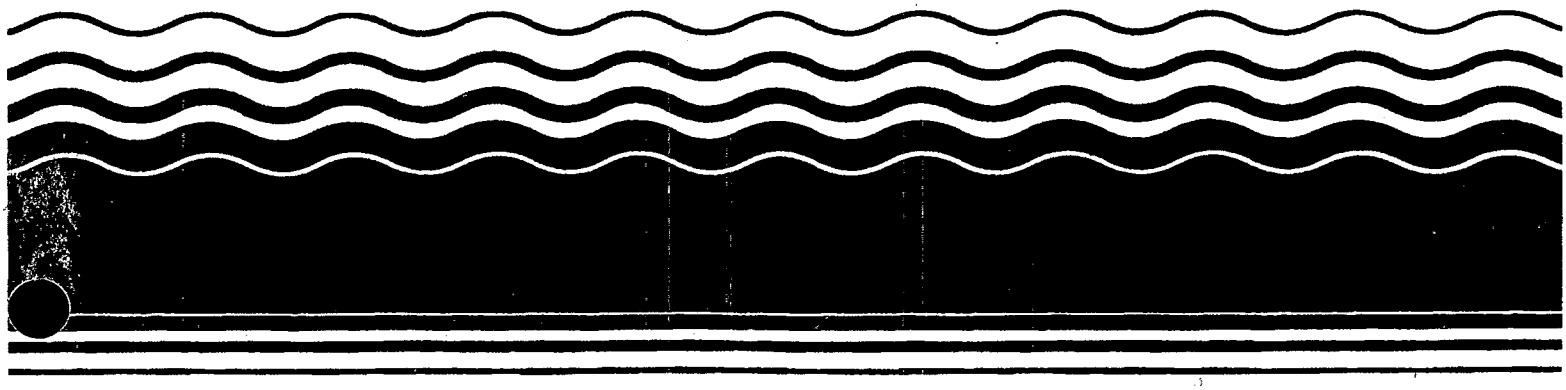
1999

EPA Superfund
Record of Decision Amendment:

G.E. Wiring Devices Site
Juana Diaz, PR
7/1/1999



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RECORD OF DECISION AMENDMENT

SITE NAME AND LOCATION

G.E. Wiring Devices Superfund Site
Juana Diaz, Puerto Rico

STATEMENT OF BASIS AND PURPOSE

This Record of Decision Amendment presents the United States Environmental Protection Agency's (EPA's) selection of a modification to the remedial action for the G.E. Wiring Devices Superfund Site (the "Site"), in accordance with the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA), 42 U.S.C. S9601-9675, and to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300. This Record of Decision Amendment explains the factual and legal basis for selecting the modified remedy for the Site. The original remedial action was selected in the Record of Decision issued by EPA on September 30, 1988.

The attached index (Appendix 1) identifies the items that comprise the Administrative Record upon which the selection of the remedial action is based.

ASSESSMENT OF THE SITE

Actual or threatened releases of hazardous substances from the Site, if not addressed by implementing the response actions selected in the September 30, 1988 Record of Decision, as revised by this Record of Decision Amendment, may present an imminent and substantial threat to the public health, welfare, or the environment.

DESCRIPTION OF MODIFICATION TO THE SELECTED REMEDY

The modification to the selected remedy implements the off-site disposal of all excavated mercury-impacted materials in a Subtitle C (hazardous waste) landfill in the mainland United States without additional treatment, in place of the on-site hydrometallurgical treatment using the G.E. Mercury Extraction Process (GEMEP) system and subsequent backfill.

The components of the modification to the selected remedy consist of the following:

o Elimination of the on-site hydrometallurgical treatment component of the remedy, including the on-site backfilling of the treated material.

o Complete excavation of remaining mercury impacted materials, including the clean washed coarse materials (mercury concentration below the residential remediation goal (RG) of 39 parts per million or ppm) that were backfilled in the West Field and contaminated materials remaining underneath structures in three discrete areas (cold storage building, electrical substation pads, and maintenance shop).

o Placement of approximately 10,000 tons of mercury impacted fines into containers called Lift Liners.

o Placement of approximately 1,600 tons of clean, oversized material currently in the West Field into Lift Liners.

o Transport of the approximately 11,600 tons of containerized material to a permitted RCRA Subtitle C hazardous waste landfill. It is currently expected that the specific landfill that will be used is the one located in Pinewood, South Carolina; the wastes would be transported via truck to Ponce, by covered barge to Charleston, and by truck to Pinewood.

o Backfill of the excavation areas with imported clean fill material.

o Grading and seeding of the backfilled areas to support revegetation, and to make it available for productive future use.

All the other components of the original remedy as selected in the September 1988 Record of Decision are NOT affected by this modification. These components are:

o Limited groundwater monitoring (i.e., for a minimum of three years), given that additional groundwater investigation has established that there is no need for groundwater remediation.

o Confirmatory air monitoring and re-sampling of soil in residential yards.

EXPLANATION OF FUNDAMENTAL CHANGE

The September 1988 Record of Decision addressed mercury contamination in the waste-fill area known as the West Field, including the waste-fill materials, contaminated near-surface soils, and perched ground water expected to be encountered in the West Field having mercury concentrations above the health-based cleanup levels specified by EPA. Major remedy components were (1) excavation of wastes from the West Field and the contaminated near-surface soils, (2) on-site hydrometallurgical treatment of materials containing mercury in excess of 39 ppm, (3) on-site backfilling of the treated materials having mercury levels less than 39 ppm in the West Field, and (4) installation of a two-foot thick clean soil cover over the backfilled area.

The conceptual hydrometallurgical treatment component described in the 1988 Record of Decision differs from the specific GEMEP hydrometallurgical treatment system which was ultimately designed for the Site in two significant ways.

1) The 1988 Record of Decision did not consider a physical separation treatment step that would remove both clean, coarse material and high concentration metallic debris from the materials to be treated hydrometallurgically.

2) The 1988 Record of Decision envisioned use of a readily available leaching agent, such as cyanide, hypochlorite or nitric acid, which were subsequently determined to be ineffective based upon treatability study results. It also assumed the need for only one batch of leaching agent. The GEMEP uses iodine, which was never evaluated or even considered as a leaching agent.

During initiation of remedial activities, excavation of waste-fill, and implementation of the physical separation treatment step, G.E. encountered Site conditions that significantly differed from those which served as basic assumptions in developing the 1988 Record of Decision. These changed conditions make the original remedy less implementable and more costly than other remedial alternatives.

The significant changed conditions include a 250 percent increase in the waste volume; significant differences in the physical characteristics of the waste (e.g., clay content); and serious concerns regarding the inability to procure the additional quantity of chemical extraction agent (iodine) needed to complete hydrometallurgical treatment of the expanded waste volume using the

GEMEP system. These variations and their impact on the original remedy are described as follows:

Waste Volume - The estimated volume of contaminated materials excavated to date has increased from 5,005 tons calculated in the 1994 Preliminary Design report to 11,700 tons. The estimated volume of contaminated material requiring GEMEP treatment has increased from 4,105 tons, calculated in the 1994 Preliminary Design Report, to 10,000 tons. The difference between these two sets of volumes represents the clean coarse materials and the high concentration materials which were disposed off-site. The majority of these additional wastes consist of fine-grained clay soils, which are not conducive to GEMEP treatment. Moreover, the amount of soil to be excavated as part of the remedy has more than quadrupled from original estimates.

The major increase in waste volume will cause the GEMEP treatment system, which is based on mass, to run significantly longer and cost significantly more than anticipated in 1988. The increased tonnage from the West Field has already contributed to a significant increase in the duration of the excavation and physical treatment components. Also, the available space on-site to stockpile materials awaiting treatment is limited.

Waste Composition - The content of fine soils (i.e., clay) in the materials from the West Field is much greater than anticipated in the remedial design, which assumed that 34 percent of the materials would consist of fines. Recent grain-size analyses indicated that the wastes actually consist of 85 percent fines. The tests also showed that about 63 percent of the material is clay-sized.

These changes in waste composition will cause a significant increase in the amount of clay materials requiring treatment, which is expected to result in substantial materials handling difficulties. The new waste characteristics already have caused the excavation and physical treatment components to far exceed the original time schedule. For example, the physical separation process took 34 weeks to complete, in comparison to the projected 4-week schedule. High clay content coupled with increased volume caused plugging and fouling of the physical separation treatment equipment. Similar setbacks to the GEMEP time frame are now expected due to materials handling and dewatering difficulties.

Iodine Usage - The GEMEP treatment system uses iodine, a limited commodity on the world market, as an extraction agent. Laboratory tests indicated a conservative consumption rate of iodine equal to 1 percent of the treated soil/waste. Based on the projected waste volume at that time, G.E. procured 40 tons of iodine. At present,

assuming the 1 percent consumption rate, at least 100 tons of iodine will be needed by GEMEP because of the 250 percent increase in waste volume. The additional 60 tons of iodine now required for the GEMEP system will be difficult, time consuming and costly to obtain, given that the majority of the global iodine production is sold out for the next two years.

Two major operational factors, the significant increase in waste volume and the uncertainties associated with the iodine consumption rate in a full-scale GEMEP treatment system, further exacerbate the situation. G.E. would need to procure the additional iodine prior to system start-up to provide an adequate supply for continuous operation.

Based on iodine losses of 1 percent and the treatment of 10,000 tons of material, the estimated total cost of the GEMEP remedy is now estimated at $8.8 million, assuming the treatment system runs for 52 weeks. Four other scenarios were developed in the Focused Feasibility Study, illustrating the cost impact associated with higher and lower treatment rates, higher iodine losses, and an increase in the total quantity of material. These estimated total costs ranged from $7.9 to $11.4 million.

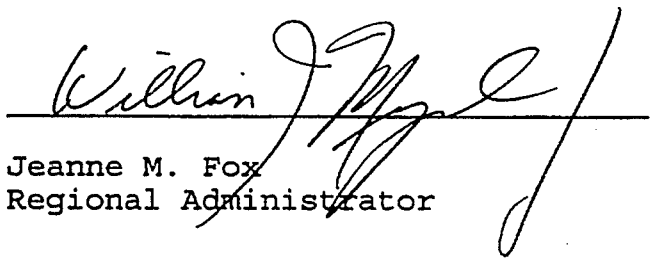
In light of these factors, EPA proposed to eliminate the on-site treatment component of the original remedy in favor of off-site disposal in a permitted RCRA Subtitle C hazardous waste landfill. EPA is NOT proposing to change the mercury cleanup level it adopted for the Site in 1993, which remains at 39 ppm. The only modification to the remedy involves the off-site disposal of materials greater than 39 ppm mercury, including the three areas of waste deposition yet to be excavated. In comparison to the GEMEP treatment approach described above, off-site disposal has an estimated cost of less than $3.5 million. Thus, the modified remedy will also result in a significant cost savings.

DECLARATION OF STATUTORY DETERMINATIONS

The original remedy, as revised by the selected modification, meets the requirements for remedial actions set forth in CERCLA §121, 42 U.S.C. §9621 in that it: (1) is protective of human health and the environment; (2) attains a level or standard of control of the hazardous substances, pollutants and contaminants, which at least attains the legally applicable or relevant and appropriate requirements under federal and state laws; (3) is cost-effective; (4) utilizes alternative treatment (or resource recovery) technologies to the maximum extent practicable; and (5) satisfies the statutory preference for remedies that employ treatment to

reduce the toxicity, mobility, or volume of the hazardous substances, pollutants or contaminants at a site. Physical separation treatment, consisting of dry screening, wet soil washing, and magnetic separation of the mercury contaminated materials to remove both clean coarse material and high concentration materials containing "free" mercury was conducted.

Because the modified remedy will not result in hazardous substances remaining on-site above health-based levels, the five-year remedial action review will not apply to this action.



Jeanne M. Fox
Regional Administrator

7/1/99
Date

DECISION SUMMARY

RECORD OF DECISION AMENDMENT
G.E. Wiring Devices Superfund Site
Juana Diaz, Puerto Rico

I. INTRODUCTION

The G.E. Wiring Devices Site is located in the south central part of the island of Puerto Rico on Calle Carrion Maduro Final (Carr. 149, Km. 67) in the municipality of Juana Diaz. The Site is northeast of Ponce, close to the intersection of Routes 14 and 149. See Location Map (**Figure 1**). The General Electric Company (G.E.) operates a wiring devices plant at the Site, manufacturing various residential, institutional, and commercial electrical devices, such as night lights, wall outlets, and switches. The plant covers about six acres, and includes a 1.1 acre waste-fill area, referred to as West Field, that is the source of mercury contamination. See Site Map (**Figure 2**). G.E. has not used mercury in its manufacturing process at the Juana Diaz plant since 1970.

Several residences are located about 400 feet south of the West Field area. Ground water in the area is used as a source of potable water. A public supply well is located about 1,500 feet west of the waste-fill area.

From 1957 until 1969, G.E. used the waste-fill area known as West Field to dispose of defective electrical components, including parts from silent mercury switches. Each switch contained a hermetically sealed, stainless-steel button that encased a ceramic core containing elemental mercury. At the Site, G.E. broke open buttons that did not meet quality specifications to reclaim the mercury. G.E. then discarded the steel button shells, with residual mercury and ceramic cores, in the waste-fill area, along with other defective switch parts and plastic scraps.

Test pit excavations indicated that the waste-fill area was roughly 1 to 4 feet thick and covered 1.1 acres. Site investigations confirmed that the mercury is tightly bound to the components in the waste-fill area and has not migrated or entered the ground water. Based on available data, including sampling and analysis by EPA in April 1982, the Site was included on the National Priorities List of hazardous sites in December 1982.

II. G.E. WIRING DEVICES SUPERFUND SITE

Throughout the mid- to late-1980s, EPA and G.E. conducted numerous field studies to determine the extent of contamination and to evaluate cleanup alternatives. In 1987, Law Engineering performed a remedial investigation/feasibility study (RI/FS) of the West Field for G.E.

After review of the FS, EPA directed the U.S. Bureau of Mines (BOM) to evaluate additional treatment technologies that could achieve a permanent remedy. BOM evaluated hydrometallurgical treatment, using a variety of chemical reagents, such as acid and chlorine, to leach mercury from a generic host material. BOM concluded that additional studies of leaching using Site-specific waste materials would be necessary.

In September 1988, based on an Addendum FS, EPA selected a remedy and issued the ROD for the Site. This remedy called for excavation of wastes from West Field and the contaminated near-surface soils, on-site hydrometallurgical treatment of the materials, backfilling of the excavated area with treated materials, and placement of a two-foot thick cover of clean soils over the backfilled area. Hydrometallurgical treatment involves mixing on-site waste containing mercury with a leaching agent to create a solution containing the mercury. The solution is filtered, and the mercury is then removed by precipitation or cementation. The mercury can then be recovered.

EPA revised the Baseline Risk Assessment for the Site in 1993. The Risk Assessment calculated a residential remediation goal (RG) of 39 parts per million (ppm) for mercury levels in soil at the Site. The residential RG is based on a residential exposure scenario involving ingestion of soil and waste. This meant that all material with mercury concentrations above the residential RG of 39 ppm would be removed, and that treated materials returned to the West Field would be required to have mercury concentrations of less than 39 ppm. The ROD also included a groundwater component that consisted of the installation of monitoring wells and groundwater sampling.

In late 1988, G.E. took over the treatability studies from the BOM, with EPA oversight. From 1994 to 1997, under EPA oversight, G.E. patented a mercury removal process called the G.E. Mercury Extraction Process (GEMEP) treatment system. GEMEP uses a water solution of iodine and iodide to extract mercury from waste-fill components and soil, leaving behind clean materials. The mercury and iodine and iodide are then recovered and recycled.

In June 1994, based upon successful laboratory studies, G.E. designed the final conceptual treatment process for the Site, which consisted of excavation of wastes having mercury concentrations above the residential RG of 39 ppm from the West Field, followed by a two-step treatment process:

1) physical separation treatment, consisting of dry screening, wet soil washing, and magnetic separation of the materials to remove both clean coarse material and high concentration materials containing "free" mercury, and

2) hydrometallurgical (GEMEP) treatment of remaining residual wastes containing non-mobile mercury at concentrations greater than 39 ppm. Treated materials would be backfilled in the West Field and covered with a soil cover.

In mid-1996, G.E. contracted with Metcalf & Eddy, Inc. (M&E) to design, fabricate, and operate the system, including the waste separation (screening/washing) component (using (M&E's Hydrosep process) and the GEMEP treatment component. This contract would represent the first full-scale application of the GEMEP technology.

In June 1997, G.E. initiated excavation of wastes from the West Field for physical separation, and construction of the dry screening and Hydrosep treatment systems. The physical separation treatment (screening/washing) of excavated wastes occurred in conjunction with the excavation activities.

The estimated duration of the physical separation treatment step of the remedy was approximately 4 weeks. However, the physical separation treatment extended 34 weeks due to two significant variations between the design conditions and the conditions encountered during its implementation at the Site:

1) The quantity of material that actually underwent physical treatment was more than double the amount originally expected (11,700 tons versus 5,005 tons), resulting in an associated increase in the duration of the physical treatment step, and

2) The actual clay content of the material that underwent treatment was much higher than expected (63 percent versus 18 percent), resulting in major production delays related to various equipment operational difficulties.

From June 1997 to April 1998, excavation of waste-fill and impacted soils in the West Field and on PRIDCO property west of the G.E. facility was completed concurrent with the physical treatment step. Excavations on PRIDCO property were backfilled with clean off-site

soil, and the backfilled area was graded, compacted, and seeded. Clean (less than the residential RG of 39 ppm mercury) oversized material from the physical separation (screening/washing) treatment process was returned to the West Field. This material, washed plastic components and small stones, was spread along the west wall of the West Field excavation and leveled to an average thickness of 4 feet. The excavated slopes along the east side of the West Field and around the cold storage building were backfilled with off-site soil, which was compacted and seeded to protect the slope from water erosion. A new chain link fence was installed along the west Site boundary between the G.E. facility and the PRIDCO property.

During physical separation, material less than 1/4-inch, called fines, was stored in piles on a concrete pad and in a second pile near the pad while the system was operational. After completion and demobilization of the physical separation process, these stockpiles were consolidated on the concrete pad. The settled fines from all three modu-tanks were removed and added to the fines pile on the pad. Oversized material, greater than 2 inches, that was separated during physical separation was added to the fines pile on the pad and surrounded with concrete barriers at the toe. The entire stockpile was then covered with four 100-foot by 100-foot tarps, which were secured to the concrete pad around the perimeter of the pile outside of the concrete barriers.

Over the 34-week period, approximately 100 tons of high concentration wastes containing free mercury were generated from the separation stage. This waste was packaged and transported off-site for treatment in the mainland United States.

In May 1998, as a result of the two significant changed conditions noted above, EPA and G.E. suspended all Site activities. The GEMEP treatment system, which was near completion at that time, was decommissioned. Consequently, no residual wastes from the physical separation (screening/washing) treatment process were treated in the GEMEP system.

At present, the Site is in a standby condition pending identification of the final remedial alternative. In addition, three areas of waste deposition remain to be excavated on the Site. Access to material in these areas will require either significant modifications to or demolition (and relocation) of various structures, as follows:

o A small deposit of material underneath the northwest corner of the cold storage building in the West Field.

o Two small areas underneath the electrical substation pads on the eastern side of West Field.

o A small area near the northwest corner of the maintenance shop under the road and plant access ramp.

III. HIGHLIGHTS OF COMMUNITY PARTICIPATION

The Post-Decision Proposed Plan (PDPP) for the Site was released to the public on April 26, 1999. The PDPP, along with other Site-related documents, is available to the public at both the administrative record and the information repository locations. A summary of the PDPP and a notice as to the availability of those documents and the administrative record was published in the San Juan Star daily newspaper April 26, 1999, and in the El Nova Dia daily newspaper on May 10, 1999. A copy of the public notice is included as an attachment to this Record of Decision Amendment.

The public comment period began on April 26, 1999 and ended on May 26, 1999. A public meeting was held on May 13, 1999 at the City Hall in Juana Diaz. The purpose of the public meeting was to discuss the proposed changes to the September 1988 Record of Decision.

The responses to the comments received during the public comment period as well as those expressed orally at the public meeting are stated in the Responsiveness Summary, which is an attachment to this Record of Decision.

This Record of Decision Amendment presents the selected modification to the original remedial action for the disposition of mercury impacted materials located at the Site. The modification to the original remedial action is chosen in accordance with CERCLA and, to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Part 300. The decision as made for the Site is based upon the administrative record. An index for the administrative record is included as an attachment to this document. This Record of Decision will become a part of the administrative record file.

The administrative record file, containing the information upon which the modification to the original remedy is based, is available at the following locations:

U.S. Environmental Protection Agency
290 Broadway, 18th Floor
New York, New York 10007-1866
By appt.: 212-637-3263

Mon.- Fri., 9 am- 5 pm

The Press Office at the Mayor's Office
Casa Alcaldia de Juana Diaz
Calle Degetau
Mon. - Fri., 8 am - noon; 1 pm - 4:30 pm
Sat. & Sun., closed

U.S. Environmental Protection Agency
Caribbean Environmental Protection Division
Centro Europa Building
1492 Ponce De Leon Avenue, Suite 207
Santurce, PR 00907
By appt.: (787)729-6951 Ext. 263
Mon to Fri.: 7am to 4 pm

IV. REASONS FOR ISSUING THE RECORD OF DECISION AMENDMENT

In mid-1994, G.E. conducted laboratory studies which indicated the GEMEP technology would meet ROD requirements. G.E. added a physical separation treatment step prior to hydrometallurgical treatment to remove both clean coarse material and high concentration materials containing "free" mercury. GEMEP would then treat the remaining "residual" wastes containing non-mobile mercury at concentrations greater than 39 ppm. Treated materials would be backfilled in the West Field and covered with 2 feet of clean soils.

During initiation of remedial activities, excavation of waste-fill, and implementation of the physical separation treatment (screening/washing) process, G.E. encountered Site conditions that significantly differed from the conditions which served as basic assumptions in developing the 1988 ROD. These changed conditions made the original remedy less implementable, and more costly than other remedial alternatives.

The significant changed conditions include a 250 percent increase in the waste volume; significant differences in the physical characteristics of the waste (e.g., clay content); and serious concerns regarding the inability to procure the additional quantity of chemical extraction agent (iodine) needed to complete hydrometallurgical treatment of the expanded waste volume using the GEMEP treatment system. These variations and their impact on the original remedy are described as follows:

Waste Volume - The estimated volume of contaminated material requiring GEMEP treatment has increased from 4,105 tons calculated in the 1994 Preliminary Design Report, to 10,000 tons. This increase is 2.5 times the original estimate of tonnage requiring hydrometallurgical treatment. Additional areas to the north, east, and south of the originally anticipated waste footprint were discovered during excavation activities in the West Field. The majority of these additional wastes consisted of fine-grained clay soils, which are not conducive to this type of treatment. Moreover, the amount of soil to be excavated as part of the remedy has more than quadrupled from the original estimates.

This major increase in the amount of material requiring treatment will cause the GEMEP treatment system, which is based on mass, to run significantly longer and cost significantly more than anticipated. The increased tonnage from the West Field has already contributed to a significant increase in the duration of the excavation and physical treatment components of the remedy. Furthermore, the available space on-site to stockpile materials awaiting treatment is limited, and has required the placement of residual materials in overflow storage areas outside of the containment pad for the treatment system.

Waste Composition - The content of fine soils (i.e., clay) in the materials from the West Field is much greater than anticipated in the remedial design. While the remedial design assumed that approximately 34 percent of the materials would consist of fines, grain-size analyses performed during implementation of the physical treatment indicated that the wastes consist of approximately 85 percent fines. The tests also showed that about 63 percent of the material is clay-sized.

The overall impact of these changes is a significant increase in the amount of clay materials requiring treatment, which is expected to result in substantial materials handling difficulties. These new waste characteristics have already caused the excavation and physical treatment components to far exceed the original schedule. For example, the physical separation (screening/washing) process required 34 weeks to complete, in comparison to the projected 4-week schedule. The high clay content coupled with the increased volume caused plugging and fouling of the dry screening and Hydrosep process component of the physical separation treatment equipment. These materials handling problems lead to an increase in time spent on equipment maintenance, resulting in project delays. Similar setbacks to the GEMEP time frame are now expected due to materials handling and dewatering difficulties.

Iodine Usage - The hydrometallurgical treatment process proposed in the ROD was based on the potential use of readily available and relatively inexpensive leaching agents, such as cyanide, hydrochloride or nitric acid, which were later found to be ineffective. Additionally, the ROD assumed the need for only one batch of leaching agent. The GEMEP treatment system uses iodine, a relatively limited commodity on the world market, as an extraction agent.

Laboratory tests indicated a conservative consumption rate of iodine equal to 1 percent of the treated soil/waste. Based on the projected waste volume at that time, procurement of up to 40 tons of iodine would be needed. Currently, G.E. has procured this amount (32 tons of iodine and 8 tons of potassium iodide).

At present, assuming the 1 percent consumption rate, at least 100 tons of iodine will be needed by GEMEP because of the increase in the volume of waste (4,105 tons to 10,000 tons).

The additional 60 tons of iodine now required in the GEMEP will be difficult, time consuming and costly to obtain, given that the majority of the global iodine production is sold out for the next two years. Two major operational factors, the significant increase in waste volume and the uncertainties associated with the iodine consumption rate in a full-scale GEMEP treatment system, increase the uncertainties of the situation. At the least, G.E. would need to procure the additional iodine prior to system start-up to provide an adequate supply for continuous operation. In addition, the consumption of 100 tons of iodine in the GEMEP will produce an equivalent tonnage of iodide for landfill disposal.

Based on iodine losses of 1 percent and the treatment of 10,000 tons of material, the estimated total cost of the GEMEP remedy is now estimated at $8.8 M. This best-case scenario assumes the GEMEP treatment system would run for 52 weeks. Four other scenarios were developed in the Focused Feasibility Study, illustrating the cost impact associated with higher and lower treatment rates, higher iodine losses, and an increase in the total quantity of material. These estimated total costs ranged from $7.9 to $11.4 M.

V. DESCRIPTION OF ALTERNATIVES

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) requires that each selected site remedy be protective of human health and the environment, be cost-effective, comply with other laws, and use permanent solutions and alternative treatment technologies and resource recovery alternatives to the maximum extent practicable. In addition, CERCLA includes a

preference for treatment as a principle element for the reduction of toxicity, mobility, or volume of the hazardous substances.

The present-worth costs presented below for each alternative include capital costs and operation and maintenance (O&M) costs. The O&M costs are for post-remediation monitoring of the Site over a three-year period.

ALTERNATIVE 1 - EXISTING REMEDY IN THE SEPTEMBER 1988 RECORD OF DECISION

Hydrometallurgical Treatment and Subsequent On-site Replacement of the Treated Material

This alternative is defined as the selected remedy in the September 1988 Record of Decision. The original remedy addresses mercury contamination in the waste-fill area known as the West Field, including the waste-fill materials, contaminated near-surface soils, and perched ground water expected to be encountered in the West Field having mercury concentrations above the health-based cleanup levels specified by EPA. Major remedy components are:

o Further treatability studies during remedial design to insure the implementability of hydrometallurgical processes, as well as continued study of other treatment alternatives.

o On-site hydrometallurgical treatment of the waste-fill materials (approximately 4,000 cubic yards), perched water (approximately 0.5 million gallons), and contaminated near surface soils (approximately 1,500 cubic yards).

o Treatment of the material to below health-based levels and backfilling the waste-fill area with the treated materials. The area would then be covered with 2 feet of clean soil.

o Additional investigation of the ground water to determine the extent of groundwater contamination.

o Limited groundwater monitoring (i.e., for a minimum of three years), provided that the additional groundwater investigation establishes that there is no need for groundwater remediation.

o Confirmatory air monitoring and re-sampling of soil in residential yards.

The hydrometallurgical treatment component is described in further detail in the 1988 ROD on pages 18 and 19 as follows:

"This alternative involves putting the mercury into solution by using a leaching agent such as cyanide, hypochlorite or nitric acid. The mercury would then be recovered from the aqueous solution by using various metallurgical techniques such as filtration and cementation/precipitation. The waste would be mixed with the leaching agent until the desired level of mercury is extracted from the waste and put into solution. The process stream from the leaching stage would then be filtered. The residue from filtering would be disposed of in the former waste-fill area and capped with two feet of clean soil. The process would be designed to achieve treatment of mercury from the waste to below health-based levels. Since it is anticipated that the treatment process could attain treatment of mercury to below acceptable levels, the actual performance standard for the treatment process would be determined by the maximum removal efficiency associated with the technology with due consideration to the corresponding incremental cost involved in achieving further removal. The mercury-laden liquid from the filtering stage would then be subjected to cementation or precipitation. This process is achieved by passing the liquid through a material such as stainless steel, zinc, copper or aluminum.

During cementation the mercury is exchanged with the metal and precipitated out. The liquid would then be recycled back through the process. It is anticipated that only one batch of leaching agent would be needed. Upon completion of the process, the remaining liquid would be treated on-site prior to discharge to a POTW. Further treatability studies will be conducted during design to optimize the treatment process. The process would be designed to meet or exceed levels protective of public health."

The conceptual hydrometallurgical treatment component described above in the 1988 ROD differs from the particular GEMEP hydrometallurgical treatment system which was ultimately designed for the Site in two significant ways:

1) The ROD did not consider a physical separation treatment step that would remove both clean, coarse material and high concentration metallic debris from the materials to be treated hydrometallurgically.

2) The ROD called for use of a readily available leaching agent, such as cyanide, hypochlorite or nitric acid, which were subsequently determined to be ineffective based upon treatability study results. The GEMEP uses iodine, which was never evaluated or even considered in the ROD as a leaching agent.

The estimated incremental cost of implementing Alternative 1 is **$8,810,319**[1], including the cost of post-closure groundwater monitoring. This estimate considers the on-site treatment of 10,000 tons of residual material and its subsequent backfill over a 52-week period, and iodine losses equivalent to one percent of the total feed material.

ALTERNATIVE 2 - MODIFIED REMEDY AS SELECTED IN THIS RECORD OF DECISION AMENDMENT

Off-site Disposal of all Remaining Site Wastes in a Subtitle C (hazardous waste) Landfill in the Mainland United States Without Further Treatment

This alternative is defined as the selected remedy in the Record of Decision Amendment. It does not modify the remediation goal established by EPA in the 1993 Baseline Risk Assessment for the Site, which calculated a residential RG of 39 ppm for mercury levels in soil.

This alternative eliminates the on-site hydrometallurgical treatment component of the remedy, including the on-site backfilling of the treated material. All remaining mercury- impacted materials at the Site will be excavated, including the clean, washed coarse materials (mercury concentration below the residential RG of 39 ppm) that were backfilled in the West Field and contaminated materials remaining underneath structures in three discrete areas (cold storage building, electrical substation pads, and maintenance shop).

Approximately 10,000 tons of mercury impacted fines and 1,600 tons of clean, oversized material currently in the West Field will be placed into containers called Lift Liners. It is currently expected the 11,600 tons of containerized material will be transported to a permitted RCRA Subtitle C hazardous waste landfill in Pinewood, South Carolina (via truck to Ponce, by covered barge to Charleston, and by truck to Pinewood).

Excavation areas will be backfilled with imported clean fill material. The backfilled areas will be graded and seeded to support revegetation, and will be made available for productive future use.

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[1]This cost is in addition to the costs GE has spent on the physical separation treatment and off-site disposal of highly concentrated wastes.

The estimated total cost of Alternative 2 is $3,447,522[1], based on 11,600 tons of material to be loaded into Lift Liners at a rate of 20 containers per day.

VI. EVALUATION OF ALTERNATIVES

In accordance with the NCP, this section presents a detailed analysis of the original remedy and the alternative remedy considered in the preceding section. The detailed analysis consists of an assessment of the two alternatives against each of the NCP's nine evaluation criteria and a comparative analysis focusing upon the relative performance of each alternative against those criteria.

The following "threshold" criteria must be satisfied by an alternative to be eligible for selection:

1. **Overall protection of human health and the environment** addresses whether or not a remedy provides adequate protection and describes how risks posed through each exposure pathway (based on a reasonable maximum exposure scenario) are eliminated, reduced, or controlled through treatment, engineering controls, or institutional controls;

2. **Compliance with applicable or relevant and appropriate requirements (ARARs)** addresses whether or not a remedy will meet all of the applicable or relevant and appropriate federal and state environmental statutes and requirements (i.e., those federal or state laws that specifically address a hazardous substance, pollutant or contaminant, remedial action or other circumstance found at a CERCLA site, or which address problems or situations sufficiently similar to those encountered at a site that their use is well suited to the site) or provide grounds for invoking a waiver.

The following "primary balancing" criteria are used to make comparisons and to identify the major trade-offs between alternatives:

3. **Long-term effectiveness and permanence** refers to the ability of a remedy to maintain reliable protection of human health and the environment over time, once cleanup goals have been met;

4. **Reduction of toxicity, mobility, or volume through treatment** refers to the degree to which remedial alternatives employ recycling

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or treatment that reduces the toxicity, mobility, or volume of hazardous substances at a site;

5. **Short-term effectiveness** addresses the period of time needed to achieve protection and any adverse impacts on human health and the environment that may be posed during the construction and implementation periods until cleanup goals are achieved;

6. **Implementability** refers to the technical and administrative feasibility of a remedy, including the availability of the materials and services needed to implement a particular option; and,

7. **Cost** includes estimated capital and operation and maintenance costs, and net present-worth costs for alternatives expected to last more than two years.

The following "modifying" criteria are considered fully after the formal public comment period on the Post-Decision Proposed Plan is completed:

8. **State acceptance** indicates whether, based on its review of the remedial investigation/feasibility study (RI/FS), and the proposed plan, the State supports, opposes, and/or has identified any reservations with the preferred alternative; and,

9. **Tribal/Community acceptance** refers to the public's general response to the alternatives described in the proposed plan and the RI/FS reports; factors of community acceptance to be discussed include support, reservation, and opposition by the tribe/community.

The following section presents a comparative analysis of the alternatives based upon these evaluation criteria. The comparative analysis focuses upon the essential differences in the two alternatives:

Alternative 1 - Hydrometallurgical Treatment Using the GEMEP System and Subsequent On-site Replacement of the Treated Material, and

Alternative 2 - Off-site Disposal of all Site Wastes in a Subtitle C (hazardous waste) Landfill in the Mainland United States Without Further Treatment.

1. Overall Protection of Human Health & the Environment

Both alternatives would be protective of human health and the environment by preventing direct exposure to mercury-contaminated materials. Alternative 1 would permanently reduce the mercury concentration in residual materials to less than the residential RG

of 39 ppm by treating the materials on-site using the GEMEP system. The treated materials would then be backfilled in the West Field. For Alternative 2, all materials containing mercury in excess of 39 ppm would be disposed off-site at an EPA-approved, RCRA-permitted (Subtitle C) disposal facility.

2. Compliance with Applicable, or Relevant and Appropriate Requirements (ARARs)

Both alternatives would achieve Applicable or Relevant and Appropriate Requirements (ARARs), which include all federal and Commonwealth regulations and public health regulations that address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a site. Three ARAR classifications exist:

o chemical-specific ARARs, which are health- or risk-based concentration limits of chemicals which may be found in, or discharged to, the ambient environment;

o location-specific, which are based on the geographical location of a site and its surroundings; and

o action-specific, which are typically technology-based or activity-based requirements or limitations on actions taken with respect to hazardous substances, pollutants, or contaminants.

No chemical-specific ARARs were identified for Alternative 1 or Alternative 2. Both alternatives would achieve the residential RG of 39 ppm for mercury by removing materials that exceed this criterion from the Site by on-site treatment or off-site disposal, respectively.

No location-specific ARARs have been identified for Alternative 1 or Alternative 2.

Action-specific ARARs for Alternatives 1 and 2 would include air emissions and OSHA health and safety requirements. In addition, the RCRA guidelines for facility operation would apply to Alternative 1, and the RCRA guidelines for generators, land disposal and waste transportation would apply to Alternative 2.

3. Long-Term Effectiveness and Permanence

Both alternatives would achieve long-term effectiveness and permanence.

For Alternative 1, approximately 10,000 tons of stockpiled and unexcavated residual materials would be treated on-site using the GEMEP system to achieve the 39 ppm cleanup goal, and then backfilled in the West Field and covered with a clean soil cap. Hazardous GEMEP process residuals, including elemental mercury and spent iron filings, would be sent off-site to an EPA-approved facility for recycling or disposal.

For Alternative 2, all residual materials containing mercury concentrations in excess of 39 ppm and clean coarse materials previously backfilled in the West Field would be transported off site to an EPA-approved, RCRA-permitted (Subtitle C) disposal facility, which is specifically designed to provide long-term effectiveness and permanence for disposal of RCRA-hazardous wastes. Most of the materials requiring off-site disposal under this alternative have undergone physical treatment to remove any mobile mercury, rendering the materials as non-hazardous.

4. Reduction in Toxicity, Mobility, or Volume Through Treatment

The toxicity, mobility, and volume of mercury contamination were reduced at the Site as a result of prior remedial activities, which included excavation and physical treatment to remove mobile mercury.

Alternative 1 would achieve further reductions in waste toxicity, mobility, and volume by using the on-site GEMEP treatment system to remove mercury from residual materials to concentrations below the 39 ppm RG. The clean soil cap would also reduce mobility by preventing erosional transport of backfilled materials, which contain residual mercury below 39 ppm.

Alternative 2 would achieve a further reduction in waste mobility by transporting residual materials containing mercury in excess of the 39 ppm RG to an off-site, RCRA-permitted (Subtitle C) disposal facility without further treatment, which is designed to effectively and permanently contain RCRA hazardous wastes. Waste toxicity and volume would not be effectively reduced; however, the contaminated materials would be removed from the Site as a result of off-site disposal.

5. Short-Term Effectiveness

Both alternatives involve short-term risks during the performance of remediation work, which are considered to be manageable through the implementation of standard administrative, procedural, and engineering controls. However, from a comparative standpoint, the short-term risks associated with Alternative 2 are considered to be

lower than Alternative 1 based upon the anticipated duration of work and the controls required to prevent exposure.

Short-term risks associated with Alternative 1 include worker exposure to hazardous chemicals required for GEMEP treatment system operation. Risks associated with residential exposure would also exist to a lesser extent due to potential emissions resulting from GEMEP treatment system operation. Standard administrative and procedural controls would be employed to prevent accidents associated with handling of process chemicals and residual wastes. Exposure to treatment system emissions and dust would be prevented by the implementation of engineering controls, such as water sprays. These risks would exist for an extended period of one to two years to implement the remedy, based upon the anticipated system maintenance requirements (intensive), increased waste volume for treatment, and waste characteristics (higher clay content,less suitable for treatment).

Short-term risks associated with Alternative 2 include worker and residential exposure to waste materials and wind-blown particulate during off-site handling and transport. Engineering controls, such as the use of secure shipping containers and methods, would be implemented to prevent exposure to wastes during their off-site transport. Dust controls, such as water or foam sprays, and standard procedures would also be implemented to prevent exposure associated with any off-site handling of waste. These risks would exist for a duration of approximately three months to implement this alternative.

6. Implementability

Alternative 1 would be difficult to implement based upon the following factors:

o treatment of the increased volume of residual material would require the procurement of 60 tons of iodine, in addition to the 40 tons (32 tons of iodine and 8 tons of potassium iodide)already in G.E.'s possession, which would be difficult based upon its limited availability on the world market;

o uncertainties associated with iodine consumption by the GEMEP treatment process could require subsequent procurement of additional iodine above the 60-ton estimate; and

o the increased clay content would cause frequent fouling of GEMEP system filters, centrifuges, filter presses, and downstream processes in general.

Alternative 2 could be readily implemented using standard equipment and services associated with transporting residual materials to a RCRA-permitted (Subtitle C landfill), off-site disposal facility approved by EPA.

7. Cost

Cost estimates for implementing each alternative were developed considering direct capital costs, indirect capital costs, and operation and maintenance costs in accordance with EPA's "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA."

The estimated total cost of implementing Alternative 1 is **$8,810,319**. This estimate considers the on-site treatment of 10,000 tons of residual material and its subsequent backfill over a 52-week period, and iodine losses equivalent to one percent of the total feed material. It also includes the cost of post-closure groundwater monitoring. The following four cases illustrate the cost impact associated with varying key assumptions:

- Case 1 - 10,000 tons of material, 52 weeks, and 2 percent iodine loss. Estimated total cost: $10,696,319
- Case 2 - 10,000 tons of material, 40 weeks, and 1 percent iodine loss. Estimated total cost: $ 7,884,433
- Case 3 - 10,000 tons of material, 70 weeks, and 1 percent iodine loss. Estimated total cost: $10,199,045
- Case 4 - 13,000 tons of material, 52 weeks, and 1 percent iodine loss. Estimated total cost: $11,431,002

The estimated total cost of Alternative 2 is **$3,447,522**. This estimate considers the off-site disposal of 11,600 tons of residual material at a RCRA-permitted, Subtitle C landfill. It was assumed that the residual materials would be loaded into Lift Liners at a rate of 20 containers per day. The following three cases illustrate the cost impact associated with varying key assumptions:

- Case 1 - 11,600 tons at 10 Lift Liners per day. Estimated total cost: $3,609,897
- Case 2 - 11,600 tons at 30 Lift Liners per day. Estimated total cost: $3,393,811
- Case 3 - 14,600 tons at 20 Lift Liners per day. Estimated total cost: $4,150,802

8. Commonwealth Acceptance

The Commonwealth of Puerto Rico concurred with the off-site disposal alternative in November 1998.

9. Community Acceptance

Community Acceptance is addressed in the Appendix 2 Responsiveness Summary. In general, the community appears to have no objections to Alternative 2.

VII. SELECTED REMEDY

Based on considerations of the requirements of CERCLA, the detailed analysis of the alternatives, and the comments received during the public comment period, EPA has determined that Alternative 2, off-site disposal of mercury impacted materials in a permitted RCRA Subtitle C hazardous waste landfill, is the most appropriate remedy for the Site. As described, Alternative 2 would replace Alternative 1, hydrometallurgical treatment using the GEMEP system and subsequent on-site replacement of the treated material. All other components of the original remedy will remain the same.

Alternative 2 encompasses the complete excavation of remaining mercury-impacted materials on the Site, including the washed coarse material that was determined to be below the residential RG of 39 ppm and was backfilled in the West Field, as well as the contaminated materials remaining underneath the cold storage building, electrical substation pads, and maintenance shop.

Off-site disposal provides the best balance of trade-offs among the two alternatives with respect to the NCP evaluation criteria. EPA believes Alternative 2 will provide comparable overall protectiveness of human health and the environment, greater implementability, fewer short-term risks, and significantly lower costs when compared to the GEMEP treatment system and on-site disposal of treated materials. Alternative 2 also could be implemented within a few months and is consistent with Site-specific cleanup levels.

VIII. STATUTORY DETERMINATIONS

Under CERCLA and the NCP, EPA's responsibility at Superfund sites is to undertake remedial actions that achieve adequate protection of human health and the environment. In addition, Section 121 of CERCLA establishes several other statutory requirements and preferences that the selected remedy must meet. Section 121 of CERCLA specifies that when complete, the selected remedial action

for the Site must comply with ARARs established under federal and state environmental laws unless a statutory waiver is justified. The selected remedy also must be cost-effective and use permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. Finally, the statute includes a preference for remedies that employ treatment that permanently and significantly reduces the volume, toxicity, or mobility of hazardous wastes as their principal element. The following sections discuss how the modified remedy meets these statutory requirements.

1. Protection of Human Health and the Environment

The modified remedy maintains a comparable level of protection of human health and the environment as the original remedy set forth in the 1988 Record of Decision. Complete excavation will be performed to remove all remaining mercury-impacted materials, thereby achieving the residential RG of 39 ppm, as calculated in the Baseline Risk Assessment for the Site in 1993. The modified remedy includes the excavation of clean, washed coarse materials that were backfilled in the West Field and contaminated materials remaining underneath structures in the three aforementioned areas. The removal of all Site contaminants to the established cleanup level will mitigate the health threats posed at the Site, primarily the ingestion of soil and waste by local residents, by minimizing exposure to the mercury-impacted materials.

The off-site landfilling of all materials containing mercury in excess of 39 ppm at an EPA-approved, RCRA-permitted (Subtitle C) disposal facility where adequate engineering controls are provided will permanently remove those contaminants from the Site and encapsulate them in a secure and monitored containment system.

2. Compliance with Applicable, or Relevant and Appropriate Requirements (ARARs)

The original analysis with respect to ARARs, as contained in the 1988 Record of Decision, held that the original remedy did comply with all federal and state ARARs.

The key element which is changed in the modified remedy will also comply with federal and state ARARs. The modified remedy will comply with air emissions and Occupational Safety and Health Administration (OSHA) requirements. In addition, the modified remedy will comply with applicable or relevant and appropriate RCRA requirements and/or corresponding state requirements for the identification, transportation, storage, treatment and disposal of hazardous waste (40 CFR Parts 261 through 264 and 268).

The off-site disposal facility which is expected to be used is located in the State of South Carolina; those State requirements for hazardous wastes will be met by the disposal facility to the extent applicable. All necessary approvals will be obtained prior to disposal to ensure the excavated materials meet the facility's permit restrictions.

3. Cost-Effectiveness

Cost-effectiveness is a critical component used in the balancing of the evaluation criteria. With the 250 percent increase in the estimated volume of waste requiring hydrometallurgical treatment, the estimated total cost of the original remedy increased from $1,912,870 (in 1988 dollars) to $8,810,319[2] (in 1999 dollars). The cost savings associated with off-site disposal, rather than on-site treatment, was therefore a factor which eventually led to the selection of the modifications as opposed to the original remedy.

The estimated total cost for the modified remedy, also based on the revised waste volume estimates, is $3,447,522[2].

4. Utilization of Permanent Solutions and Alternative Treatment Technologies (or Resource Recovery Technologies) to the Maximum Extent Practicable

This statutory determination is satisfied by the selected modification.

EPA believes that, based on the information that was available when the Record of Decision was issued in 1988, the original remedy represented the maximum extent to which permanent solutions and treatment technologies could have been used in a cost-effective manner at the Site. We also believe that the modified remedy uses permanent solutions and alternative treatment technologies to the maximum extent practicable after consideration of the most recent volumetric and cost estimates and mitigating factors associated with the implementability of the GEMEP treatment system.

5. Preference for Treatment as a Principal Element

For the modified remedy, the preference for treatment is satisfied since most of the materials requiring off-site disposal have already

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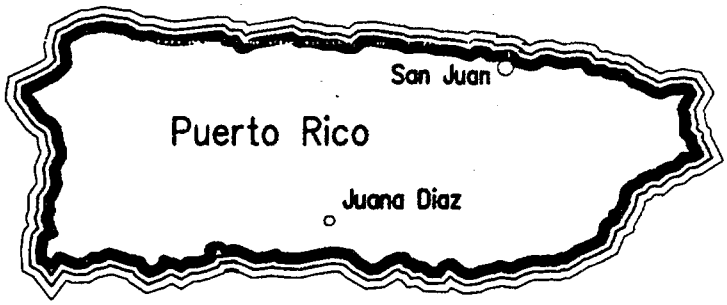
[2]This cost is in addition to the costs GE has spent on the physical separation treatment and off-site disposal of highly concentrated wastes.

undergone the physical separation phase of GEMEP treatment to remove mobile mercury. Additionally, all residual materials containing mercury concentrations in excess of 39 ppm and clean coarse materials previously backfilled in the West Field will be transported off-site to an EPA-approved, RCRA-permitted (Subtitle C) disposal facility, designed to effectively and permanently contain RCRA-hazardous wastes.

IX. DOCUMENTATION OF SIGNIFICANT CHANGE

There are no significant changes from the preferred alternative, as presented in the Post-Decision Proposed Plan released to the public on April 26, 1999.



VICINITY MAP

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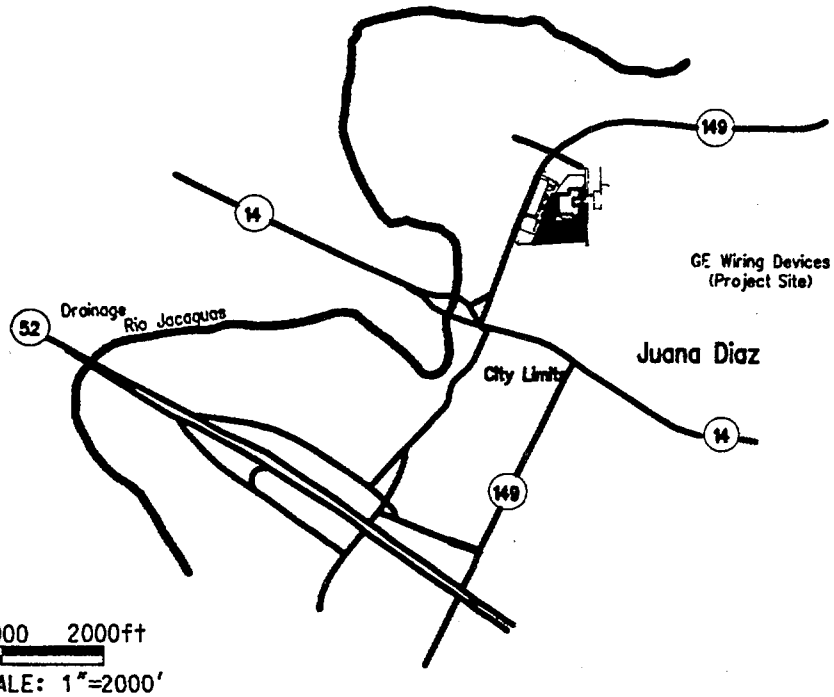

CDM Federal Programs Corporation *A Subsidiary of Camp Dresser & McKee Inc.*	G.E. WIRING DEVICES SITE JUANA DIAZ, PUERTO RICO	FIGURE 1

APPENDIX 1

G E WIRING DEVICES SITE
ADMINISTRATIVE RECORD UPDATE
INDEX OF DOCUMENTS

5.0 RECORD OF DECISION

5.2 Amendment to the Record of Decision

p. 500001-500013 Letter to Ms. Caroline Kwan, New York/Emergency and Remedial Response Division, U.S. EPA, Region II, from Mr. Vijay K. Kakaria, Project Manager, Morrison Knudsen Corporation, re: Remedial Design Work Plan for Juana Diaz, Puerto Rico Project GE Lighting, (attached), January 15, 1995.

p. 500014-500015 Letter to Ms. Caroline Kwan, New York/Emergency and Remedial Response Division, U.S. EPA, Region II, from Mr. Vijay K. Kakaria, Project Manager, Morrison Knudsen Corporation, re: Progress Report for February, 1995, AOC for Remedial Design, GE Wiring Devices, Juana Diaz, Puerto Rico, (attached), May 17, 1995.

p. 500016-500017 Letter to Ms. Caroline Kwan, New York/Emergency and Remedial Response Division, U.S. EPA, Region II, from Mr. Vijay K. Kakaria, Project Manager, Morrison Knudsen Corporation, re: Progress Report for March, 1995, AOC for Remedial Design, GE Wiring Devices, Juana Diaz, Puerto Rico, (attached), May 17, 1995.

P. 500018-500019 Letter to Ms. Caroline Kwan, New York/Emergency and Remedial Response Division, U.S. EPA, Region II, from Mr. Vijay K. Kakaria, Project Manager, Morrison Knudsen Corporation, re: Progress Report for April, 1995, AOC for Remedial Design, GE Wiring Devices, Juana Diaz, Puerto Rico, (attached), May 17, 1995.

P.	500020-500021	Letter to Ms. Caroline Kwan, New York/Emergency and Remedial Response Division, U.S. EPA, Region II, from Mr. Vijay K. Kakaria, Project Manager, Morrison Knudsen Corporation, re: Progress Report for May, 1995, AOC for Remedial Design, GE Wiring Devices, Juana Diaz, Puerto Rico, (attached), June 12, 1995.
P.	500022-500023	Letter to Ms. Caroline Kwan, New York/Emergency and Remedial Response Division, U.S. EPA, Region II, from Mr. Vijay K. Kakaria, Project Manager, Morrison Knudsen Corporation, re: Progress Report for June, 1995, AOC for Remedial Design, GE Wiring Devices, Juana Diaz, Puerto Rico, (attached), June 30, 1995.
P.	500024-500025	Letter to Ms. Caroline Kwan, New York/Emergency and Remedial Response Division, U.S. EPA, Region II, from Mr. Vijay K. Kakaria, Project Manager, Morrison Knudsen Corporation, re: Progress Report for July, 1995, AOC for Remedial Design, GE Wiring Devices, Juana Diaz, Puerto Rico, (attached), July 28, 1995.
P.	500026-500027	Letter to Ms. Caroline Kwan, New York/Emergency and Remedial Response Division, U.S. EPA, Region II, from Mr. Vijay K. Kakaria, Project Manager, Morrison Knudsen Corporation, re: Progress Report for August, 1995, AOC for Remedial Design, GE Wiring Devices, Juana Diaz, Puerto Rico, (attached), September 20, 1995.
P.	500028-500029	Letter to Ms. Caroline Kwan, New York/Emergency and Remedial Response Division, U.S. EPA, Region II, from Mr. Vijay K. Kakaria, Project Manager, Morrison Knudsen Corporation, re: Progress Report for September, 1995, AOC for Remedial Design, GE Wiring Devices, Juana Diaz, Puerto Rico, (attached), October 11, 1995.
P.	500030-500031	Letter to Ms. Caroline Kwan, New York/Emergency and Remedial Response Division, U.S. EPA, Region

II, from Mr. Vijay K. Kakaria, Project Manager, Morrison Knudsen Corporation, re: Progress Report for October, 1995, AOC for Remedial Design, GE Wiring Devices, Juana Diaz, Puerto Rico, (attached), November 30, 1995.

P. 500032-500033 Letter to Ms. Caroline Kwan, New York/Emergency nd Remedial Response Division, U.S. EPA, Region II, from Mr. Vijay K. Kakaria, Project Manager, Morrison Knudsen Corporation, re: Progress Report for November, 1995, AOC for Remedial Design, GE Wiring Devices, Juana Diaz, Puerto Rico, (attached), December 5, 1995.

P. 500034-500035 Letter to Ms. Caroline Kwan, Project Manager, New York/Caribbean Superfund Branch II, U.S. EPA Region II, from Mr. Tom J. Harlan, Jr., Environmental Specialist, General Electric Company, re: GE Lighting Wiring Devices Site, Juana Diaz, Puerto Rico -- Monthly Report, (attached: M&E Staffing Plan, GE Wiring Devices Site, Juana Diaz, Puerto Rico), August 26, 1996.

P. 500036-500036 Letter to Ms. Caroline Kwan, Project Manager, New York/Caribbean Superfund Branch II, U.S. EPA Region II, from Mr. Tom J. Harlan, Jr., Environmental Specialist, General Electric Company, re: GE Lighting Wiring Devices Site, Juana Diaz, Puerto Rico -- Monthly Report, November 5, 1996.

P. 500037-500038 Letter to Ms. Caroline Kwan, Project Manager, New York/Caribbean Superfund Branch II, U.S. EPA Region II, from Mr. Tom J. Harlan, Jr., Environmental Specialist, General Electric Company, re: GE Lighting Wiring Devices Site, Juana Diaz, Puerto Rico -- Monthly Report, December 5, 1996.

p. 500039-500041 Letter to Ms. Caroline Kwan, Project Manager, New York/Caribbean Superfund Branch II, U.S. EPA Region II, from Mr. Tom J. Harlan, Jr., Environmental Specialist, General Electric Company, re: GE Lighting Wiring Devices Site, Juana Diaz, Puerto Rico -- Monthly Report,

(attached: Juana Diaz Site Remediation Schedule), January 6, 1997.

P. 500042-500045 Letter to Ms. Caroline Kwan, Project Manager, New York/Caribbean Superfund Branch II, U.S. EPA Region II, from Mr. Tom J. Harlan, Jr., Environmental Specialist, General Electric Company, re: GE Lighting Wiring Devices Site, Juana Diaz, Puerto Rico -- Monthly Report, (Attached: Juana Diaz Site Remediation Schedule), February 6, 1997.

P. 500046-500046 Letter to Ms. Caroline Kwan, Project Manager, New York/Caribbean Superfund Branch II, U.S. EPA Region II, from Mr. Tom J. Harlan, Jr., Environmental Specialist, General Electric Company, re: GE Lighting Wiring Devices Site, Juana Diaz, Puerto Rico -- Monthly Report, March 7, 1997.

P. 500047-500051 Public Notice: "SUPERFUND REMEDIAL ACTION PUBLIC MEETING STATEMENT", GE Wiring Devices, Juana Diaz, Puerto Rico, prepared by General Electric Company, Cleveland, OH, April 1997.

P. 500052-500068 Plan: Erosion And Surface Water Control Plan for General Electric Wiring Devices Site, Juana Diaz, Puerto Rico, prepared by Metcalf & Eddy, prepared for the U.S. EPA, Region II, April 1997.

P. 500069-500070 Letter to Ms. Caroline Kwan, Project Manager, New York/Caribbean Superfund Branch II, U.S. EPA Region II, from Mr. Tom J. Harlan, Jr., Environmental Specialist, General Electric Company, re: GE Lighting Wiring Devices Site, Juana Diaz, Puerto Rico -- Monthly Report, (attached: Juana Diaz Site Remediation Schedule), April 6, 1997.

P. 500071-500071 Letter to Ms. Caroline Kwan, Project Manager, New York/Caribbean Superfund Branch II, U.S. EPA Region II, from Mr. Tom J. Harlan, Jr., Environmental Specialist, General Electric Company, re: GE Lighting Wiring Devices Site,

		Juana Diaz, Puerto Rico--Monthly Report, May 5, 1997.
P.	500072-500073	Letter to Ms. Caroline Kwan, Project Manager, New York/Caribbean Superfund Branch II, U.S. EPA Region II, from Mr. Tom J. Harlan, Jr., Environmental Specialist, General Electric Company, re: GE Lighting Wiring Devices Site, Juana Diaz, Puerto Rico -- Monthly Report, June 6, 1997.
P.	500074-500076	Letter to Ms. Caroline Kwan, Project Manager, New York/Caribbean Superfund Branch II, U.S. EPA Region II, from Mr. Tom J. Harlan, Jr., Environmental Specialist, General Electric Company, re: GE Lighting Wiring Devices Site, Juana Diaz, Puerto Rico -- Monthly Report, (attached: June 1997 Update, Juana Diaz Site Remediation Schedule), June 20, 1997.
P.	500077-500081	Letter to Maheyar R. Billimoria, Ph.D., CDM Federal Programs Corporation, Ms. Caroline Kwan, U.S. EPA, Region II, and Mr. Miguel Rullan, Puerto Rico Environmental Quality Board, from Scott R. Smith, P.E., Metcalf & Eddy, re: GE Wiring Devices Site-Stormwater, July 2, 1997.
P.	500082-500083	Letter to Ms. Caroline Kwan, Project Manager, New York/Caribbean Superfund Branch II, U.S. EPA Region II, from Mr. Tom J. Harlan, Jr., Environmental Specialist, General Electric Company, re: GE Lighting Wiring Devices Site, Juana Diaz, Puerto Rico -- Monthly Report, (attached: June 1997 Update, Juana Diaz Site Remediation Schedule), July 9, 1997.
P.	500084-500084	Letter to Ms. Caroline Kwan, Project Manager, New York/Caribbean Superfund Branch II, U.S. EPA Region II, from Mr. Tom J. Harlan, Jr., Environmental Specialist, General Electric Company, re: GE Lighting Wiring Devices Site, Juana Diaz, Puerto Rico -- Monthly Report, August 10, 1997.
P.	500085-	Letter to Ms. Caroline Kwan, Project Manager, New

	500087	York/Caribbean Superfund Branch II, U.S. EPA Region II, from Mr. Tom J. Harlan, Jr., Environmental Specialist, General Electric Company, re: GE Lighting Wiring Devices Site, Juana Diaz, Puerto Rico -- Monthly Report, (attached: Generalized Site Plan), September 9, 1997.
p.	500088-500093	Letter to Ms. Caroline Kwan, Project Manager, New York/Caribbean Superfund Branch II, U.S. EPA, Region II, from Mr. Tom J. Harlan, Jr., Environmental Specialist, General Electric Company, re: GE Lighting Wiring Devices Site, Juana Diaz, Puerto Rico-Cold Storage Building, September 30, 1997.
P.	500094-500095	Letter to Ms. Caroline Kwan, Project Manager, New York/Caribbean Superfund Branch II, U.S. EPA Region II, from Mr. Tom J. Harlan, Jr., Environmental Specialist, General Electric Company, re: GE Lighting Wiring Devices Site, Juana Diaz, Puerto Rico -- Monthly Report, October 7, 1997.
P.	500096-500104	Letter to Ms. Nina Kuchar, US EPA CLASS, Dyncorp Information and Engineering Technology, Inc., from Maheyar R. Billimoria, Ph.D., Work Assignment Manager, CDM Federal Programs Corporation, re: Original CLP Paperwork for RAS Case Number 25729, (attached), October 14, 1997.
P.	500105-500118	Letter to Ms. Janet Trotter, RSCC Lockhead, from Maheyar R. Billimoria, Ph.D., Work Assignment Manager, CDM Federal Programs Corporation, re: Sampling Trip Report for RAS Case Number 25729, prepared by CDM Federal Programs Corporation, prepared for U.S. EPA, Region II, (attached), October 14, 1997.
P.	500119-500176	Letter to Mr. Mark Austin, Project Officer, U.S. EPA, Region II, and Ms. Caroline Kwan-Appleman, Remedial Project Manager, U.S. EPA, Region II, from Mr. Robert D. Goltz, P.E., ARCS II Program Manager, CDM Federal Programs Corporation, re: Bi-Weekly Field Oversight Progress Report, Document

Control No. 7720-072-LR-CPKG, prepared by CDM Federal Programs Corporation, prepared for U.S. EPA, Region II, (attached), October 22, 1997.

P. 500177-500178 Letter to Ms. Caroline Kwan, Project Manager, New York/Caribbean Superfund Branch II, U.S. EPA Region II, from Mr. Tom J. Harlan, Jr., Environmental Specialist, General Electric Company, re: GE Lighting Wiring Devices Site, Juana Diaz, Puerto Rico -- Monthly Report, November 7, 1997.

P. 500179-500183 Letter to Ms. Molly Boyter, US EPA CLASS, Dyncorp Information and Engineering Technology, Inc., Maheyar R. Billimoria, Ph.D., Work Assignment Manager, CDM Federal Programs Corporation, re: Original CLP Paperwork for RAS Case Number 25793, prepared by CDM Federal Programs Corporation, prepared for U.S. EPA, Region II, (attached), November 11, 1997.

P. 500184-500218 Letter to Mr. Mark Austin, Project Officer, US EPA, Region II, and Ms. Caroline Kwan-Appleman, Remedial Project Manager, U.S. EPA, Region II, from Mr. Robert D. Goltz, P.E., ARCS II Program Manager, CDM Federal Programs Corporation, re: Bi-Weekly Field Oversight Progress Report, Document Control No. 7720-072-LR-CPPD, prepared by CDM Federal Programs Corporation, prepared for US EPA, Region II, (attached), November 18, 1997.

P. 500219-500219 Letter to Sra. Clara O'Neill, Directora Interina-Area de Servicios Ambientales, Autoridad de Acueductos y Alcantarillados, from Mr. Tom J. Harlan, Project Manager, General Electric Company, re: GE Wiring Devices - Superfund Site, Permit GDG-97-405-033, dated July 9, 1977, November 24, 1997.

P. 500220-500221 Letter to Ms. Caroline Kwan, Project Manager, New York/Caribbean Superfund Branch II, U.S. EPA Region II, from Mr. Tom J. Harlan, Jr., Environmental Specialist, General Electric Company, re: GE Lighting Wiring Devices Site, Juana Diaz, Puerto Rico -- Monthly Report,

December 5, 1997.

P. 500222-500227 Letter to Ms. Nicole Coene, US EPA CLASS, Dyncorp Information and Engineering Technology, Inc., from Maheyar R. Billimoria, Ph.D., Work Assignment Manager, CDM Federal Programs Corporation, re: Original CLP Paperwork for RAS Case Number 25897, prepared by CDM Federal Programs Corporation, prepared for US EPA, Region II, (attached), December 16, 1997.

P. 500228-500261 Letter to Mr. Mark Austin, Project Officer, U.S. EPA, Region II, and Ms. Caroline Kwan-Appleman, Remedial Project Manager, U.S. EPA, Region II, from Mr. Robert D. Goltz, P.E., ARCS II Program Manager, CDM Federal Programs Corporation, re: Bi-Weekly Field Oversight Progress Report, Document Control No. 7720-072-LR-CPVF, prepared by CDM Federal Programs Corporation, prepared for US EPA, Region II, (attached), December 19, 1997.

P. 500262-500262 Letter to Ms. Caroline Kwan, Project Manager, New York/Caribbean Superfund Branch II, U.S. EPA, Region II, from Mr. Tom J. Harlan, Jr., Environmental Specialist, General Electric, re: GE Lighting Wiring Devices Site, Juana Diaz, Puerto Rico -- Monthly Report, January 12, 1998.

P. 500263-500265 Letter to Ms. Caroline Kwan, Project Manager, New York/Caribbean Superfund Branch II, U.S. EPA, Region II, from Mr. Tom J. Harlan, Jr., Environmental Specialist, General Electric Company, re: GE Wiring Devices Site - Juana Diaz, (attached: constructing a temporary pile), January 19, 1998.

P. 500266-500272 Letter to Ms. Nicole Coene, US EPA CLASS, Dyncorp Information and Engineering Technology, Inc., from Maheyar R. Billimoria, Ph.D., Work Assignment Manager, CDM Federal Programs Corporation, re: Original CLP Paperwork for RAS Case Number 25958, (attached), January 20, 1998.

P. 500273- Letter to Ms. Janet Trotter, RSCC Lockhead,

	500284	Maheyar R. Billimoria, Ph.D., Work Assignment Manager, CDM Federal Programs Corporation, re: Sampling Trip Report for RAS Case Number 25958, prepared by CDM Federal Programs Corporation, prepared for US EPA, Region II, (attached), January 20, 1998.
p.	500285-500315	Letter to Mr. Mark Austin, Project Officer, U.S. EPA, Region II, Ms. Caroline Kwan-Appleman, Remedial Project Manager, U.S. EPA, Region II, from Mr. Robert D. Goltz, P.E., ARCS II Program Manager, CDM Federal Programs Corporation, re: Bi-Weekly Field Oversight Progress Report Document Control No. 7720-072-LR-CQCY, prepared by CDM Federal Programs Corporation, prepared for US EPA, Region II, (attached), January 29, 1998.
P.	500316-500317	Letter to Ms. Caroline Kwan, Project Manager, New York/Caribbean Superfund Branch II, U.S. EPA Region II, from Mr. Tom J. Harlan, Jr., Environmental Specialist, General Electric Company, re: GE Lighting Wiring Devices Site, Juana Diaz, Puerto Rico -- Monthly Report, February 9, 1998.
P.	500318-500322	Letter to Ms. Nicole Coene, US EPA CLASS, Dyncorp Information and Engineering Technology, Inc., from Maheyar R. Billimoria, Ph.D., Work Assignment Manager, CDM Federal Programs Corporation, re: Original CLP Paperwork for RAS Case Number 25996, (attached), February 17, 1998.
P.	500323-500332	Letter to Ms. Janet Trotter, RSCC Lockhead, Maheyar R. Billimoria, Ph.D., Work Assignment Manager, CDM Federal Programs Corporation, re: Sampling Trip Report for RAS Case Number 25996, prepared by CDM Federal Programs Corporation, prepared for U.S. EPA, Region II, (attached) February 17, 1998.
P.	500333-500358	Letter to Mr. Mark Austin, Project Officer, U.S. EPA, Region II, and Ms. Caroline Kwan-Appleman, Remedial Project Manager, U.S. EPA, Region II, from Mr. Robert D. Goltz, P.E., ARCS II Program Manager, CDM Federal Programs Corporation, re: Bi-

		Weekly Field Oversight Progress Report, Document Control No. 7720-072-LR-CQHN, prepared by CDM Federal Programs Corporation, prepared for U.S. EPA, Region II, (attached),February 24, 1998.
P.	500359-500359	Letter to Ms. Caroline Kwan, Project Manager, New York/Caribbean Superfund Branch II, U.S. EPA, Region II, from Mr. Tom J. Harlan, Jr., Environmental Specialist, General Electric Company, re: GE Lighting Wiring Devices Site, Juana Diaz, Puerto Rico -- Monthly Report, March 10, 1998.
p.	500360-500366	Letter to Ms. Nicole Coene, US EPA CLASS, Dyncorp Information and Engineering Technology, Inc., from Maheyar R. Billimoria, Ph.D., Work Assignment Manager, CDM Federal Programs Corporation, re: Original CLP Paperwork for RAS Case Number 26044, (attached), March 18, 1998.
P.	500367-500379	Letter to Ms. Janet Trotter, RSCC Lockhead, Maheyar R. Billimoria, Ph.D., Work Assignment Manager, CDM Federal Programs Corporation, re: Sampling Trip Report for RAS Case Number 26044, prepared by CDM Federal Programs Corporation, prepared for U.S. EPA, Region II,(attached), March 18, 1998.
P.	500380-500400	Letter to Mr. Mark Austin, Project Officer, U.S. EPA, Region II, and Ms. Caroline Kwan-Appleman, Remedial Project Manager, U.S. EPA, Region II, from Mr. Robert D. Goltz, P.E., ARCS II Program Manager, CDM Federal Programs Corporation, re: Bi-Weekly Field Oversight Progress Report, Document Control No. 7720-072-LR-CQLS, prepared by CDM Federal Programs Corporation, prepared for U.S. EPA, Region II, (attached), March 19, 1998.
P.	500401-500407	Letter to Ms. Nicole Coene, US EPA CLASS, Dyncorp Information and Engineering Technology, Inc., from Maheyar R. Billimoria, Ph.D., Work Assignment Manager, CDM Federal Programs Corporation, re: Original CLP Paperwork for RAS Case Number 26161, (attached), May 12, 1998.

P. 500408-500419 Letter to Ms. Janet Trotter, RSCC Lockhead, Maheyar R. Billimoria, Ph.D., Work Assignment Manager, CDM Federal Programs Corporation, re: Sampling Trip Report for RAS Case Number 26161, prepared by CDM Federal Programs Corporation, prepared for US EPA, Region II,(attached), May 12, 1998.

P. 500420-500426 Letter to Mr. Scott Kirchner, CDM-FPC, from Mr. John Birri, Special Projects Coordinator, Laboratory Branch, U.S. EPA, Region II, re: results of the GE Wiring sampling survey conducted the week of April 6, 1998. (attached: Completed Analysis Report for GE Wiring Devices, project number 771), May 14, 1998.

P. 500427-500448 Letter to Mr. Mark Austin, Project Officer, U.S. EPA, Region II, and Ms. Caroline Kwan-Appleman, Remedial Project Manager, U.S. EPA, Region II, from Mr. Robert D. Goltz, P.E., ARCS II Program Manager, CDM Federal Programs Corporation, re: Bi-Weekly Field Oversight Progress Report, Document Control No. 7720-072-LR-CQWM, prepared by CDM Federal Programs Corporation, prepared for U.S. EPA, Region II, (attached), May 18, 1998.

P. 500449-500454 Report: Lab Data Management System, re: results of the GE Wiring sampling survey conducted the week of April 6, 1998. (attached: Completed Analysis Report for GE Wiring Devices 771, project number 833), June 22, 1998.

P. 500455-500468 Letter to Mr. Scott Kirchner, CDM-FPC, from Mr. John Birri, Special Projects Coordinator, Laboratory Branch, U.S. EPA, Region II, re: results of the GE Wiring sampling survey conducted the week of March 2, 1998. (attached: Completed Analysis Report for GE Wiring Devices, project number 832 and project number 740), June 24, 1998.

P. 500469-500481 Plan: Superfund Post-Decision Proposed Plan, GE Wiring Devices Superfund Site,Juana Diaz, Puerto Rico, prepared by U.S. EPA, Region II, March 1999.

p. 500482-500586 Report: Focused Feasibility Study, GE Wiring Devices Superfund Site, Juana Diaz, Puerto Rico, prepared by Metcalf & Eddy, Inc., March 1999.

Document Number: GEW-001-0022 To 0022 Parent: GEW-001-0018 Date: / /

Title: Juana Diaz Plant Soil Evaluation Samples: Location Sketch

Type: GRAPHIC
Author: none: none
Recipient: none: none

Document Number: GEW-001-0025 To 0025 Parent: GEW-001-0023 Date: / /

Title: Juana Diaz Plant Soil Evaluation Samples: Location Sketch

Type: GRAPHIC
Author: none: none
Recipient: none: none

Document Number: GEW-001-0158 To 0160 Date: / /

Title: Analytical data and field data from standpipes at the Juana Diaz site

Type: DATA
Author: none: Law Engineering Testing
Recipient: none: none

Document Number: GEW-001-0177 To 0177 Parent: GEW-001-0170 Date: / /

Title: Figure 1 - Generalized Locations of August 1982 Test Pits 1 through 12

Type: GRAPHIC
Author: none: Law Engineering Testing
Recipient: none: none

Document Number: GEW-001-0286 To 0286 Parent: GEW-001-0285 Date: / /

Title: Results of Mercury Analyses, Law Engineering Project No. MH2317

Type: DATA
Author: Maroncelli, James M.: Law Engineering Testing
Recipient: none: none

Document Number: GEW-001-0448 To 0449 Parent: GEW-001-0447 Date: / /

Title: Principles of Engineering Geology and Geotechnics: Chapter 18: Earthquakes and Aseismic Design

Type: CORRESPONDENCE
Condition: INCOMPLETE
Author: Krynine, Dimitri P.: McGraw Hill Book Company
Recipient: none: none

Document Number: GEW-001-0537 To 0537 Parent: GEW-001-0511 Date: / /

Title: Results of Mercury Analyses, Law Engineering Project No. MH2317

Type: PLAN
Author: Maroncelli, James M.: Law Engineering Testing
Recipient: none: none

Document Number: GEW-001-0556 To 0607 Date: / /

Title: Map of Generalized Site Setting, Initial Assessment Findings, and other presentation materials for a GE Wiring meeting

Type: OTHER
Author: none: none
Recipient: none: none

Document Number: GEW-001-0650 To 0651 Date: / /

Title: (News release: GE Consents to EPA order to Act on Juana Diaz, P.R. Contamination)

Type: CORRESPONDENCE
Author: none: US EPA
Recipient: none: none

Document Number: GEW-001-0692 To 0700 Parent: GEW-001-0689 Date: / /

Title: Data Report Notice and Report of Data

Type: PLAN
Author: Scammell, Diana A.: CompuChem
Recipient: Neil, Larry A.: Law Engineering Testing

Document Number: GEW-001-0759 To 0765 Parent: GEW-001-0758 Date: / /

Title: Community Relations Plan, General Electric Company, Juana Diaz Plant

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: GEW-001-0767 To 0767 Parent: GEW-001-0766 Date: / /

Title: Remedial Investigation Work Plan Projected Schedule

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: GEW-001-0774 To 0774 Parent: GEW-001-0770 Date: / /

Title: Table 2, Comparative Analyses of Soil Samples for Mercury Concentration

Type: DATA
Author: none: none
Recipient: none: none

Document Number: GEW-001-0776 To 1210 Parent: GEW-001-0775 Date: / /

Title: Remedial Investigation Report for General Electric Wiring Devices Site, Juana Diaz, Puerto Rico

Type: REPORT
Condition: MARGINALIA
Author: none: Law Engineering Testing
Recipient: none: General Electric

Document Number: GEW-001-1317 To 1323 Parent: GEW-001-1316 Date: / /

Title: Document No. 1 - Work Plan for Supplemental Soil Sampling, General Electric Company Wiring Devices Facility, Juana Diaz, Puerto Rico

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: GEW-001-1324 To 1326 Parent: GEW-001-1316 Date: / /

Title: Document No. 2 - Work Plan for PCB Analyses, General Electric Company Wiring Devices Facility, Juana Diaz, Puerto Rico

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: GEW-001-2220 To 2227 Parent: GEW-001-2218 Date: / /

Title: Interim Guidance on Compliance with Applicable or Relevant and Appropriate Requirements

Type: PLAN
Condition: DRAFT
Author: none: none
Recipient: none: none

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ocument Number: GEW-001-0288 To 0384 Parent: GEW-001-0287 Date: / /

Title: Summary of CompuChem data

Type: DATA
Author: Bloom, Richard L.: Mead CompuChem Laboratory
Recipient: Maroncelli, James M.: Law Engineering Testing

Document Number: GEW-001-2209 To 2209 Parent: GEW-001-2199 Date: / /

Title: Proposed Remedy Selection Process Under Reauthorization Chart

Type: GRAPHIC
Author: none: none
Recipient: none: none

Document Number: GEW-001-0012 To 0013 Parent: GEW-001-0011 Date: 10/21/76

Title: Resource Conservation and Recovery Act, Public law 94-580, as amended by the Quiet Communities Act of 1978

Type: LEGAL DOCUMENT
Author: none: US EPA
ecipient: none: none

Document Number: GEW-001-0001 To 0001 Date: 06/12/79

Title: (Memorandum re: Mercury Sampling)

Type: CORRESPONDENCE
Author: Figueroa, Solange I.: General Electric
Recipient: Poland, J.B.: General Electric
Attached: GEW-001-0002 GEW-001-0004 GEW-001-0006 GEW-001-0009

Document Number: GEW-001-0002 To 0003 Parent: GEW-001-0001 Date: 06/18/79

Title: (Memorandum re: Mercury Sampling on 6/16/79)

Type: CORRESPONDENCE
Author: Figueroa, Solange I.: General Electric
Recipient: Poland, J.B.: General Electric

Document Number: GEW-001-0006 To 0008 Parent: GEW-001-0001 Date: 06/20/79

Title: (Memorandum re: Mercury Sampling - Follow Up)

Type: CORRESPONDENCE
Author: Figueroa, Solange I.: General Electric
Recipient: Poland, J.B.: General Electric

Document Number: GEW-001-0009 To 0010 Parent: GEW-001-0001 Date: 06/22/79

Title: (Memorandum re: Mercury Button Handling, Plating Area, Juana Diaz)

Type: CORRESPONDENCE
Author: Figueroa, Solange I.: General Electric
Recipient: Poland, J.B.: General Electric

Document Number: GEW-001-0011 To 0011 Date: 06/25/79

Title: (Memorandum re: Juana Diaz Plating Area Situation)

Type: CORRESPONDENCE
Author: Figueroa, Solange I.: General Electric
Recipient: Poland, J.B.: General Electric
Attached: GEW-001-0012

Document Number: GEW-001-0016 To 0016 Parent: GEW-001-0014 Date: 07/12/79

Title: Analytical results of mercury soil samples for samples received 06/26/79

Type: DATA
Author: none: General Electric
Recipient: none: none

Document Number: GEW-001-0015 To 0015 Parent: GEW-001-0014 Date: 07/19/79

Title: (Memorandum re: Mercury Soil Samples)

Type: CORRESPONDENCE
Author: Figueroa, Solange I.: General Electric
Recipient: Poland, J.B.: General Electric

Document Number: GEW-001-0014 To 0014 Date: 08/16/79

Title: (Letter re: Mercury Soil Contamination - Juana Diaz, P.R.)

Type: CORRESPONDENCE
Author: Feliu, Leo: General Electric
Recipient: Burns, William S.: General Electric
Attached: GEW-001-0015 GEW-001-0016

Document Number: GEW-001-0017 To 0017 Date: 09/27/79

Title: (Memorandum re: Plant Soil Evaluation Program)

Type: CORRESPONDENCE
Author: Feliu, Leo: General Electric
Recipient: Poland, J.B.: General Electric

Document Number: GEW-001-0020 To 0021 Parent: GEW-001-0018 Date: 10/05/79

Title: Environmental Monitoring Analytical Services Request Forms

Type: OTHER
Author: none: General Electric
Recipient: Feliu, Leo: General Electric

Document Number: GEW-001-0018 To 0019 Date: 10/11/79

Title: (Letter re: Juana Diaz Plant Soil Evaluation Samples)

Type: CORRESPONDENCE
Author: Figueroa, Solange I.: General Electric
Recipient: Feliu, Leo: General Electric
Attached: GEW-001-0020 GEW-001-0022

Document Number: GEW-001-0024 To 0024 Parent: GEW-001-0023 Date: 10/24/79

Title: Environmental Analysis of Mercury contained in soil samples received 10/12/79

Type: DATA
Author: none: General Electric
Recipient: none: General Electric

Document Number: GEW-001-0023 To 0023 Date: 11/02/79

Title: (Letter re: Laboratory Analysis of the Juana Diaz Plant Soil)

Type: CORRESPONDENCE
Author: Figueroa, Solange I.: General Electric
Recipient: Schauseil, Robert I.: General Electric
Attached: GEW-001-0024 GEW-001-0025

Document Number: GEW-001-0450 To 0502 Date: 11/02/80

Title: (Letter re: Attached Report of Clay Continuity Study, Waste Fill Area, Juana Diaz Plant, Puerto Rico, Law Engineering Project No. MH1367)

Type: CORRESPONDENCE
Author: Germond, Bart J.: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-0026 To 0046 Date: 04/22/81

Title: Field notes made by W.J. Alexander during auger borings and test pit excavations at the West Field Site

Type: OTHER
Author: Alexander, W. Joseph: Law Engineering Testing
Recipient: none: none

Document Number: GEW-001-0047 To 0047 Date: 05/19/81

Title: (Certificate of Analysis for eight water samples received 04/30/81)

Type: DATA
Author: illegible: Stewart Laboratories
Recipient: Phillips, J.M.: General Electric

Document Number: GEW-001-0505 To 0508 Date: 06/05/81

Title: Notification of Hazardous Waste Site: General Electric Company - Wiring Devices Department

Type: OTHER
Author: Schauseil, Robert I.: General Electric
Recipient: Frisco, John S.: US EPA

Document Number: GEW-001-0099 To 0099 Parent: GEW-001-0048 Date: 06/18/81

Title: (Certificate of Analysis on two samples of waste material)

Type: DATA
Author: illegible: Stewart Laboratories
Recipient: Phillips, J.M.: General Electric

Document Number: GEW-001-0504 To 0504 Parent: GEW-001-0503 Date: 06/18/81

Title: Certificate of Analysis (for two samples of waste material)

Type: LEGAL DOCUMENT
Author: illegible: Stewart Laboratories
Recipient: Phillips, Marvin: General Electric

Document Number: GEW-001-0048 To 0098 Date: 06/19/81

Title: (Letter re: Attached Report Submittal, Hydrogeologic Investigatigation, Waste Fill Area, Juana Diaz, Puerto Rico, Law Engineering Job Number MH1223)

Type: CORRESPONDENCE
Author: Alexander, W. Joseph: Law Engineering Testing
Recipient: Phillips, J.M.: General Electric
Attached: GEW-001-0099

Document Number: GEW-001-0503 To 0503 Date: 10/30/81

Title: (Letter re: Amendment to the June 19th Report, Hydrogeologic Investigation Waste Fill Area, Juana Diaz Plant, Puerto Rico, Law Engineering Job No. MH1223)

Type: CORRESPONDENCE
Author: Germond, Bart J.: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric
Attached: GEW-001-0504

Document Number: GEW-001-0100 To 0150 Date: 11/02/81

Title: (Letter re: Attached Report of Clay Continuity Study, Waste Fill Area, Juana Diaz Plant, Puerto Rico, Law Engineering Project No. MH1367)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: Germond, Bart J.: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-0151 To 0152 Date: 01/27/82

Title: (Letter re: EPA's review of comments regarding Law Engineering Testing Company's Clay Continuity Report)

Type: CORRESPONDENCE
Author: Frisco, John S.: US EPA
Recipient: Phillips, Marvin: General Electric

Document Number: GEW-001-0509 To 0510 Date: 01/27/82

Title: (Letter re: U.S. EPA's comments on Law Engineering Testing Company's Continuity of Clay Report).

Type: CORRESPONDENCE
Author: Frisco, John S.: US EPA
Recipient: Phillips, Marvin: General Electric

Document Number: GEW-001-0554 To 0554 Date: 02/04/82

Title: Water Analysis Report (for samples received 01/28/82)

Type: DATA
Author: illegible: Caribtec Laboratories
Recipient: none: none

Document Number: GEW-001-0153 To 0157 Date: 02/15/82

Title: Attachment 2-5 Certified Laboratory Results (water samples from selected standpipes)

Type: DATA
Author: illegible: Omni Research Incorporated
Recipient: none: General Electric

Document Number: GEW-001-0161 To 0162 Date: 02/19/82

Title: (Letter re: Water Level Monitoring Program, Waste Fill Area, Juana Diaz Plant, Puerto Rico, Law Engineering Project No. MH1440)

Type: CORRESPONDENCE
Author: Germond, II, Bart J.: Law Engineering Testing
Recipient: Marques, Jose A.: General Electric

Document Number: GEW-001-0163 To 0165 Date: 02/23/82

Title: (Letter re: Response to U.S. EPA'S Review, Juana Diaz, Puerto Rico Study, by Mr. John S. Frisco, Chief, Hazard Assessment Section, Law Engineering Project No. MH1367)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: White, Robert M.: Law Engineering Testing
Recipient: Phillips, Marvin: General Electric

Document Number: GEW-001-0168 To 0169 Date: 03/04/82

Title: (Letter re: General Electric Juana Diaz)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: de la Cruz, Luis E: PR Environmental Quality Board
Recipient: Colon, Javier: General Electric

Document Number: GEW-001-0549 To 0549 Parent: GEW-001-0511 Date: 04/21/82

Title: Sampling Trip Report (at Juana Diaz site for sampling trip on 04/19/82 and 04/21/82 and stating "measurements taken with Bachrach Mercury Sniffer along fence perimeters- No mercury detected")

Type: PLAN
Condition: MISSING ATTACHMENT
Author: Lipsky, David: US EPA
Recipient: none: none

Document Number: GEW-001-0166 To 0167 Date: 05/18/82

Title: (Letter re: Questions and answers from the March 4, 1982 letter that raised concerns about the Clay Continuity Report and Hydrogeologic Study)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: de la Cruz, Luis E.: PR Environmental Quality Board
Recipient: Colon, Javier: General Electric

Document Number: GEW-001-0511 To 0549 Date: 08/04/82

Title: Hazardous Ranking System Scores Package: General Electric - Wiring Devices of Puerto Rico

Type: OTHER
Author: Lipsky, David: US EPA
Recipient: none: none
Attached: GEW-001-0537 GEW-001-0549

Document Number: GEW-001-0184 To 0192 Date: 08/27/82

Title: General Electric Company, Juana Diaz Plant, Retaining Wall (Muro de Contencion)

Type: GRAPHIC
Author: Marques, Jose A.: General Electric
Recipient: none: none

Document Number: GEW-001-0170 To 0176 Date: 09/22/82

Title: (Letter re: Report of August, 1982 Site Visit, Juana Diaz Plant, Puerto Rico, Law Engineering Project No. MH2296)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: Alexander, W. Joseph: Law Engineering Testing
Recipient: Friss, James T.: General Electric
Attached: GEW-001-0177

Document Number: GEW-001-0178 To 0183 Date: 09/29/82

Title: (Letter re: Drilling and Monitoring Well Installation, General Electric Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: Jernigan, Bruce L.: Law Engineering Testing
Recipient: Castillo, Luis Vasquez: Vazquez Agrait, Vazquez Castillo & Despiau

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Document Number: GEW-001-0193 To 0196 Date: 10/28/82

Title: (Letter re: Attached Technical Response to EQB's Clay Continuity and Alluvial Contamination Concerns, Juana Diaz Site, Puerto Rico, Law Engineering Project No. MH2317.01)

Type: CORRESPONDENCE
Author: Jernigan, Bruce L.: Law Engineering Testing
Recipient: Friss, James T.: General Electric

Document Number: GEW-001-0197 To 0197 Date: 11/05/82

Title: (Letter re: General Electric, Juana Diaz Site, P.R.)

Type: CORRESPONDENCE
Author: Jernigan, Bruce L.: Law Engineering Testing
Recipient: Castillo, Luis Vasquez: Vazquez Agrait, Vazquez Castillo & Despiau

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Document Number: GEW-001-0220 To 0230 Parent: GEW-001-0218 Date: 11/17/82

Title: (Copies of driller's logs for the monitoring wells recently installed from 10/03/82-11/17/82)

Type: OTHER
Condition: ILLEGIBLE
Author: none: Caribbean Soil Testing Company
Recipient: none: none

Document Number: GEW-001-0198 To 0217 Date: 11/22/82

Title: (Letter re: Attached Status Report of Hydraulic Conditions, Perched-Water Table; Waste Fill Area, Juana Diaz Plant, Puerto Rico, Law Engineering Project No. MH1440.03)

Type: CORRESPONDENCE
Author: Alexander, W. Joseph: Law Engineering Testing
Neal, Larry A.: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-0553 To 0553 Date: 12/09/82

Title: (Letter re: Receipt of November 29, 1982 letter)

Type: CORRESPONDENCE
Author: Schauseil, Robert I.: General Electric
Recipient: de la Cruz, Luis E.: PR Environmental Quality Board

Document Number: GEW-001-0219 To 0219 Parent: GEW-001-0218 Date: 12/10/82

Title: (Letter re: Enclosed copy of the original test boring field logs)

Type: CORRESPONDENCE
Author: Ramirez, Hector Laverone: Caribbean Soil Testing Company
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-0218 To 0218 Date: 12/13/82

Title: (Letter re: Enclosed copies of Driller's Logs)

Type: CORRESPONDENCE
Author: Schauseil, Robert I.: General Electric
Recipient: de la Cruz, Luis E.: PR Environmental Quality Board
Attached: GEW-001-0219 GEW-001-0220

Document Number: GEW-001-0231 To 0233 Date: 12/20/82

Title: Permeability test results from boring locations MW-2 and MW-4 taken 12/13/82-12/20/82

Type: DATA
Author: O'Kelly, M.: Law Engineering Testing
Recipient: none: none

Document Number: GEW-001-0550 To 0552 Date: 12/22/82

Title: (Letter re: Response to December 16, 1982 letter relating to the inclusion of the Juana Diaz site as a priority project)

Type: CORRESPONDENCE
Author: DeSorbo, L.A.: General Electric
Recipient: Madera, Jose R.: PR Economic Development Administration

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Document Number: GEW-001-0234 To 0242 Date: 01/11/83

Title: (Letter re: Attached Chemical Analyses on the Water and Sediment Samples)

Type: CORRESPONDENCE
Author: Maroncelli, James M.: Law Engineering Testing
Recipient: Alexander, W. Joseph: Law Engineering Testing

Document Number: GEW-001-0243 To 0245 Date: 01/13/83

Title: (Letter re: Attached Brief Statement on analyses of data gathered on the Hydrogeologic Investigation)

Type: CORRESPONDENCE
Author: Long, David T.: MI State University
Recipient: Jernigan, Bruce L.: Law Engineering Testing

Document Number: GEW-001-0246 To 0284 Date: 01/27/83

Title: Presentation materials used by GE and Law Engineering Testing Company

Type: OTHER
Author: none: none
Recipient: none: none

Document Number: GEW-001-0555 To 0555 Date: 01/27/83

Title: Handwritten list of attendees to GE meeting

Type: OTHER
Author: none: none
Recipient: none: none

Document Number: GEW-001-0608 To 0608 Date: 02/08/83

Title: (Letter re: On-site disposal of hazardous and/or toxic wastes)

Type: CORRESPONDENCE
Author: Madera, Jose R.: PR Economic Development Administration
Recipient: DeSorbo, L.A.: General Electric

Document Number: GEW-001-0285 To 0285 Date: 02/24/83

Title: (Letter re: Results of Mercury Analysis, Juana Diaz Plant, Puerto Rico, Law Engineering No. MH2317)

Type: CORRESPONDENCE
Author: Alexander, W. Joseph: Law Engineering Testing
Recipient: Friss, James T.: General Electric
Attached: GEW-001-0286

Document Number: GEW-001-0609 To 0609 Date: 02/24/83

Title: (Letter re: Results of Mercury Analyses, Juana Diaz Plant, Puerto Rico, Law Engineering Project No. MH2317)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Alexander, W. Joseph: Law Engineering Testing
Recipient: Friss, James T.: General Electric

Document Number: GEW-001-0610 To 0611 Date: 02/25/83

Title: (Letter re: Comments on Proposed Amendment to National Oil and Hazardous Substance Contingency Plan; the National Priorities List, 47 Federal Register 54,476, December 30, 1982)

Type: CORRESPONDENCE
Author: Schauseil, Robert I.: General Electric
Recipient: Wyer, Russell H.: US EPA

Document Number: GEW-001-0287 To 0287 Date: 03/09/83

Title: (Letter re: Attached summary of CompuChem data)

Type: CORRESPONDENCE
Author: none: Head CompuChem Laboratory
Recipient: Maroncelli, James M.: Law Engineering Testing
Attached: GEW-001-0288

Document Number: GEW-001-0385 To 0386 Date: 03/11/83

Title: (Letter re: Attached results of chemical analyses soil samples)

Type: CORRESPONDENCE
Author: Maroncelli, James M.: Law Engineering Testing
Recipient: Alexander, W. Joseph: Law Engineering Testing

Document Number: GEW-001-0387 To 0408 Date: 03/15/83

Title: (Letter re: Ground-water Quality Analyses, Juana Diaz Site, Puerto Rico, Reference Proposal MS3022.20 (Item 5), Law Engineering Project No. WM3233)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: Alexander, W. Joseph: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-0613 To 0613 Parent: GEW-001-0612 Date: 04/11/83

Title: (Letter re: Technical Alternatives available for correcting the environmental problems created by the disposal of toxic wastes at the General Electric Manufacture Wiring Devices, Inc.)

Type: CORRESPONDENCE
Author: Madera, Jose R.: PR Economic Development Administration
Recipient: Rivera, Ignacio: General Electric

Document Number: GEW-001-0409 To 0413 Date: 04/18/83

Title: (Letter re: Test Boring Records, General Electric Company Plant Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Alexander, W. Joseph: Law Engineering Testing
Recipient: Pierre, Wayne N.: US EPA

Document Number: GEW-001-0414 To 0433 Date: 04/20/83

Title: (Letter re: Report of Test Results, Juana Diaz Site, Puerto Rico, Reference Proposal MS3022.20 (Items 3 and 4), Law Engineering Project No. WM3233)

Type: CORRESPONDENCE
Author: Alexander, W. Joseph: Law Engineering Testing
Neal, Larry A.: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-0434 To 0443 Date: 05/25/83

Title: (Letter re: Seismic Risk of the Proposed Encapsulation Alternative, Waste Fill Area, Item 1 of Proposal No. MS3022.20, Law Engineering Project No. WM3233)

Type: CORRESPONDENCE
Author: Parker, Mark: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-0612 To 0612 Date: 05/27/83

Title: (Letter re: General Electric Wiring Devices, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Umpierre, Victor R.: PR Economic Development Administration
Recipient: Diamond, Larry: US EPA
Attached: GEW-001-0613

Document Number: GEW-001-0444 To 0446 Date: 06/06/83

Title: (Letter re: Flooding Analyses, Juana Diaz Site, Puerto Rico, Reference Proposal MS3022.20 (Item 2), Law Engineering Project No. WM3233)

Type: CORRESPONDENCE
Author: Lawing, Raymond J.: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-0447 To 0447 Date: 07/19/83

Title: (Letter re: Intensity of Earthquakes, Law Engineering Project No. WM3233)

Type: CORRESPONDENCE
Author: Alexander, W. Joseph: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric
Attached: GEW-001-0448

Document Number: GEW-001-0615 To 0615 Parent: GEW-001-0614 Date: 08/04/83

Title: (Letter re: Immediate action for proper disposal of mercury contaminated wastes)

Type: CORRESPONDENCE
Author: Madera, Jose R.: PR Economic Development Administration
Recipient: Rivera, Ignacio: General Electric

Document Number: GEW-001-0614 To 0614 Date: 09/28/83

Title: (Letter re: On-site encapsulation of toxic wastes)

Type: CORRESPONDENCE
Author: Madera, Jose R.: PR Economic Development Administration
Recipient: Rivera, Ignacio: General Electric
Attached: GEW-001-0615

Document Number: GEW-001-0616 To 0620 Date: 10/07/83

Title: (Letter re: Evaluation of hazardous sites in Puerto Rico for inclusion on the National Priorties List)

Type: CORRESPONDENCE
Author: Librizzi, William J.: US EPA
Recipient: Madera, Jose R.: PR Economic Development Administration

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Document Number: GEW-001-0645 To 0646 Date: 12/15/83

Title: Resolution and notification (written in Spanish)

Type: LEGAL DOCUMENT
Author: Gelabert, Pedro A.: PR, Commonwealth of
Recipient: none: General Electric

Document Number: GEW-001-0621 To 0643 Date: 01/16/84

Title: Administrative Order on Consent (regarding actions and studies to be done at Juana Diaz site)

Type: LEGAL DOCUMENT
Condition: MARGINALIA
Author: Schafer, Jacqueline E.: US EPA
Recipient: Vineyard, William: General Electric
Attached: GEW-001-0644

Document Number: GEW-001-0647 To 0649 Date: 01/27/84

Title: (Letter re: Complete removal of toxic waste from the site)

Type: CORRESPONDENCE
Author: Madera, Jose R.: PR Economic Development Administration
Recipient: Rivera, Ignacio: General Electric

Document Number: GEW-001-0644 To 0644 Parent: GEW-001-0621 Date: 02/01/84

Title: (Public Notice re: General Electric Company entering into Administrative order on Consent)

Type: CORRESPONDENCE
Author: Carlos, O'Neil: US EPA
Recipient: none: none

Document Number: GEW-001-0652 To 0652 Date: 02/03/84

Title: (Public notice re: Administrative Order on Consent (written in Spanish))

Type: CORRESPONDENCE
Author: none: El Nuevo Dia
Recipient: none: none

Document Number: GEW-001-0653 To 0653 Date: 02/07/84

Title: (Newspaper article titled: "GE Will Cleanup Juana Diaz Site where Toxic Waste Was Dumped")

Type: CORRESPONDENCE
Author: Ghigliotty, Julio: San Juan Star
Recipient: none: none

Document Number: GEW-001-0654 To 0654 Date: 02/13/84

Title: (Newspaper article titled: "PA Exige GE Limpie Vertedero en Juana Diaz")

Type: CORRESPONDENCE
Author: none: El Mundo, San Juan
Recipient: none: none

Document Number: GEW-001-0655 To 0656 Date: 02/15/84

Title: (Article titled: "GE Will Cleanup Waste Disposal Site: Company signs consent order with EPA to attend to 27-year-old Juana Diaz dump")

Type: CORRESPONDENCE
Author: Echavarri, Christian M.: Carribean Business
Recipient: none: none

Document Number: GEW-001-0657 To 0659 Date: 03/09/84

Title: (Letter re: General Electric Company, EPA Order on Consent, Index No. II CERCLA-30301, To Clean Up Juana Diaz Plant Site)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Madera, Jose R.: PR Economic Development Administration
Recipient: none: US EPA

Document Number: GEW-001-0661 To 0663 Parent: GEW-001-0660 Date: 06/01/84

Title: Response to comments on Administrative order

Type: PLAN
Author: none: US EPA
Recipient: none: none

Document Number: GEW-001-0004 To 0005 Parent: GEW-001-0001 Date: 06/19/84

Title: (Memorandum re: Ground Samples/Mercury Percent)

Type: CORRESPONDENCE
Author: Figueroa, Solange I.: General Electric
Recipient: Culp, Dale: General Electric

Document Number: GEW-001-0660 To 0660 Date: 07/16/84

Title: (Letter re: EPA's response to the public comments received on Order No. II-CERCLA-30301)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Dewling, Richard T.: US EPA
Recipient: Vineyard, William: General Electric
Attached: GEW-001-0661

Document Number: GEW-001-2237 To 2283 Date: 09/01/84

Title: Health Effects Assessment for Mercury

Type: PLAN
Author: none: US EPA
Recipient: none: none

Document Number: GEW-001-0691 To 0691 Parent: GEW-001-0689 Date: 01/22/85

Title: (Letter re: Summary of data from requested sample analysis)

Type: CORRESPONDENCE
Author: Carrington, Pamela S.: CompuChem
Recipient: Neil, Larry A.: Law Engineering Testing

Document Number: GEW-001-0665 To 0686 Parent: GEW-001-0664 Date: 03/11/85

Title: Work Plan for Remedial Investigation, Mercury Waste Site, Juana Diaz, Puerto Rico

Type: PLAN
Author: none: Law Engineering Testing
Recipient: none: General Electric

Document Number: GEW-001-0690 To 0690 Parent: GEW-001-0689 Date: 03/19/85

Title: (Letter re: Analytical Results of Priority Pollutant, Analysis of Water Sample from Stand-Pipe No. 11, General Electric Juana Diaz Facility)

Type: CORRESPONDENCE
Author: Neal, Larry A.: Law Engineering Testing
Shugart, Steven L.: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-0664 To 0664 Date: 03/26/85

Title: (Letter re: GE Wiring Device Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Kaplan, Arthur L.: General Electric
Recipient: Font, Jose C.: US EPA
Attached: GEW-001-0665

Document Number: GEW-001-0687 To 0688 Date: 04/09/85

Title: (Letter re: Request for data on ground-water wells in the vicinity of Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Shugart, Steven L.: Law Engineering Testing
Recipient: Font, Jose C.: US EPA

Document Number: GEW-001-0689 To 0689 Date: 04/24/85

Title: (Letter re: Analytical Results of Priority Pollutant Analysis of Water Sample from Stand-Pipe No. 11, General Electric Juana Diaz Facility)

Type: CORRESPONDENCE
Author: Hart, Steven W.: Law Engineering Testing
Recipient: Font, Jose C.: US EPA
Attached: GEW-001-0690 GEW-001-0691 GEW-001-0692

Document Number: GEW-001-0722 To 0729 Parent: GEW-001-0701 Date: 08/22/85

Title: (Letter re: Report for analysis of sample from monitoring well No. 1)

Type: CORRESPONDENCE
Author: Scammell, Diana A.: CompuChem
Recipient: Neil, Larry A.: Law Engineering Testing

Document Number: GEW-001-0730 To 0737 Parent: GEW-001-0701 Date: 08/22/85

Title: (Letter re: Report for analysis of sample from monitoring well No. 2)

Type: CORRESPONDENCE
Author: Scammell, Diana A.: CompuChem
Recipient: Neil, Larry A.: Law Engineering Testing

Document Number: GEW-001-0738 To 0745 Parent: GEW-001-0701 Date: 08/22/85

Title: (Letter re: Attached report for analysis of sample from monitoring well No. 3)

Type: CORRESPONDENCE
Author: Scammell, Diana A.: CompuChem
Recipient: Neil, Larry A.: Law Engineering Testing

Document Number: GEW-001-0746 To 0753 Parent: GEW-001-0701 Date: 08/22/85

Title: (Letter re: Attached analysis results of sample from monitoring well No. 4)

Type: CORRESPONDENCE
Author: Scammell, Diana A.: CompuChem
Recipient: Neil, Larry A.: Law Engineering Testing

Document Number: GEW-001-0754 To 0754 Date: 10/29/85

Title: (Letter re: Review of possible trichloroethylene contamination at Juana Diaz site)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Kaplan, Arthur L.: General Electric
Recipient: Font, Jose C.: US EPA
Attached: GEW-001-0755 GEW-001-0756

Document Number: GEW-001-0755 To 0755 Parent: GEW-001-0754 Date: 12/13/85

Title: (Letter re: Proposed Schedule of Soil Sampling for Trichloroethylene, G.E. Juana Diaz, Puerto Rico Plant)

Type: CORRESPONDENCE
Author: Neil, Larry A.: Law Engineering Testing
Recipient: Font, Jose C.: US EPA

Document Number: GEW-001-0756 To 0756 Parent: GEW-001-0754 Date: 01/10/86

Title: (Letter re: Revised Schedule of Soil Sampling for Trichloroethylene, G.E. Juana Diaz, Puerto Rico Plant)

Type: CORRESPONDENCE
Author: Spiers, Charles A.: Law Environmental Services
Recipient: Font, Jose C.: US EPA

Document Number: GEW-001-2194 To 2198 Date: 04/15/86

Title: (Memorandum re: Discharge of Wastewater from CERCLA Sites into POTWS)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: Longest, II, Henry L.: US EPA
Recipient: none: US EPA

Document Number: GEW-001-0757 To 0757 Date: 05/05/86

Title: (Letter re: Revised Work Plan for Remedial Investigation, G.E. Wiring Devices Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Czapor, John V.: US EPA
Recipient: Kaplan, Arthur L.: General Electric

Document Number: GEW-001-0771 To 0772 Parent: GEW-001-0770 Date: 06/01/86

Title: Table 1, Mercury Concentration, General Electric - Juana Diaz

Type: DATA
Author: none: none
Recipient: none: none

Document Number: GEW-001-0758 To 0758 Date: 06/03/86

Title: Favor De Firmar (handwritten list of names, organization and addresses), General Electric Wiring Devices

Type: OTHER
Author: none: none
Recipient: none: none
Attached: GEW-001-0759

Document Number: GEW-001-0766 To 0766 Date: 06/18/86

Title: (Letter re: Revised Work Plan for Remedial Investigation, G.E. Wiring Devices Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Kaplan, Arthur L.: General Electric
Recipient: Czapor, John V.: US EPA
Attached: GEW-001-0767

Document Number: GEW-001-0768 To 0769 Date: 08/20/86

Title: (Letter re: Notification of Time Extension, G.E. Wiring Devices Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Kaplan, Arthur L.: General Electric
Recipient: Czapor, John V.: US EPA

Document Number: GEW-001-1633 To 1851 Date: 09/01/86

Title: QC Package for Project 6331 - GE/Juana Diaz, July, August, and September, 1986

Type: DATA
Condition: MARGINALIA
Author: none: none
Recipient: none: none
Attached: GEW-001-1852

Document Number: GEW-001-0773 To 0773 Parent: GEW-001-0770 Date: 09/11/86

Title: (Letter re: Analyses of soil samples sent to Oxford Laboratories, Inc., for comparative Mercury study by Cold Vapor Technique)

Type: CORRESPONDENCE
Author: Tersegno, Vincent J.: Law Environmental Services
Recipient: Sellers, Mark A.: Law Engineering Testing

Document Number: GEW-001-0770 To 0770 Date: 09/23/86

Title: (Letter re: G.E. Wiring Devices Site, Juana Diaz, P.R., CERCLA #106 Order)

Type: CORRESPONDENCE
Author: Kaplan, Arthur L.: General Electric
Recipient: Font, Jose C.: US EPA
Attached: GEW-001-0771 GEW-001-0773 GEW-001-0774

Document Number: GEW-001-0775 To 0775 Date: 10/08/86

Title: (Letter re: Submittal of Report, Remedial Investigation, General Electric Wiring Devices Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Sellers, Mark A.: Law Engineering Testing
Recipient: Czapor, John V.: US EPA
Attached: GEW-001-0776

Document Number: GEW-001-1395 To 1415 Parent: GEW-001-1345 Date: 12/02/86

Title: (Letter re: Attached Report of Preliminary Testing and Evaluation, Solidification/Fixation Agent, G.E. Wiring Devices Plant, Juana, Puerto Rico)

Type: CORRESPONDENCE
Author: McNelis, Kathleen A.: Law Environmental Services
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-1416 To 1493 Parent: GEW-001-1345 Date: 12/02/86

Title: (Letter re: Attached Chemical Analyses of Samples Received on August 4, 1986)

Type: CORRESPONDENCE
Author: Tersegno, Vincent J.: Law Environmental Services
Recipient: Wheeless, Dave: Law Environmental Services

Document Number: GEW-001-2199 To 2208 Date: 12/24/86

Title: (Memorandum re: Interim Guidance on Superfund Selection of Remedy)

Type: CORRESPONDENCE
Author: Porter, J. Winston: US EPA
Recipient: none: US EPA
Attached: GEW-001-2209

Document Number: GEW-001-2214 To 2217 Parent: GEW-001-2210 Date: 03/27/87

Title: (Letter re: Requirements of Section 121)

Type: CORRESPONDENCE
Author: Florio, James J.: US Congress
Recipient: Thomas, Lee M.: US EPA

Document Number: GEW-001-1211 To 1211 Date: 04/09/87

Title: (Letter re: Remedial Investigation Report, General Electric Wiring Devices Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Ignacio, Rafael L.: PR Industrial Development Company
Recipient: Gelabert, Pedro A.: US EPA

Document Number: GEW-001-1212 To 1264 Date: 04/28/87

Title: Transcript of GE Meeting held 04/28/87 (written in Spanish)

Type: OTHER
Author: none: none
Recipient: none: none
Attached: GEW-001-1265

Document Number: GEW-001-1265 To 1314 Parent: GEW-001-1212 Date: 04/28/87

Title: English translation of transcript of GE Meeting held 04/28/87

Type: OTHER
Author: none: none
Recipient: none: none

Document Number: GEW-001-1315 To 1315 Date: 04/30/87

Title: News article titled: "Mercury Only Pollutant Found at GE Juana Diaz Waste Site: GE dump one of eight P.R. Superfund sites; total estimated cleanup cost could be $37M"

Type: OTHER
Author: Luxner, Larry: Caribbean Business
Recipient: none: none

Document Number: GEW-001-2210 To 2213 Date: 05/21/87

Title: (Letter re: Agency's implementation of the Superfund Amendments and Reauthorization Act of 1986 (SARA))

Type: CORRESPONDENCE
Author: Thomas, Lee M.: US EPA
Recipient: Florio, James J.: US Congress
Attached: GEW-001-2214

Document Number: GEW-001-2218 To 2219 Date: 05/29/87

Title: (Memorandum re: Review of Interim Guidance on Compliance with ARAR's)

Type: CORRESPONDENCE
Author: Weissman, Arthur B.: US EPA
Recipient: none: none
Attached: GEW-001-2220

Document Number: GEW-001-2228 To 2236 Date: 07/09/87

Title: (Memorandum re: Interim Guidance on Compliance with Applicable or Relevant and Appropiate Requirements)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: Porter, J. Winston: US EPA
Recipient: none: none

Document Number: GEW-001-1316 To 1316 Date: 07/31/87

Title: (Transmittal slip re: Work Plan for Supplemental Soil Sampling and PCB Analyses)

Type: CORRESPONDENCE
Author: Coffuros, Glenn N.: Law Environmental Services
Recipient: O'Neil, Carlos E.: US EPA
Attached: GEW-001-1317 GEW-001-1324

Document Number: GEW-001-1327 To 1343 Date: 08/01/87

Title: Work Plan for Feasibility Study, Mercury Waste Site, Juana Diaz, Puerto Rico

Type: PLAN
Author: none: Law Environmental, Inc.
Recipient: none: General Electric

Document Number: GEW-001-2409 To 2425 Date: 10/01/87

Title: Research and Development: Site Analysis, G.E. Wiring Devices, Juana Diaz, Puerto Rico

Type: REPORT
Author: Fauss, L. Mike: Bionetics Corporation
Recipient: none: US EPA

Document Number: GEW-001-0701 To 0753 Date: 10/23/87

Title: (Letter re: Results of Chemical Analysis of Water Samples from Water Wells and Monitoring Wells)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: Spiers, Charles A.: Law Environmental Services
Recipient: Schauseil, Robert I.: General Electric
Attached: GEW-001-0722 GEW-001-0730 GEW-001-0738 GEW-001-0746

Document Number: GEW-001-1345 To 1493 Parent: GEW-001-1344 Date: 11/01/87

Title: Feasibility Study, Corrective Action Alternatives for Waste with Mercury Constituent, Wiring Devices of Puerto Rico, Inc., Juana Diaz, Puerto Rico

Type: PLAN
Condition: MISSING ATTACHMENT
Author: none: Law Environmental, Inc.
Recipient: none: General Electric
Attached: GEW-001-1395 GEW-001-1416

Document Number: GEW-001-1495 To 1631 Parent: GEW-001-1494 Date: 11/12/87

Title: (Letter re: Attached Addendum to the RI/FS Study, General Electric Wiring Devices Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Condition: DRAFT; MARGINALIA
Author: Sellers, Mark A.: Law Engineering Testing
Recipient: Kaplan, Arthur L.: General Electric

Document Number: GEW-001-1344 To 1344 Date: 11/25/87

Title: (Letter re: Feasibility Study Report, Wiring Devices of Puerto Rico, Inc., Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Chopan, Phil M.: Law Environmental, Inc.
Recipient: Kaplan, Arthur L.: General Electric
Attached: GEW-001-1345

Document Number: GEW-001-1494 To 1494 Date: 12/08/87

Title: (Letter re: Administrative Consent Order No. II-CERCLA-3030, dated January 16, 1984, General Electric Company, Juana Diaz, P.R. Plant)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Kaplan, Arthur L.: General Electric
Recipient: DiForte, Nicoletta: US EPA
Attached: GEW-001-1495

Document Number: GEW-001-1632 To 1632 Date: 03/15/88

Title: (Law Environmental Client Contact Form)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: none: Law Engineering Testing
Recipient: Messina, Frank J.: US EPA

Document Number: GEW-001-1852 To 1852 Parent: GEW-001-1633 Date: 04/11/88

Title: (Inter-office memorandum re: Project 6331 - GE Juana Diaz, Work Performed July to September, 1986)

Type: CORRESPONDENCE
Author: McBride, Clifford H.: Law Engineering Testing
Recipient: Sellers, Mark A.: Law Engineering Testing

Document Number: GEW-001-1853 To 1853 Date: 04/15/88

Title: (Letter re: Supplemental Data Submittal, Laboratory Quality Assurance/Quality Control, General Electric Wiring Devices Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Allen, David A.: Law Engineering Testing
Recipient: Kaplan, Arthur L.: General Electric

Document Number: GEW-001-1854 To 1856 Date: 05/12/88

Title: (Memorandum re: Mercury Validation Results)

Type: CORRESPONDENCE
Author: Messina, Frank J.: US EPA
Recipient: DiForte, Nicoletta: US EPA

Document Number: GEW-001-1895 To 1918 Parent: GEW-001-1857 Date: 08/22/88

Title: (Letter re: Status report on the work performed by the Bureau of Mines with attached Bureau of Mines Report)

Type: CORRESPONDENCE
Author: Schmidt, William B.: US Dept of the Interior
Recipient: DiForte, Nicoletta: US EPA

Document Number: GEW-001-2284 To 2320 Date: 08/31/88

Title: Draft Cost Estimates for Remedial Action Alternatives

Type: FINANCIAL/TECHNICAL
Author: none: Lee Wan & Associates
Recipient: none: Camp Dresser & McKee (CDM)

Document Number: GEW-001-1857 To 1894 Date: 09/01/88

Title: G.E. Wiring Devices, Addendum Feasibility Study, September, 1988

Type: PLAN
Condition: MISSING ATTACHMENT
Author: none: US EPA
Recipient: none: none
Attached: GEW-001-1895 GEW-001-1919 GEW-001-1920

Document Number: GEW-001-1919 To 1919 Parent: GEW-001-1857 Date: 09/01/88

Title: (Letter re: Quality Assurance Project Plan for EPA Work Assignment 649, Sampling and Analysis of Ground Water and Soil Samples, G.E. Wiring Devices, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Goltz, Robert D.: Camp Dresser & McKee (CDM)
Recipient: Harvell, Rose: US EPA

Document Number: GEW-001-1920 To 1941 Parent: GEW-001-1857 Date: 09/01/88

Title: Quality Assurance Project Plan, Sampling and Analysis of Groundwater and Soil Samples, G.E. Wiring Devices, Juana Diaz, P.R.

Type: PLAN
Author: none: Lee Wan & Associates
Recipient: none: US EPA

Document Number: GEW-001-2321 To 2326 Date: 09/01/88

Title: (Proposed Remedial Action Plan for site, written in Spanish)

Type: PLAN
Author: none: US EPA
Recipient: none: none
Attached: GEW-001-2327

Document Number: GEW-001-2327 To 2332 Parent: GEW-001-2321 Date: 09/01/88

Title: Proposed Remedial Action Plan, G.E. Wiring Devices Superfund Site, Juana Diaz, Puerto Rico

Type: PLAN
Author: none: US EPA
Recipient: none: none

Document Number: GEW-001-1942 To 1943 Date: 09/13/88

Title: (Letter re: Trip Report, Sampling Investigation Report, Data Summary, and Evaluation Report for EPA Work Assignment 649, G.E. Wiring Devices, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Goltz, Robert D.: Camp Dresser & McKee (CDM)
Recipient: Harvell, Rose: US EPA
Attached: GEW-001-1944

Document Number: GEW-001-1944 To 2193 Parent: GEW-001-1942 Date: 09/13/88

Title: Trip Report, Sampling Investigation Report, Data Summary and Evaluation Report, G.E. Wiring Devices, Juana Diaz, Puerto Rico

Type: PLAN
Author: none: Lee Wan & Associates
Recipient: none: US EPA

Document Number: GEW-001-2333 To 2334 Date: 09/22/88

Title: (Letter concurring with EPA that alternative 9, Hydrometallurgical Treatment, is the most environmentally sound and safe alternative while noting more detailed studies on groundwater are needed prior to taking any action)

Type: CORRESPONDENCE
Author: Torres, Heriberto: PR, Commonwealth of
Recipient: O'Neill, Carlos E.: US EPA

Document Number: GEW-001-2335 To 2336 Date: 09/23/88

Title: (Letter re: Receipt of Draft Feasibility Study Report)

Type: CORRESPONDENCE
Author: Ignacio, Rafael L.: PR Industrial Development Company
Recipient: O'Neill, Carlos E.: US EPA

Document Number: GEW-001-2337 To 2381 Date: 09/29/88

Title: Research and Development: Final Draft, Endangerment Assessment, General Electric Wiring Devices Site, Juana Diaz, Puerto Rico

Type: REPORT
Author: none: US EPA
Recipient: none: US EPA

Document Number: GEW-002-0044 To 0075 Date: 09/30/88

Title: Record of Decision, G.E. Wiring Devices, Juana Diaz, Puerto Rico

Type: REPORT
Author: Muszynski, William J.: US EPA
Recipient: none: none

Document Number: GEW-001-2382 To 2382 Date: 10/27/88

Title: (Letter re: Attached copies of the final version of the Bureau's report)

Type: CORRESPONDENCE
Author: Schmidt, William B.: US Dept of the Interior
Recipient: Diforte, Nicoletta: US EPA
Attached: GEW-001-2383

Document Number: GEW-001-2383 To 2408 Parent: GEW-001-2382 Date: 10/27/88

Title: Bureau of Mines Technologic Screening Study for Wastes from the G.E. Wiring Devices Superfund Site, Juana Diaz, Puerto Rico

Type: REPORT
Author: staff: Reno Research Center
Recipient: none: none

Document Number: GEW-001-2464 To 2464 Date: 08/26/93

Title: (Letter re: Draft Baseline Risk Assessment, G.E. Wiring Devices Site, Juana Diaz, Puerto Rico, and Health and Endangerment Assessment Work Assignment)

Type: CORRESPONDENCE
Author: Graber, Scott B.: CDM Federal Programs Corporation
Recipient: Smieszek, Erwin: US EPA
Attached: GEW-001-2465

Document Number: GEW-001-2465 To 0043 Parent: GEW-001-2464 Date: 08/26/93

Title: Draft Baseline Risk Assessment for the G.E. Wiring Devices Site, Work Assignment No. C02120

Type: REPORT
Author: Faulk, Jack: CDM Federal Programs Corporation
Recipient: none: US EPA

Document Number: GEW-001-2426 To 2426 Date: 12/01/93

Title: (Letter re: Addendum to the Revised Baseline Risk Assessment, G.E. Wiring Devices Site, Juana Diaz, Puerto Rico, and Health and Endangerment Assessment Work Assignment)

Type: CORRESPONDENCE
Author: Graber, Scott B.: CDM Federal Programs Corporation
Recipient: Smieszek, Erwin: US EPA
Attached: GEW-001-2427

Document Number: GEW-001-2427 To 2463 Parent: GEW-001-2426 Date: 12/01/93

Title: Revised Baseline Risk Assessment Addendum for the G.E. Wiring Devices Site, Work Assignment No. C02120

Type: REPORT
Author: Oxford, Jeniffer: CDM Federal Programs Corporation
Recipient: none: US EPA

Document Number: GEW-001-0022 To 0022 Parent: GEW-001-0018 Date: / /

Title: Juana Diaz Plant Soil Evaluation Samples: Location Sketch

Type: GRAPHIC
Author: none: none
Recipient: none: none

Document Number: GEW-001-0025 To 0025 Parent: GEW-001-0023 Date: / /

Title: Juana Diaz Plant Soil Evaluation Samples: Location Sketch

Type: GRAPHIC
Author: none: none
Recipient: none: none

Document Number: GEW-001-0246 To 0284 Date: 01/27/83

Title: Presentation materials used by GE and Law Engineering Testing Company

Type: OTHER
Author: none: none
Recipient: none: none

Document Number: GEW-001-0555 To 0555 Date: 01/27/83

Title: Handwritten list of attendees to GE meeting

Type: OTHER
Author: none: none
Recipient: none: none

Document Number: GEW-001-0556 To 0607 Date: / /

Title: Map of Generalized Site Setting, Initial Assessment Findings, and other presentation materials for a GE Wiring meeting

Type: OTHER
Author: none: none
Recipient: none: none

Document Number: GEW-001-0758 To 0758 Date: 06/03/86

Title: Favor De Firmar (handwritten list of names, organization and addresses), General Electric Wiring Devices

Type: OTHER
Author: none: none
Recipient: none: none
Attached: GEW-001-0759

Document Number: GEW-001-0759 To 0765 Parent: GEW-001-0758 Date: / /

Title: Community Relations Plan, General Electric Company, Juana Diaz Plant

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: GEW-001-0767 To 0767 Parent: GEW-001-0766 Date: / /

Title: Remedial Investigation Work Plan Projected Schedule

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: GEW-001-0771 To 0772 Parent: GEW-001-0770 Date: 06/01/86

Title: Table 1, Mercury Concentration, General Electric - Juana Diaz

Type: DATA
Author: none: none
Recipient: none: none

Document Number: GEW-001-0774 To 0774 Parent: GEW-001-0770 Date: / /

Title: Table 2, Comparative Analyses of Soil Samples for Mercury Concentration

Type: DATA
Author: none: none
Recipient: none: none

Document Number: GEW-001-1212 To 1264 Date: 04/28/87

Title: Transcript of GE Meeting held 04/28/87 (written in Spanish)

Type: OTHER
Author: none: none
Recipient: none: none
Attached: GEW-001-1265

Document Number: GEW-001-1265 To 1314 Parent: GEW-001-1212 Date: 04/28/87

Title: English translation of transcript of GE Meeting held 04/28/87

Type: OTHER
Author: none: none
Recipient: none: none

Document Number: GEW-001-1317 To 1323 Parent: GEW-001-1316 Date: / /

Title: Document No. 1 - Work Plan for Supplemental Soil Sampling, General Electric Company Wiring Devices Facility, Juana Diaz, Puerto Rico

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: GEW-001-1324 To 1326 Parent: GEW-001-1316 Date: / /

Title: Document No. 2 - Work Plan for PCB Analyses, General Electric Company Wiring Devices Facility, Juana Diaz, Puerto Rico

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: GEW-001-1633 To 1851 Date: 09/01/86

Title: QC Package for Project 6331 - GE/Juana Diaz, July, August, and September, 1986

Type: DATA
Condition: MARGINALIA
Author: none: none
Recipient: none: none
Attached: GEW-001-1852

Document Number: GEW-001-2209 To 2209 Parent: GEW-001-2199 Date: / /

Title: Proposed Remedy Selection Process Under Reauthorization Chart

Type: GRAPHIC
Author: none: none
Recipient: none: none

Document Number: GEW-001-2220 To 2227 Parent: GEW-001-2218 Date: / /

Title: Interim Guidance on Compliance with Applicable or Relevant and Appropriate Requirements

Type: PLAN
Condition: DRAFT
Author: none: none
Recipient: none: none

Document Number: GEW-001-0012 To 0013 Parent: GEW-001-0011 Date: 10/21/76

Title: Resource Conservation and Recovery Act, Public law 94-580, as amended by the Quiet Communities Act of 1978

Type: LEGAL DOCUMENT
Author: none: US EPA
Recipient: none: none

Document Number: GEW-001-0016 To 0016 Parent: GEW-001-0014 Date: 07/12/79

Title: Analytical results of mercury soil samples for samples received 06/26/79

Type: DATA
Author: none: General Electric
Recipient: none: none

Document Number: GEW-001-0020 To 0021 Parent: GEW-001-0018 Date: 10/05/79

Title: Environmental Monitoring Analytical Services Request Forms

Type: OTHER
Author: none: General Electric
Recipient: Feliu, Leo: General Electric

Document Number: GEW-001-0024 To 0024 Parent: GEW-001-0023 Date: 10/24/79

Title: Environmental Analysis of Mercury contained in soil samples received 10/12/79

Type: DATA
Author: none: General Electric
Recipient: none: General Electric

Document Number: GEW-001-0158 To 0160 Date: / /

Title: Analytical data and field data from standpipes at the Juana Diaz site

Type: DATA
Author: none: Law Engineering Testing
Recipient: none: none

Document Number: GEW-001-0177 To 0177 Parent: GEW-001-0170 Date: / /

Title: Figure 1 - Generalized Locations of August 1982 Test Pits 1 through 12

Type: GRAPHIC
Author: none: Law Engineering Testing
Recipient: none: none

Document Number: GEW-001-0220 To 0230 Parent: GEW-001-0218 Date: 11/17/82

Title: (Copies of driller's logs for the monitoring wells recently installed from 10/03/82-11/17/82)

Type: OTHER
Condition: ILLEGIBLE
Author: none: Caribbean Soil Testing Company
Recipient: none: none

Document Number: GEW-001-0287 To 0287 Date: 03/09/83

Title: (Letter re: Attached summary of CompuChem data)

Type: CORRESPONDENCE
Author: none: Mead CompuChem Laboratory
Recipient: Maronceili, James M.: Law Engineering Testing
Attached: GEW-001-0288

Document Number: GEW-001-0650 To 0651 Date: / /

Title: (News release: GE Consents to EPA order to Act on Juana Diaz, P.R. Contamination)

Type: CORRESPONDENCE
Author: none: US EPA
Recipient: none: none

Document Number: GEW-001-0652 To 0652 Date: 02/03/84

Title: (Public notice re: Administrative Order on Consent (written in Spanish))

Type: CORRESPONDENCE
Author: none: El Nuevo Dia
Recipient: none: none

Document Number: GEW-001-0654 To 0654 Date: 02/13/84

Title: (Newspaper article titled: "PA Exige GE Limpie Vertedero en Juana Diaz")

Type: CORRESPONDENCE
Author: none: El Mundo, San Juan
Recipient: none: none

Document Number: GEW-001-0661 To 0663 Parent: GEW-001-0660 Date: 06/01/84

Title: Response to comments on Administrative order

Type: PLAN
Author: none: US EPA
Recipient: none: none

Document Number: GEW-001-0665 To 0686 Parent: GEW-001-0664 Date: 03/11/85

Title: Work Plan for Remedial Investigation, Mercury Waste Site, Juana Diaz, Puerto Rico

Type: PLAN
Author: none: Law Engineering Testing
Recipient: none: General Electric

Document Number: GEW-001-0776 To 1210 Parent: GEW-001-0775 Date: / /

Title: Remedial Investigation Report for General Electric Wiring Devices Site, Juana Diaz, Puerto Rico

Type: REPORT
Condition: MARGINALIA
Author: none: Law Engineering Testing
Recipient: none: General Electric

Document Number: GEW-001-1327 To 1343 Date: 08/01/87

Title: Work Plan for Feasibility Study, Mercury Waste Site, Juana Diaz, Puerto Rico

Type: PLAN
Author: none: Law Environmental, Inc.
Recipient: none: General Electric

Document Number: GEW-001-1345 To 1493 Parent: GEW-001-1344 Date: 11/01/87

Title: Feasibility Study, Corrective Action Alternatives for Waste with Mercury Constituent, Wiring Devices of Puerto Rico, Inc., Juana Diaz, Puerto Rico

Type: PLAN
Condition: MISSING ATTACHMENT
Author: none: Law Environmental, Inc.
Recipient: none: General Electric
Attached: GEW-001-1395 GEW-001-1416

Document Number: GEW-001-1632 To 1632 Date: 03/15/88

Title: (Law Environmental Client Contact Form)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: none: Law Engineering Testing
Recipient: Messina, Frank J.: US EPA

Document Number: GEW-001-1857 To 1894 Date: 09/01/88

Title: G.E. Wiring Devices, Addendum Feasibility Study, September, 1988

Type: PLAN
Condition: MISSING ATTACHMENT
Author: none: US EPA
Recipient: none: none
Attached: GEW-001-1895 GEW-001-1919 GEW-001-1920

Document Number: GEW-001-1920 To 1941 Parent: GEW-001-1857 Date: 09/01/88

Title: Quality Assurance Project Plan, Sampling and Analysis of Groundwater and Soil Samples, G.E. Wiring Devices, Juana Diaz, P.R.

Type: PLAN
Author: none: Lee Wan & Associates
Recipient: none: US EPA

Document Number: GEW-001-1944 To 2193 Parent: GEW-001-1942 Date: 09/13/88

Title: Trip Report, Sampling Investigation Report, Data Summary and Evaluation Report, G.E. Wiring Devices, Juana Diaz, Puerto Rico

Type: PLAN
Author: none: Lee Wan & Associates
Recipient: none: US EPA

Document Number: GEW-001-2237 To 2283 Date: 09/01/84

Title: Health Effects Assessment for Mercury

Type: PLAN
Author: none: US EPA
Recipient: none: none

Document Number: GEW-001-2284 To 2320 Date: 08/31/88

Title: Draft Cost Estimates for Remedial Action Alternatives

Type: FINANCIAL/TECHNICAL
Author: none: Lee Wan & Associates
Recipient: none: Camp Dresser & McKee (CDM)

Document Number: GEW-001-2321 To 2326 Date: 09/01/88

Title: (Proposed Remedial Action Plan for site, written in Spanish)

Type: PLAN
Author: none: US EPA
Recipient: none: none
Attached: GEW-001-2327

Document Number: GEW-001-2327 To 2332 Parent: GEW-001-2321 Date: 09/01/88

Title: Proposed Remedial Action Plan, G.E. Wiring Devices Superfund Site, Juana Diaz, Puerto Rico

Type: PLAN
Author: none: US EPA
Recipient: none: none

Document Number: GEW-001-2337 To 2381 Date: 09/29/88

Title: Research and Development: Final Draft, Endangerment Assessment, General Electric Wiring Devices Site, Juana Diaz, Puerto Rico

Type: REPORT
Author: none: US EPA
Recipient: none: US EPA

Document Number: GEW-001-0026 To 0046 Date: 04/22/81

Title: Field notes made by W.J. Alexander during auger borings and test pit excavations at the West Field Site

Type: OTHER
Author: Alexander, W. Joseph: Law Engineering Testing
Recipient: none: none

Document Number: GEW-001-0048 To 0098 Date: 06/19/81

Title: (Letter re: Attached Report Submittal, Hydrogeologic Investigatigation, Waste Fill Area, Juana Diaz, Puerto Rico, Law Engineering Job Number MH1223)

Type: CORRESPONDENCE
Author: Alexander, W. Joseph: Law Engineering Testing
Recipient: Phillips, J.M.: General Electric
Attached: GEW-001-0099

Document Number: GEW-001-0170 To 0176 Date: 09/22/82

Title: (Letter re: Report of August, 1982 Site Visit, Juana Diaz Plant, Puerto Rico, Law Engineering Project No. MH2296)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: Alexander, W. Joseph: Law Engineering Testing
Recipient: Friss, James T.: General Electric
Attached: GEW-001-0177

Document Number: GEW-001-0198 To 0217 Date: 11/22/82

Title: (Letter re: Attached Status Report of Hydraulic Conditions, Perched-Water Table; Waste Fill Area, Juana Diaz Plant, Puerto Rico, Law Engineering Project No. MH1440.03)

Type: CORRESPONDENCE
Author: Alexander, W. Joseph: Law Engineering Testing
Neal, Larry A.: Law Engineering Testing
Recipient: Schauseil, Robert J.: General Electric

Document Number: GEW-001-0285 To 0285 Date: 02/24/83

Title: (Letter re: Results of Mercury Analysis, Juana Diaz Plant, Puerto Rico, Law Engineering No. MH2317)

Type: CORRESPONDENCE
Author: Alexander, W. Joseph: Law Engineering Testing
Recipient: Friss, James T.: General Electric
Attached: GEW-001-0286

Document Number: GEW-001-0387 To 0408 Date: 03/15/83

Title: (Letter re: Ground-water Quality Analyses, Juana Diaz Site, Puerto Rico, Reference Proposal MS3022.20 (Item 5), Law Engineering Project No. WM3233)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: Alexander, W. Joseph: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-0409 To 0413 Date: 04/18/83

Title: (Letter re: Test Boring Records, General Electric Company Plant Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Alexander, W. Joseph: Law Engineering Testing
Recipient: Pierre, Wayne N.: US EPA

Document Number: GEW-001-0414 To 0433 Date: 04/20/83

Title: (Letter re: Report of Test Results, Juana Diaz Site, Puerto Rico, Reference Proposal MS3022.20 (Items 3 and 4), Law Engineering Project No. WM3233)

Type: CORRESPONDENCE
Author: Alexander, W. Joseph: Law Engineering Testing
Neal, Larry A.: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-0447 To 0447 Date: 07/19/83

Title: (Letter re: Intensity of Earthquakes, Law Engineering Project No. WM3233)

Type: CORRESPONDENCE
Author: Alexander, W. Joseph: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric
Attached: GEW-001-0448

Document Number: GEW-001-0609 To 0609 Date: 02/24/83

Title: (Letter re: Results of Mercury Analyses, Juana Diaz Plant, Puerto Rico, Law Engineering Project No. MH2317)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Alexander, W. Joseph: Law Engineering Testing
Recipient: Friss, James T.: General Electric

Document Number: GEW-001-1853 To 1853 Date: 04/15/88

Title: (Letter re: Supplemental Data Submittal, Laboratory Quality Assurance/Quality Control, General Electric Wiring Devices Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Allen, David A.: Law Engineering Testing
Recipient: Kaplan, Arthur L.: General Electric

Document Number: GEW-001-0288 To 0384 Parent: GEW-001-0287 Date: / /

Title: Summary of CompuChem data

Type: DATA
Author: Bloom, Richard L.: Head CompuChem Laboratory
Recipient: Maroncelli, James M.: Law Engineering Testing

Document Number: GEW-001-0644 To 0644 Parent: GEW-001-0621 Date: 02/01/84

Title: (Public Notice re: General Electric Company entering into Administrative order on Consent)

Type: CORRESPONDENCE
Author: Carlos, O'Neil: US EPA
Recipient: none: none

Document Number: GEW-001-0691 To 0691 Parent: GEW-001-0689 Date: 01/22/85

Title: (Letter re: Summary of data from requested sample analysis)

Type: CORRESPONDENCE
Author: Carrington, Pamela S.: CompuChem
Recipient: Neil, Larry A.: Law Engineering Testing

Document Number: GEW-001-1344 To 1344 Date: 11/25/87

Title: (Letter re: Feasibility Study Report, Wiring Devices of Puerto Rico, Inc., Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Chopan, Phil M.: Law Environmental, Inc.
Recipient: Kaplan, Arthur L.: General Electric
Attached: GEW-001-1345

Document Number: GEW-001-1316 To 1316 Date: 07/31/87

Title: (Transmittal slip re: Work Plan for Supplemental Soil Sampling and PCB Analyses)

Type: CORRESPONDENCE
Author: Coffuros, Glenn N.: Law Environmental Services
Recipient: O'Neil, Carlos E.: US EPA
Attached: GEW-001-1317 GEW-001-1324

Document Number: GEW-001-0757 To 0757 Date: 05/05/86

Title: (Letter re: Revised Work Plan for Remedial Investigation, G.E. Wiring Devices Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Czapor, John V.: US EPA
Recipient: Kaplan, Arthur L.: General Electric

Document Number: GEW-001-0168 To 0169 Date: 03/04/82

Title: (Letter re: General Electric Juana Diaz)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: de la Cruz, Luis E: PR Environmental Quality Board
Recipient: Colon, Javier: General Electric

Document Number: GEW-001-0166 To 0167 Date: 05/18/82

Title: (Letter re: Questions and answers from the March 4, 1982 letter that raised concerns about the Clay Continuity Report and Hydrogeologic Study)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: de la Cruz, Luis E.: PR Environmental Quality Board
Recipient: Colon, Javier: General Electric

Document Number: GEW-001-0550 To 0552 Date: 12/22/82

Title: (Letter re: Response to December 16, 1982 letter relating to the inclusion of the Juana Diaz site as a priority project)

Type: CORRESPONDENCE
Author: DeSorbo, L.A.: General Electric
Recipient: Madera, Jose R.: PR Economic Development Administration

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Document Number: GEW-001-0660 To 0660 Date: 07/16/84

Title: (Letter re: EPA's response to the public comments received on Order No. II-CERCLA-30301)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Dewling, Richard T.: US EPA
Recipient: Vineyard, William: General Electric
Attached: GEW-001-0661

Document Number: GEW-001-0655 To 0656 Date: 02/15/84

Title: (Article titled: "GE Will Cleanup Waste Disposal Site: Company signs consent order with EPA to attend to 27-year-old Juana Diaz dump")

Type: CORRESPONDENCE
Author: Echavarri, Christian M.: Carribean Business
Recipient: none: none

Document Number: GEW-001-2465 To 0043 Parent: GEW-001-2464 Date: 08/26/93

Title: Draft Baseline Risk Assessment for the G.E. Wiring Devices Site, Work Assignment No. C02120

Type: REPORT
Author: Faulk, Jack: CDM Federal Programs Corporation
Recipient: none: US EPA

Document Number: GEW-001-2409 To 2425 Date: 10/01/87

Title: Research and Development: Site Analysis, G.E. Wiring Devices, Juana Diaz, Puerto Rico

Type: REPORT
Author: Fauss, L. Mike: Bionetics Corporation
Recipient: none: US EPA

Document Number: GEW-001-0014 To 0014 Date: 08/16/79

Title: (Letter re: Mercury Soil Contamination - Juana Diaz, P.R.)

Type: CORRESPONDENCE
Author: Feliu, Leo: General Electric
Recipient: Burns, William S.: General Electric
Attached: GEW-001-0015 GEW-001-0016

Document Number: GEW-001-0017 To 0017 Date: 09/27/79

Title: (Memorandum re: Plant Soil Evaluation Program)

Type: CORRESPONDENCE
Author: Feliu, Leo: General Electric
Recipient: Poland, J.B.: General Electric

Document Number: GEW-001-0001 To 0001 Date: 06/12/79

Title: (Memorandum re: Mercury Sampling)

Type: CORRESPONDENCE
Author: Figueroa, Solange I.: General Electric
Recipient: Poland, J.B.: General Electric
Attached: GEW-001-0002 GEW-001-0004 GEW-001-0006 GEW-001-0009

Document Number: GEW-001-0002 To 0003 Parent: GEW-001-0001 Date: 06/18/79

Title: (Memorandum re: Mercury Sampling on 6/16/79)

Type: CORRESPONDENCE
Author: Figueroa, Solange I.: General Electric
Recipient: Poland, J.B.: General Electric

Document Number: GEW-001-0004 To 0005 Parent: GEW-001-0001 Date: 06/19/84

Title: (Memorandum re: Ground Samples/Mercury Percent)

Type: CORRESPONDENCE
Author: Figueroa, Solange I.: General Electric
Recipient: Culp, Dale: General Electric

Document Number: GEW-001-0006 To 0008 Parent: GEW-001-0001 Date: 06/20/79

Title: (Memorandum re: Mercury Sampling - Follow Up)

Type: CORRESPONDENCE
Author: Figueroa, Solange I.: General Electric
Recipient: Poland, J.B.: General Electric

Document Number: GEW-001-0009 To 0010 Parent: GEW-001-0001 Date: 06/22/79

Title: (Memorandum re: Mercury Button Handling, Plating Area, Juana Diaz)

Type: CORRESPONDENCE
Author: Figueroa, Solange I.: General Electric
Recipient: Poland, J.B.: General Electric

Document Number: GEW-001-0011 To 0011 Date: 06/25/79

Title: (Memorandum re: Juana Diaz Plating Area Situation)

Type: CORRESPONDENCE
Author: Figueroa, Solange I.: General Electric
Recipient: Poland, J.B.: General Electric
Attached: GEW-001-0012

Document Number: GEW-001-0015 To 0015 Parent: GEW-001-0014 Date: 07/19/79

Title: (Memorandum re: Mercury Soil Samples)

Type: CORRESPONDENCE
Author: Figueroa, Solange I.: General Electric
Recipient: Poland, J.B.: General Electric

Document Number: GEW-001-0018 To 0019 Date: 10/11/79

Title: (Letter re: Juana Diaz Plant Soil Evaluation Samples)

Type: CORRESPONDENCE
Author: Figueroa, Solange I.: General Electric
Recipient: Feliu, Leo: General Electric
Attached: GEW-001-0020 GEW-001-0022

Document Number: GEW-001-0023 To 0023 Date: 11/02/79

Title: (Letter re: Laboratory Analysis of the Juana Diaz Plant Soil)

Type: CORRESPONDENCE
Author: Figueroa, Solange I.: General Electric
Recipient: Schauseil, Robert I.: General Electric
Attached: GEW-001-0024 GEW-001-0025

Document Number: GEW-001-2214 To 2217 Parent: GEW-001-2210 Date: 03/27/87

Title: (Letter re: Requirements of Section 121)

Type: CORRESPONDENCE
Author: Florio, James J.: US Congress
Recipient: Thomas, Lee M.: US EPA

Document Number: GEW-001-0151 To 0152 Date: 01/27/82

Title: (Letter re: EPA's review of comments regarding Law Engineering Testing Company's Clay Continuity Report)

Type: CORRESPONDENCE
Author: Frisco, John S.: US EPA
Recipient: Phillips, Marvin: General Electric

Document Number: GEW-001-0509 To 0510 Date: 01/27/82

Title: (Letter re: U.S. EPA's comments on Law Engineering Testing Company's Continuity of Clay Report)

Type: CORRESPONDENCE
Author: Frisco, John S.: US EPA
Recipient: Phillips, Marvin: General Electric

Document Number: GEW-001-0645 To 0646 Date: 12/15/83

Title: Resolution and notification (written in Spanish)

Type: LEGAL DOCUMENT
Author: Gelabert, Pedro A.: PR, Commonwealth of
Recipient: none: General Electric

Document Number: GEW-001-0100 To 0150 Date: 11/02/81

Title: (Letter re: Attached Report of Clay Continuity Study, Waste Fill Area, Juana Diaz Plant, Puerto Rico, Law Engineering Project No. MH1367)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: Germond, Bart J.: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-0450 To 0502 Date: 11/02/80

Title: (Letter re: Attached Report of Clay Continuity Study, Waste Fill Area, Juana Diaz Plant, Puerto Rico, Law Engineering Project No. MH1367)

Type: CORRESPONDENCE
Author: Germond, Bart J.: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-0503 To 0503 Date: 10/30/81

Title: (Letter re: Amendment to the June 19th Report, Hydrogeologic Investigation Waste Fill Area, Juana Diaz Plant, Puerto Rico, Law Engineering Job No. MH1223)

Type: CORRESPONDENCE
Author: Germond, Bart J.: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric
Attached: GEW-001-0504

Document Number: GEW-001-0161 To 0162 Date: 02/19/82

Title: (Letter re: Water Level Monitoring Program, Waste Fill Area, Juana Diaz Plant, Puerto Rico, Law Engineering Project No. MH1440)

Type: CORRESPONDENCE
Author: Germond, II, Bart J.: Law Engineering Testing
Recipient: Marques, Jose A.: General Electric

Document Number: GEW-001-0653 To 0653 Date: 02/07/84

Title: (Newspaper article titled: "GE Will Cleanup Juana Diaz Site where Toxic Waste Was Dumped")

Type: CORRESPONDENCE
Author: Ghigliotty, Julio: San Juan Star
Recipient: none: none

Document Number: GEW-001-1919 To 1919 Parent: GEW-001-1857 Date: 09/01/88

Title: (Letter re: Quality Assurance Project Plan for EPA Work Assignment 649, Sampling and Analysis of Ground Water and Soil Samples, G.E. Wiring Devices, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Goltz, Robert D.: Camp Dresser & McKee (CDM)
Recipient: Harvell, Rose: US EPA

Document Number: GEW-001-1942 To 1943 Date: 09/13/88

Title: (Letter re: Trip Report, Sampling Investigation Report, Data Summary, and Evaluation Report for EPA Work Assignment 649, G.E. Wiring Devices, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Goltz, Robert D.: Camp Dresser & McKee (CDM)
Recipient: Harvell, Rose: US EPA
Attached: GEW-001-1944

Document Number: GEW-001-2426 To 2426 Date: 12/01/93

Title: (Letter re: Addendum to the Revised Baseline Risk Assessment, G.E. Wiring Devices Site, Juana Diaz, Puerto Rico, and Health and Endangerment Assessment Work Assignment)

Type: CORRESPONDENCE
Author: Graber, Scott B.: CDM Federal Programs Corporation
Recipient: Smieszek, Erwin: US EPA
Attached: GEW-001-2427

Document Number: GEW-001-2464 To 2464 Date: 08/26/93

Title: (Letter re: Draft Baseline Risk Assessment, G.E. Wiring Devices Site, Juana Diaz, Puerto Rico, and Health and Endangerment Assessment Work Assignment)

Type: CORRESPONDENCE
Author: Graber, Scott B.: CDM Federal Programs Corporation
Recipient: Smieszek, Erwin: US EPA
Attached: GEW-001-2465

Document Number: GEW-001-0689 To 0689 Date: 04/24/85

Title: (Letter re: Analytical Results of Priority Pollutant Analysis of Water Sample from Stand-Pipe No. 11, General Electric Juana Diaz Facility)

Type: CORRESPONDENCE
Author: Hart, Steven W.: Law Engineering Testing
Recipient: Font, Jose C.: US EPA
Attached: GEW-001-0690 GEW-001-0691 GEW-001-0692

Document Number: GEW-001-1211 To 1211 Date: 04/09/87

Title: (Letter re: Remedial Investigation Report, General Electric Wiring Devices Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Ignacio, Rafael L.: PR Industrial Development Company
Recipient: Gelabert, Pedro A.: US EPA

Document Number: GEW-001-2335 To 2336 Date: 09/23/88

Title: (Letter re: Receipt of Draft Feasibility Study Report)

Type: CORRESPONDENCE
Author: Ignacio, Rafael L.: PR Industrial Development Company
Recipient: O'Neill, Carlos E.: US EPA

Document Number: GEW-001-0047 To 0047 Date: 05/19/81

Title: (Certificate of Analysis for eight water samples received 04/30/81)

Type: DATA
Author: illegible: Stewart Laboratories
Recipient: Phillips, J.M.: General Electric

Document Number: GEW-001-0099 To 0099 Parent: GEW-001-0048 Date: 06/18/81

Title: (Certificate of Analysis on two samples of waste material)

Type: DATA
Author: illegible: Stewart Laboratories
Recipient: Phillips, J.M.: General Electric

Document Number: GEW-001-0153 To 0157 Date: 02/15/82

Title: Attachment 2-5 Certified Laboratory Results (water samples from selected standpipes)

Type: DATA
Author: illegible: Omni Research Incorporated
Recipient: none: General Electric

Document Number: GEW-001-0504 To 0504 Parent: GEW-001-0503 Date: 06/18/81

Title: Certificate of Analysis (for two samples of waste material)

Type: LEGAL DOCUMENT
Author: illegible: Stewart Laboratories
Recipient: Phillips, Marvin: General Electric

Document Number: GEW-001-0554 To 0554 Date: 02/04/82

Title: Water Analysis Report (for samples received 01/28/82)

Type: DATA
Author: illegible: Caribtec Laboratories
Recipient: none: none

Document Number: GEW-001-0178 To 0183 Date: 09/29/82

Title: (Letter re: Drilling and Monitoring Well Installation, General Electric Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: Jernigan, Bruce L.: Law Engineering Testing
Recipient: Castillo, Luis Vasquez: Vazquez Agrait, Vazquez Castillo & Despiau

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Document Number: GEW-001-0193 To 0196 Date: 10/28/82

Title: (Letter re: Attached Technical Response to EQB's Clay Continuity and Alluvial Contamination Concerns, Juana Diaz Site, Puerto Rico, Law Engineering Project No. MH2317.01)

Type: CORRESPONDENCE
Author: Jernigan, Bruce L.: Law Engineering Testing
Recipient: Friss, James T.: General Electric

Document Number: GEW-001-0197 To 0197 Date: 11/05/82

Title: (Letter re: General Electric, Juana Diaz Site, P.R.)

Type: CORRESPONDENCE
Author: Jernigan, Bruce L.: Law Engineering Testing
Recipient: Castillo, Luis Vasquez: Vazquez Agrait, Vazquez Castillo & Despiau

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Document Number: GEW-001-0664 To 0664 Date: 03/26/85

Title: (Letter re: GE Wiring Device Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Kaplan, Arthur L.: General Electric
Recipient: Font, Jose C.: US EPA
Attached: GEW-001-0665

Document Number: GEW-001-0754 To 0754 Date: 10/29/85

Title: (Letter re: Review of possible trichloroethylene contamination at Juana Diaz site)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Kaplan, Arthur L.: General Electric
Recipient: Font, Jose C.: US EPA
Attached: GEW-001-0755 GEW-001-0756

Document Number: GEW-001-0766 To 0766 Date: 06/18/86

Title: (Letter re: Revised Work Plan for Remedial Investigation, G.E. Wiring Devices Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Kaplan, Arthur L.: General Electric
Recipient: Czapor, John V.: US EPA
Attached: GEW-001-0767

Document Number: GEW-001-0768 To 0769 Date: 08/20/86

Title: (Letter re: Notification of Time Extension, G.E. Wiring Devices Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Kaplan, Arthur L.: General Electric
Recipient: Czapor, John V.: US EPA

Document Number: GEW-001-0770 To 0770 Date: 09/23/86

Title: (Letter re: G.E. Wiring Devices Site, Juana Diaz, P.R., CERCLA #106 Order)

Type: CORRESPONDENCE
Author: Kaplan, Arthur L.: General Electric
Recipient: Font, Jose C.: US EPA
Attached: GEW-001-0771 GEW-001-0773 GEW-001-0774

Document Number: GEW-001-1494 To 1494 Date: 12/08/87

Title: (Letter re: Administrative Consent Order No. II-CERCLA-3030, dated January 16, 1984, General Electric Company, Juana Diaz, P.R. Plant)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Kaplan, Arthur L.: General Electric
Recipient: DiForte, Nicoletta: US EPA
Attached: GEW-001-1495

Document Number: GEW-001-0448 To 0449 Parent: GEW-001-0447 Date: / /

Title: Principles of Engineering Geology and Geotechnics: Chapter 18: Earthquakes and Aseismic Design

Type: CORRESPONDENCE
Condition: INCOMPLETE
Author: Krynine, Dimitri P.: McGraw Hill Book Company
Recipient: none: none

Document Number: GEW-001-0444 To 0446 Date: 06/06/83

Title: (Letter re: Flooding Analyses, Juana Diaz Site, Puerto Rico, Reference Proposal MS3022.20 (Item 2), Law Engineering Project No. WM3233)

Type: CORRESPONDENCE
Author: Lawing, Raymond J.: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-0616 To 0620 Date: 10/07/83

Title: (Letter re: Evaluation of hazardous sites in Puerto Rico for inclusion on the National Priorties List)

Type: CORRESPONDENCE
Author: Librizzi, William J.: US EPA
Recipient: Madera, Jose R.: PR Economic Development Administration

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Document Number: GEW-001-0511 To 0549 Date: 08/04/82

Title: Hazardous Ranking System Scores Package: General Electric - Wiring Devices of Puerto Rico

Type: OTHER
Author: Lipsky, David: US EPA
Recipient: none: none
Attached: GEW-001-0537 GEW-001-0549

Document Number: GEW-001-0549 To 0549 Parent: GEW-001-0511 Date: 04/21/82

Title: Sampling Trip Report (at Juana Diaz site for sampling trip on 04/19/82 and 04/21/82 and stating "measurements taken with Bachrach Mercury Sniffer along fence perimeters- No mercury detected")

Type: PLAN
Condition: MISSING ATTACHMENT
Author: Lipsky, David: US EPA
Recipient: none: none

Document Number: GEW-001-0243 To 0245 Date: 01/13/83

Title: (Letter re: Attached Brief Statement on analyses of data gathered on the Hydrogeologic Investigation)

Type: CORRESPONDENCE
Author: Long, David T.: MI State University
Recipient: Jernigan, Bruce L.: Law Engineering Testing

Document Number: GEW-001-2194 To 2198 Date: 04/15/86

Title: (Memorandum re: Discharge of Wastewater from CERCLA Sites into POTWS)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: Longest, II, Henry L.: US EPA
Recipient: none: US EPA

Document Number: GEW-001-1315 To 1315 Date: 04/30/87

Title: News article titled: "Mercury Only Pollutant Found at GE Juana Diaz Waste Site: GE dump one of eight P.R. Superfund sites; total estimated cleanup cost could be $37M"

Type: OTHER
Author: Luxner, Larry: Caribbean Business
Recipient: none: none

Document Number: GEW-001-0608 To 0608 Date: 02/08/83

Title: (Letter re: On-site disposal of hazardous and/or toxic wastes)

Type: CORRESPONDENCE
Author: Madera, Jose R.: PR Economic Development Administration
Recipient: DeSorbo, L.A.: General Electric

Document Number: GEW-001-0613 To 0613 Parent: GEW-001-0612 Date: 04/11/83

Title: (Letter re: Technical Alternatives available for correcting the environmental problems created by the disposal of toxic wastes at the General Electric Manufacture Wiring Devices, Inc.)

Type: CORRESPONDENCE
Author: Madera, Jose R.: PR Economic Development Administration
Recipient: Rivera, Ignacio: General Electric

Document Number: GEW-001-0614 To 0614 Date: 09/28/83

Title: (Letter re: On-site encapsulation of toxic wastes)

Type: CORRESPONDENCE
Author: Madera, Jose R.: PR Economic Development Administration
Recipient: Rivera, Ignacio: General Electric
Attached: GEW-001-0615

Document Number: GEW-001-0615 To 0615 Parent: GEW-001-0614 Date: 08/04/83

Title: (Letter re: Immediate action for proper disposal of mercury contaminated wastes)

Type: CORRESPONDENCE
Author: Madera, Jose R.: PR Economic Development Administration
Recipient: Rivera, Ignacio: General Electric

Document Number: GEW-001-0647 To 0649 Date: 01/27/84

Title: (Letter re: Complete removal of toxic waste from the site)

Type: CORRESPONDENCE
Author: Madera, Jose R.: PR Economic Development Administration
Recipient: Rivera, Ignacio: General Electric

Document Number: GEW-001-0657 To 0659 Date: 03/09/84

Title: (Letter re: General Electric Company, EPA Order on Consent, Index No. II CERCLA-30301, To Clean Up Juana Diaz Plant Site)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Madera, Jose R.: PR Economic Development Administration
Recipient: none: US EPA

Document Number: GEW-001-0234 To 0242 Date: 01/11/83

Title: (Letter re: Attached Chemical Analyses on the Water and Sediment Samples)

Type: CORRESPONDENCE
Author: Maroncelli, James M.: Law Engineering Testing
Recipient: Alexander, W. Joseph: Law Engineering Testing

Document Number: GEW-001-0286 To 0286 Parent: GEW-001-0285 Date: / /

Title: Results of Mercury Analyses, Law Engineering Project No. MH2317

Type: DATA
Author: Maroncelli, James M.: Law Engineering Testing
Recipient: none: none

Document Number: GEW-001-0385 To 0386 Date: 03/11/83

Title: (Letter re: Attached results of chemical analyses soil samples)

Type: CORRESPONDENCE
Author: Maroncelli, James M.: Law Engineering Testing
Recipient: Alexander, W. Joseph: Law Engineering Testing

Document Number: GEW-001-0537 To 0537 Parent: GEW-001-0511 Date: / /

Title: Results of Mercury Analyses, Law Engineering Project No. MH2317

Type: PLAN
Author: Maroncelli, James M.: Law Engineering Testing
Recipient: none: none

Document Number: GEW-001-0184 To 0192 Date: 08/27/82

Title: General Electric Company, Juana Diaz Plant, Retaining Wall (Muro de Contencion)

Type: GRAPHIC
Author: Marques, Jose A.: General Electric
Recipient: none: none

Document Number: GEW-001-1852 To 1852 Parent: GEW-001-1633 Date: 04/11/88

Title: (Inter-office memorandum re: Project 6331 - GE Juana Diaz, Work Performed July to September, 1986)

Type: CORRESPONDENCE
Author: McBride, Clifford H.: Law Engineering Testing
Recipient: Sellers, Mark A.: Law Engineering Testing

Document Number: GEW-001-1395 To 1415 Parent: GEW-001-1345 Date: 12/02/86

Title: (Letter re: Attached Report of Preliminary Testing and Evaluation, Solidification/Fixation Agent, G.E. Wiring Devices Plant, Juana, Puerto Rico)

Type: CORRESPONDENCE
Author: McNelis, Kathleen A.: Law Environmental Services
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-1854 To 1856 Date: 05/12/88

Title: (Memorandum re: Mercury Validation Results)

Type: CORRESPONDENCE
Author: Messina, Frank J.: US EPA
Recipient: DiForte, Nicoletta: US EPA

Document Number: GEW-002-0044 To 0075 Date: 09/30/88

Title: Record of Decision, G.E. Wiring Devices, Juana Diaz, Puerto Rico

Type: REPORT
Author: Muszynski, William J.: US EPA
Recipient: none: none

Document Number: GEW-001-0198 To 0217 Date: 11/22/82

Title: (Letter re: Attached Status Report of Hydraulic Conditions, Perched-Water Table; Waste Fill Area, Juana Diaz Plant, Puerto Rico, Law Engineering Project No. MH1440.03)

Type: CORRESPONDENCE
Author: Alexander, W. Joseph: Law Engineering Testing
Neal, Larry A.: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-0414 To 0433 Date: 04/20/83

Title: (Letter re: Report of Test Results, Juana Diaz Site, Puerto Rico, Reference Proposal MS3022.20 (Items 3 and 4), Law Engineering Project No. WM3233)

Type: CORRESPONDENCE
Author: Alexander, W. Joseph: Law Engineering Testing
Neal, Larry A.: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-0690 To 0690 Parent: GEW-001-0689 Date: 03/19/85

Title: (Letter re: Analytical Results of Priority Pollutant, Analysis of Water Sample from Stand-Pipe No. 11, General Electric Juana Diaz Facility)

Type: CORRESPONDENCE
Author: Neal, Larry A.: Law Engineering Testing
Shugart, Steven L.: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-0755 To 0755 Parent: GEW-001-0754 Date: 12/13/85

Title: (Letter re: Proposed Schedule of Soil Sampling for Trichloroethylene, G.E. Juana Diaz, Puerto Rico Plant)

Type: CORRESPONDENCE
Author: Neil, Larry A.: Law Engineering Testing
Recipient: Font, Jose C.: US EPA

Document Number: GEW-001-0231 To 0233 Date: 12/20/82

Title: Permeability test results from boring locations MW-2 and MW-4 taken 12/13/82-12/20/82

Type: DATA
Author: O'Kelly, M.: Law Engineering Testing
Recipient: none: none

Document Number: GEW-001-2427 To 2463 Parent: GEW-001-2426 Date: 12/01/93

Title: Revised Baseline Risk Assessment Addendum for the G.E. Wiring Devices Site, Work Assignment No. C02120

Type: REPORT
Author: Oxford, Jeniffer: CDM Federal Programs Corporation
Recipient: none: US EPA

Document Number: GEW-001-0434 To 0443 Date: 05/25/83

Title: (Letter re: Seismic Risk of the Proposed Encapsulation Alternative, Waste Fill Area, Item 1 of Proposal No. MS3022.20, Law Engineering Project No. WM3233)

Type: CORRESPONDENCE
Author: Parker, Mark: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-2199 To 2208 Date: 12/24/86

Title: (Memorandum re: Interim Guidance on Superfund Selection of Remedy)

Type: CORRESPONDENCE
Author: Porter, J. Winston: US EPA
Recipient: none: US EPA
Attached: GEW-001-2209

Document Number: GEW-001-2228 To 2236 Date: 07/09/87

Title: (Memorandum re: Interim Guidance on Compliance with Applicable or Relevant and Appropiate Requirements)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: Porter, J. Winston: US EPA
Recipient: none: none

Document Number: GEW-001-0219 To 0219 Parent: GEW-001-0218 Date: 12/10/82

Title: (Letter re: Enclosed copy of the original test boring field logs)

Type: CORRESPONDENCE
Author: Ramirez, Hector Laverone: Caribbean Soil Testing Company
Recipient: Schauseil, Robert J.: General Electric

Document Number: GEW-001-0692 To 0700 Parent: GEW-001-0689 Date: / /

Title: Data Report Notice and Report of Data

Type: PLAN
Author: Scammell, Diana A.: CompuChem
Recipient: Neil, Larry A.: Law Engineering Testing

Document Number: GEW-001-0722 To 0729 Parent: GEW-001-0701 Date: 08/22/85

Title: (Letter re: Report for analysis of sample from monitoring well No. 1)

Type: CORRESPONDENCE
Author: Scammell, Diana A.: CompuChem
Recipient: Neil, Larry A.: Law Engineering Testing

Document Number: GEW-001-0730 To 0737 Parent: GEW-001-0701 Date: 08/22/85

Title: (Letter re: Report for analysis of sample from monitoring well No. 2)

Type: CORRESPONDENCE
Author: Scammell, Diana A.: CompuChem
Recipient: Neil, Larry A.: Law Engineering Testing

Document Number: GEW-001-0738 To 0745 Parent: GEW-001-0701 Date: 08/22/85

Title: (Letter re: Attached report for analysis of sample from monitoring well No. 3)

Type: CORRESPONDENCE
Author: Scammell, Diana A.: CompuChem
Recipient: Neil, Larry A.: Law Engineering Testing

Document Number: GEW-001-0746 To 0753 Parent: GEW-001-0701 Date: 08/22/85

Title: (Letter re: Attached analysis results of sample from monitoring well No. 4)

Type: CORRESPONDENCE
Author: Scammell, Diana A.: CompuChem
Recipient: Neil, Larry A.: Law Engineering Testing

Document Number: GEW-001-0621 To 0643 Date: 01/16/84

Title: Administrative Order on Consent (regarding actions and studies to be done at Juana Diaz site)

Type: LEGAL DOCUMENT
Condition: MARGINALIA
Author: Schafer, Jacqueline E.: US EPA
Recipient: Vineyard, William: General Electric
Attached: GEW-001-0644

Document Number: GEW-001-0218 To 0218 Date: 12/13/82

Title: (Letter re: Enclosed copies of Driller's Logs)

Type: CORRESPONDENCE
Author: Schauseil, Robert I.: General Electric
Recipient: de la Cruz, Luis E.: PR Environmental Quality Board
Attached: GEW-001-0219 GEW-001-0220

Document Number: GEW-001-0505 To 0508 Date: 06/05/81

Title: Notification of Hazardous Waste Site: General Electric Company - Wiring Devices Department

Type: OTHER
Author: Schauseil, Robert I.: General Electric
Recipient: Frisco, John S.: US EPA

Document Number: GEW-001-0553 To 0553 Date: 12/09/82

Title: (Letter re: Receipt of November 29, 1982 letter)

Type: CORRESPONDENCE
Author: Schauseil, Robert I.: General Electric
Recipient: de la Cruz, Luis E.: PR Environmental Quality Board

Document Number: GEW-001-0610 To 0611 Date: 02/25/83

Title: (Letter re: Comments on Proposed Amendment to National Oil and Hazardous Substance Contingency Plan; the National Priorities List, 47 Federal Register 54,476, December 30, 1982)

Type: CORRESPONDENCE
Author: Schauseil, Robert I.: General Electric
Recipient: Wyer, Russell H.: US EPA

Document Number: GEW-001-1895 To 1918 Parent: GEW-001-1857 Date: 08/22/88

Title: (Letter re: Status report on the work performed by the Bureau of Mines with attached Bureau of Mines Report)

Type: CORRESPONDENCE
Author: Schmidt, William B.: US Dept of the Interior
Recipient: Diforte, Nicoletta: US EPA

Document Number: GEW-001-2382 To 2382 Date: 10/27/88

Title: (Letter re: Attached copies of the final version of the Bureau's report)

Type: CORRESPONDENCE
Author: Schmidt, William B.: US Dept of the Interior
Recipient: Diforte, Nicoletta: US EPA
Attached: GEW-001-2383

Document Number: GEW-001-0775 To 0775 Date: 10/08/86

Title: (Letter re: Submittal of Report, Remedial Investigation, General Electric Wiring Devices Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Sellers, Mark A.: Law Engineering Testing
Recipient: Czapor, John V.: US EPA
Attached: GEW-001-0776

Document Number: GEW-001-1495 To 1631 Parent: GEW-001-1494 Date: 11/12/87

Title: (Letter re: Attached Addendum to the RI/FS Study, General Electric Wiring Devices Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Condition: DRAFT; MARGINALIA
Author: Sellers, Mark A.: Law Engineering Testing
Recipient: Kaplan, Arthur L.: General Electric

Document Number: GEW-001-0687 To 0688 Date: 04/09/85

Title: (Letter re: Request for data on ground-water wells in the vicinity of Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Shugart, Steven L.: Law Engineering Testing
Recipient: Font, Jose C.: US EPA

Document Number: GEW-001-0690 To 0690 Parent: GEW-001-0689 Date: 03/19/85

Title: (Letter re: Analytical Results of Priority Pollutant, Analysis of Water Sample from Stand-Pipe No. 11, General Electric Juana Diaz Facility)

Type: CORRESPONDENCE
Author: Neal, Larry A.: Law Engineering Testing
Shugart, Steven L.: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-0701 To 0753 Date: 10/23/87

Title: (Letter re: Results of Chemical Analysis of Water Samples from Water Wells and Monitoring Wells)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: Spiers, Charles A.: Law Environmental Services
Recipient: Schauseil, Robert I.: General Electric
Attached: GEW-001-0722 GEW-001-0730 GEW-001-0738 GEW-001-0746

Document Number: GEW-001-0756 To 0756 Parent: GEW-001-0754 Date: 01/10/86

Title: (Letter re: Revised Schedule of Soil Sampling for Trichloroethylene, G.E. Juana Diaz, Puerto Rico Plant)

Type: CORRESPONDENCE
Author: Spiers, Charles A.: Law Environmental Services
Recipient: Font, Jose C.: US EPA

Document Number: GEW-001-2383 To 2408 Parent: GEW-001-2382 Date: 10/27/88

Title: Bureau of Mines Technologic Screening Study for Wastes from the G.E. Wiring Devices Superfund Site, Juana Diaz, Puerto Rico

Type: REPORT
Author: staff: Reno Research Center
Recipient: none: none

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ocument Number: GEW-001-0773 To 0773 Parent: GEW-001-0770 Date: 09/11/86

Title: (Letter re: Analyses of soil samples sent to Oxford Laboratories, Inc., for comparative Mercury study by Cold Vapor Technique)

Type: CORRESPONDENCE
Author: Tersegno, Vincent J.: Law Environmental Services
Recipient: Sellers, Mark A.: Law Engineering Testing

Document Number: GEW-001-1416 To 1493 Parent: GEW-001-1345 Date: 12/02/86

Title: (Letter re: Attached Chemical Analyses of Samples Received on August 4, 1986)

Type: CORRESPONDENCE
Author: Tersegno, Vincent J.: Law Environmental Services
Recipient: Wheeless, Dave: Law Environmental Services

Document Number: GEW-001-2210 To 2213 Date: 05/21/87

Title: (Letter re: Agency's implementation of the Superfund Amendments and Reauthorization Act of 1986 (SARA))

Type: CORRESPONDENCE
Author: Thomas, Lee M.: US EPA
Recipient: Florio, James J.: US Congress
Attached: GEW-001-2214

Document Number: GEW-001-2333 To 2334 Date: 09/22/88

Title: (Letter concurring with EPA that alternative 9, Hydrometallurgical Treatment, is the most environmentally sound and safe alternative while noting more detailed studies on groundwater are needed prior to taking any action)

Type: CORRESPONDENCE
Author: Torres, Heriberto: PR, Commonwealth of
Recipient: O'Neill, Carlos E.: US EPA

Document Number: GEW-001-0612 To 0612 Date: 05/27/83

Title: (Letter re: General Electric Wiring Devices, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Umpierre, Victor R.: PR Economic Development Administration
Recipient: Diamond, Larry: US EPA
Attached: GEW-001-0613

Document Number: GEW-001-2218 To 2219 Date: 05/29/87

Title: (Memorandum re: Review of Interim Guidance on Compliance with ARAR's)

Type: CORRESPONDENCE
Author: Weissman, Arthur B.: US EPA
Recipient: none: none
Attached: GEW-001-2220

Document Number: GEW-001-0163 To 0165 Date: 02/23/82

Title: (Letter re: Response to U.S. EPA'S Review, Juana Diaz, Puerto Rico Study, by Mr. John S. Frisco, Chief, Hazard Assessment Section, Law Engineering Project No. MH1367)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: White, Robert M.: Law Engineering Testing
Recipient: Phillips, Marvin: General Electric

APPENDIX 2

APPENDIX 2

RESPONSIVENESS SUMMARY

G.E. WIRING DEVICES SUPERFUND SITE
JUANA DIAZ, PUERTO RICO

In accordance with Sections 113 and 117 of the Comprehensive Environmental Response, Compensation and Liability Act, as amended, EPA has conducted community involvement activities at the G.E. Wiring Devices Superfund Site (the "Site") to solicit community input and ensure that the public remains informed about Site activities. EPA's Post-Decision Proposed Plan was released to the public on April 26, 1999. A copy of the Post-Decision Proposed Plan was placed in the Administrative Record and was made available in the information repository at the Press Office at the Mayor's Office, Juana Diaz City Hall. A public notice was published in the San Juan Star in San Juan, Puerto Rico on April 26, 1999, advising the public of the availability of the Post-Decision Proposed Plan and the Focused Feasibility Study, and the date of the upcoming public meeting. The public notice also was published in El Nuevo Dia in San Juan on May 10, 1999.

During the public comment period, EPA held a public meeting at Juana Diaz City Hall on May 13, 1999, to answer questions and receive comments on the Agency's preferred alternative for addressing Site contamination. Comments received during the public meeting were recorded in an official transcript; a copy is included in the Administrative Record and information repository. The public comment period opened on April 26, 1999 and closed on May 25, 1999.

This responsiveness summary provides information about the community's views regarding EPA's proposed action, documents how the Agency has considered public comments during the decision-making process, and provides answers to major comments received during the public comment period. EPA received many comments regarding issues unrelated to EPA's proposed remedy change. All comments are summarized in this document; however, only those comments related to the proposed remedy change for off-site disposal have been considered in EPA's final decision for selection of a remedial alternative for the Site.

These sections follow:

- **Overview:** This section discusses the recommended action for the Site and the public reaction to this alternative.

- **Background on Community Involvement:** This section provides a brief history of community interest in the Site and identifies key public issues.

- **Summary of Comments Received During the Public Comment Period and Agency Responses:** This section provides EPA's responses to oral and written comments submitted during the public comment period, and is divided into two parts, as follows.

  - Part I: Summary and Response to Local Community Concerns
  - Part II: Comprehensive Response to Specific Legal and Technical Questions

- **Remaining Concerns:** This section discusses issues and concerns that EPA was unable to address during the remedial planning activities.

- **Attachment A - Community Relations Activities at G.E. Wiring Devices Superfund Site:** This attachment contains a list of community relations activities conducted at the Site to date.

A. OVERVIEW

At the time of the public comment period, EPA had identified a preferred alternative for the Site, which would replace only a focused portion of the September 30, 1988 Record of Decision. EPA documented this change in its Post-Decision Proposed Plan, dated April 26, 1999. The recommended alternative involves the off-site disposal of all remaining Site wastes at a permitted RCRA Subtitle C hazardous waste landfill located on the mainland United States, in place of on-site treatment and backfill of processed wastes using the G.E. Mercury Extraction Process treatment system, which was a part of the original remedy.

This modification is in direct response to significant variations in Site conditions which were encountered during excavation and construction phases of the original remedy. These variations made the original remedy less effective, less implementable, and more costly than other remedial alternatives. EPA has not changed the mercury cleanup level it adopted for the Site in 1993, which remains at the residential preliminary remediation goal (PRG) of 39 parts per million (ppm).

Judging from the comments received during the public comment period, local residents and other concerned parties generally support the Post-Decision Proposed Plan, and agree that off-site disposal provides equivalent protection of human health and the environment, greater implementability, fewer short-term risks, and significantly lower costs when compared to the original remedy.

The public also understands that the preferred alternative would be accomplished within a few months and is consistent with Site-specific cleanup requirements.

B. BACKGROUND ON COMMUNITY INVOLVEMENT

Since discovery of environmental problems at the Site, EPA has worked closely with residents in the affected community to solicit their concerns and answer their questions on a regular basis. Based upon community reaction, EPA has revised its Community Relations Plan for the Site twice, prior to the Remedial Design/Remedial Action phase in July 1992 and at the start of Remedial Action activities in May 1997.

During community interviews conducted in April 1992, residents in the neighborhood adjacent to the Site expressed their concerns about three main issues: 1) lack of sufficient information on the Superfund process and how it applies to the Site, 2) potential effects of the Site contamination on public health and the environment, and 3) their reaction to sampling activities.

In March 1997, issues and concerns solicited during the community interviews were focused on issues related more closely to the Remedial Action. These included:

- Off-site migration of contamination
- Cleanup technology and schedule
- Current monitoring activities
- Public health and safety
- Ongoing communication efforts.

In August 1997, EPA prepared and distributed a fact sheet to the community in English and in Spanish which directly addressed these community concerns in a special question-and-answer section. The major concerns and how EPA addressed them are presented below:

(1) Residents were concerned that Site contamination could reach the ground water and migrate to their properties during heavy rain and flood conditions.

EPA Response: Mercury has not migrated from those areas where plastic and other scrap materials were deposited. Surface water runoff from the fill area is controlled, and will continue to be controlled throughout the cleanup. Run-off to adjacent residences is from the south field, an area of property which is not contaminated.

(2) Residents requested more information on the cleanup technology, an explanation of the term "clean soil," and an overall time frame for the cleanup process.

EPA Response: EPA described the cleanup technology in basic language in the August 1997 fact sheet. EPA also defined its established cleanup level for mercury in soil as 39 parts per million. The fact sheet presented a project schedule with major milestones and anticipated completion dates. In addition, EPA held an informational meeting with the community on September 23, 1997 to discuss the cleanup technology and answer questions.

(3) Residents expressed some confusion about sampling events and requested their soil sampling results.

EPA Response: In May 1997, EPA prepared letters and sent them to residents on Calle #2 whose properties were sampled in 1993. The letters presented the sampling results and compared the mercury concentrations found in the samples with the cleanup levels considered by EPA to be safe for human health. The letters also contained information on the potential health effects of exposure to mercury.

(4) The community wanted to know if G.E. Wiring continued to use mercury in its manufacturing process?

EPA Response: G.E. Wiring has not used mercury in its manufacturing process at the Juana Diaz facility since 1970.

(5) Residents wanted to know the whereabouts and contents of drums that were once located near G.E. property.

EPA Response: Drums were used to contain materials produced during soil sampling and well installation activities. The drums were sent off-site for proper disposal.

(6) Residents asked about the purpose of red markers observed in back of the G.E. facility.

EPA Response: The red markers identify soil sampling locations.

(7) Residents wanted to know what steps would be taken to minimize disturbances to residents and their properties during the cleanup. In particular, during the excavation and construction activities, they were concerned about the spread of rodents to nearby houses.

EPA Response: G.E. will take precautions normal to other construction projects in Puerto Rico, including the use of silt

fencing, control of working hours, etc. In addition, G.E. will provide temporary visual barriers and take steps to minimize noise. G.E. will hire a local exterminator to control rodents.

(8) The community asked about specific measures G.E. will take to maintain the formerly contaminated site.

EPA Response: G.E. will replant the Site with grass and maintain a cover on the former waste-fill area. G.E. will also maintain a fence around the Site.

(9) The community expressed concern about a possible link between the Site contamination and various illnesses in their families. They wanted to know whether mercury exposure could cause human health problems, such as cancer, Parkinson's Disease, asthma, or allergies, and asked about available studies on the subject. They also were concerned about health risks to current G.E. employees.

EPA Response: There is no clear medical evidence that mercury can cause cancer, allergies, or Parkinson's Disease in humans. Extreme exposure to mercury can cause harmful effects on the central nervous system and kidney. Lung reactions can also result from inhalation exposure to mercury vapors, while stomach problems may follow significant swallowing of organic mercury compounds. Body levels of mercury can be accurately determined using either blood or urine samples.

The potential risk associated with mercury exposure to GE factory employees and neighboring residences resulting from the cleanup work to be completed and the residual mercury level (below the 39 ppm PRG) to be left in placed is considered to be minimal. EPA will use cleanup methods at this site that are designed to prevent environmental releases.

(10) Residents, local officials, and other interested parties were eager to receive information on cleanup activities, and suggested a variety of techniques to stay informed of Site news. The Mayor's Office in cooperation with the Press Office expressed a willingness to distribute information to the community, and to relocate the information repository to Juana Diaz City Hall.

EPA Response: Residents will be kept informed through the information repository, which was relocated to the Mayor's Press Office at Juana Diaz City Hall, and through distribution of periodic newsletters and fact sheets. EPA will inform the local community of completion of the cleanup project through a public notice. (See **Attachment A** for a complete listing of community relations activities at the Site.)

C. SUMMARY OF COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD AND AGENCY RESPONSES

The public comment period on the Focused Feasibility Study and Post-Decision Proposed Plan was held from April 26, 1999 to May 25, 1999. The following correspondence was received during that time period:

- Letter from Rene R. Rodriguez (citizen) dated May 17, 1999
- Letter from the General Electric Company dated May 22, 1999

A summary of the comments contained in the above letters and the comments provided by the public at the May 13, 1999 public meeting, as well as EPA's responses to those comments, is provided below. Part I of this section addresses those community concerns and comments that are non-technical in nature. Responses to specific legal and technical questions are provided in Part II. Comments in each Part are categorized by relevant topics.

Part I - Summary and Response to Local Community Concerns

Public Participation Process

(1) A resident of the community requested that EPA review the translation of the public meeting. He was concerned that the facilitator did not translate word for word.

> **EPA Response:** EPA contracted to have an interpreter at the public meeting to assist with communications between the community and EPA. A court reporter also was at the meeting to record the entire meeting proceedings. The court reporter recorded comments and responses of both the public and the interpreter spoken in Spanish. An audio recording of the meeting was used to translate into Spanish those comments and responses given in English. A copy of the transcript is available for review in the information repository at the Major's Press Office in Juana Diaz and at the EPA Caribbean Division Office located at 1492 Ponce DeLeon Avenue, Suite 207, Santuce, Puerto Rico. EPA has reviewed the transcript to assure that EPA's Responses are accurate in addressing the comments received.

(2) One citizen expressed concern that EPA did not present sufficient technical data for citizens to make an informed choice. He proposed that EPA hold another public meeting in the near future to present technical data to support the decision-making process for the preferred alternative.

EPA Response: EPA presented the technical reasons for the proposed change at the May 13, 1999 meeting. The primary technical reasons relate to significant differences between the actual site conditions encountered during construction and the conditions which served as basic assumptions in developing the 1988 ROD. The significant differences are: 1) increased waste volume and 2) increased composition of silt and clay materials (fines) in the waste. EPA also presented the impacts of the changes in both waste volume and characteristics to the existing ROD remedy as reasons for the proposed change to off-site disposal. EPA feels that another public meeting is not warranted. However, we are available to discuss this further with any citizen who is interested.

Preferred Alternative

(1) Residents raised questions regarding the permeability of the clay layer and the permeability of the clean material proposed as backfill. They are concerned about the potential adverse impacts of backfilling the excavated area (West Field) with clean material that is more permeable than the underlying clay layer. They reported that clay fill materials, which are less permeable and are comparably priced to other imported clean material, are readily available in Juana Diaz.

EPA Response: The 1987 Remedial Investigation and additional sampling data collected in 1988 indicated the permeability of the clay layer to be in the range of 10^{-4} to 10^{-5} cm/sec. EPA considered these values as demonstrating moderate permeability. The risk-based cleanup goal of 39 ppm was calculated assuming that the site would be developed for residential use at some future point in time, considering relevant exposure pathways. The cleanup goal does not consider placement of a low-permeability cap (e.g. clay, HDPE liner) over soils containing residual levels of mercury below this concentration. The residential exposure scenario is more conservative than the scenario associated with the current industrial/commercial use for the site. Any consideration of industrial/commercial future site use or installation of a protective cap in the risk-based calculation would result in a higher cleanup goal. The 39 ppm cleanup goal is considered by EPA to be protective of human health and the environment.

(2) A citizen suggested that EPA evaluate the use of a HDPE cover system, if material more permeable than the underlying clay layer is used as backfill.

EPA Response: EPA selected and described in the Declaration Statement of EPA's 1988 ROD the major components of the

selected remedy. One of the major components of the selected remedy was the treatment of material to below health-based levels (39 ppm of mercury) based on residential use of the property and backfilling the area with treated materials. The area would then be covered with 2 feet of clean imported soil, which was considered suitable as an added physical barrier to prevent exposure to backfill material containing residual levels of mercury. Under the new proposed remedy, the entire waste area would be backfilled with clean imported soil. EPA believes that there is insufficient technical basis to support the need for an HDPE cover system, since, under the proposed remedy, the entire excavated area will be backfilled with clean imported fill material.

(3) The community is concerned about runoff from the excavated area during rain events. In particular, residents are concerned that the excavated area will be subject to overflow conditions, causing the migration of any remaining residual contamination.

EPA Response: Existing data from soil samples collected at neighboring residential properties do not support that significant amounts of mercury were transported off-site by runoff during historic storm events. Presently, runoff from the excavation and stockpile areas is fully contained and treated on-site. Upon completing excavation work, the area will be backfilled, graded, and vegetated to conform with the pre-existing topography and runoff flow characteristics. Soils containing residual mercury concentrations below the 39 ppm cleanup goal will be predominantly located underneath several feet of clean fill material and will not be exposed to off-site transport by erosion, runoff, or other mechanism.

(4) The community is concerned about the potential for mercury to infiltrate into drinkable ground water. They reported that a municipal supply well is located 500 feet to the west of the Site. Therefore, the community questioned why the preferred alternative specifies groundwater monitoring for three years and not a longer period of time.

EPA Response: In the 1988 ROD, EPA included limited groundwater monitoring (i.e., for a minimum of three years), provided that additional groundwater investigation established that there was no need for groundwater remediation. In 1993, additional monitoring wells were installed, and groundwater sampling was performed to address this requirement. The analytical results from groundwater samples did not indicate the presence of unacceptable risks associated with groundwater exposure. Therefore, EPA believes 3 years of groundwater monitoring following the completion of the remedial action

work (e.g. off-site disposal and backfilling with clean material) to be sufficient for protection of human health and the environment. The remedy selected at this Site will allow for unlimited use and unrestricted exposure. EPA will oversee the removal of contaminated soils and will review three years of ground water sampling results to insure the protectiveness of the remedy.

(5) Several residents expressed frustration regarding the length of time to solve environmental problems at the Site and complete the cleanup process. They noted that 10 years have passed since the original ROD and wonder how much longer the process will take.

EPA Response: EPA plans to advise G.E. to begin off-site removal of waste materials after the ROD Amendment is issued. It is hopeful that all material from the Site will be removed by (or before) the end of the year. Groundwater monitoring will continue for at least 3 years.

Risks to Human Health and the Environment

(1) A worker wanted to know if mercury could permeate her lungs or get into her blood. This worker also reported finding mercury in the bottom of her toilet bowl and was concerned about how it got there.

EPA Response: The potential for airborne emissions currently does not exist. In 1997, G.E. removed all the run-off materials from the South Field and processed all the contaminated materials. Currently, all the materials are under tarps to prevent runoff and airborne migration. G.E. performed some testing during the remedial investigation and confirmatory air monitoring was a major component of the 1988 ROD. Confirmatory air monitoring was also performed during excavation and physical treatment work completed from June 1997 to May 1998 to document that unacceptable levels of dust and mercury did not become airborne during the course of work. Confirmatory air monitoring will resume and continue through completion of the remedial action work.

Ginger M. Rossy, Environmental Quality Board representative, is investigating the potential presence of mercury in this worker's home.

(2) A community member reported anecdotal material about deaths and illnesses of people who lived in Juana Diaz and were in some way connected to G.E. He was concerned that these illnesses might be related to mercury contamination at G.E. and was disappointed

that no medical personnel were at the meeting to address his concerns.

EPA Response: Refer to EPA's response to Question No. 9 on page 5 .

(3) Residents on Calle #2 are worried that the duration of time that has passed since Site discovery may increase their risks for Site-related health problems. They are concerned about future health problems, because of long-term exposure to mercury waste at the G.E. facility.

EPA Response: EPA included re-sampling of soil in residential yards as a component of the remedy selected in the 1988 ROD. Residential soil sampling was performed in 1993, and again in April and May 1998. All results were below the residential remediation goal of 39 ppm. The predominant exposure routes for this site are ingestion and inhalation. As existing data do not support that significant quantities of mercury have migrated off-site via air, surface water, or other transport mechanisms, EPA believes that the potential exposure associated with occupying neighboring residences to be minimal.

(4) Residents of Calle #2 stated that during Hurricane George, their property was flooded and residual mud was left on their property. They wanted a guarantee that their yards did not contain any contamination related to the G.E. Wiring Site.

EPA Response: Runoff from the excavation and stockpile areas is fully contained and treated on-site, preventing off-site transport of contaminated materials. Tarps blown off of stockpiled materials were also replaced and re-secured by G.E. within one month of the storm. However, G.E. indicated that it will collect soil samples from the neighboring residential properties. A notice will be sent in advance of the sampling events to ensure that the affected residents will be at home.

Extent of Site Contamination

(1) Residents wanted to know if mercury contamination is moving off-site and, if so, in what direction to determine the safety of their neighborhood. Also, will the contamination migrate off-site in the future?

EPA Response: Mercury has not migrated from those areas where plastic and other scrap materials were deposited. Surface water runoff from the excavation and stockpile areas is contained and treated on-site. It will continue to be

controlled until the remedial action work is completed. Historic runoff to adjacent residences was from the south field, an area of property which is not contaminated. EPA believes the Site contamination will not affect the adjacent or distant residential neighborhoods.

(2) Residents wanted to know to what depth the mercury contamination was found at the Site.

EPA Response: Sampling conducted for the 1988 ROD detected mercury contamination in on-site soils approximately within six inches of the surface. At depths below six inches, mercury concentrations were below health-based levels and approached background levels. In the waste fill (West Field) area, contamination was originally detected to depths of about 4 feet. However, excavation depths up to 17 feet were required during construction (June 1997) to obtain confirmatory soil sample results below the required cleanup goal of 39 ppm.

(3) A resident reported that mercury waste was found off-site at an abandoned landfill in Juana Diaz. He questioned what was being done to investigate other potentially contaminated sites.

EPA Response: Carlos O'Niell, Superfund Branch Chief for the EPA Superfund Division in San Juan, Puerto Rico explained that his office was aware of this abandoned landfill. His office is in the process of classifying and undertaking preliminary investigations of landfills in Puerto Rico (including the one in Juana Diaz) for possible Superfund action.

(4) The community is concerned about long-term impacts of residual mercury-containing material of up to 39 ppm left at the Site.

EPA Response: The risk-based cleanup goal of 39 ppm was calculated assuming that the site would be developed for residential use at some future point in time. It does not consider the placement of a low permeable cap or clean fill material over soils containing residual levels of mercury below this concentration. The residential exposure scenario is more conservative than the scenario associated with the current industrial/commercial use for the site. The 39 ppm cleanup goal is considered by EPA to be protective of human health and the environment, considering relevant exposure pathways.

(5) A worker at G.E. reported that he had buried mercury waste on-Site at his supervisor's direction. He is concerned that EPA did not find all the mercury at the Site.

EPA Response: Sampling conducted for the 1988 ROD detected mercury contamination in on-site soils within six inches of the surface. At depths below six inches, mercury concentrations were below health-based levels and approached background levels. In the waste fill (West Field) area, contamination was originally detected to depths of about 4 feet. However, excavation depths up to 17 feet were required during construction (June 1997) to obtain confirmatory soil sample results below the required cleanup goal of 39 ppm. EPA believes that sufficient sampling and excavation was performed at the Site to locate and remove all waste materials above 39 ppm.

Part II - Comprehensive Response to Specific Legal and Technical Questions

Future Site Liability

(1) The community would like to know who will assume future liability for the Site. The community is concerned that once G.E. closes its Juana Diaz facility, G.E. will no longer be held responsible for cleanup at the Site. The community wants to know when G.E.'s responsibility for the Site ends.

EPA Response: EPA, under the enforcement authorities of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, holds the G.E. Company, as owner and operator of the G.E. Wiring Devices Site, liable for the cleanup of the contamination at the Site. G.E. must meets all cleanup conditions of the ROD, including long-term monitoring. All of G.E.'s work at the Site will be performed under EPA oversight. At some point in the future, once the Site has been cleaned up to the satisfaction of EPA, it may be deleted from the National Priorities List.

Proposed Remedy

(6) G.E. requested that EPA not place restrictions in the Amended ROD which prevent or pose obstacles to alternative transportation routes to the Port of Ponce in the event that the responsible party can not obtain rights to transport Site materials across PRIDCO property.

EPA Response: The ROD Amendment does not state what route is to be used to transport the waste to the Port of Ponce.

(7) G.E. requested that EPA not place restrictions in the Amended ROD which preclude or obstruct the possible need to move some bags

of Site material to an alternative location outside of the Site area pending arrival of the barge for transport to the United States. This request is based on the large volume of Site materials to be bagged and transported and the relatively limited space remaining on-Site to maneuver vehicles.

EPA Response: To the extent that G.E. wishes to use such a temporary alternative storage location for this purpose, G.E. should discuss the location with EPA in advance.

D. REMAINING CONCERNS

o Members of the community raised many health questions. They want to know if residents who live close to the Site are contaminated with mercury. They want to know if EPA is planning to do medical tests of Juana Diaz residents. If some residents are found to be ill, they want to know if G.E. will take responsibility.

EPA Response: The Federal agency responsible for this type of investigation is the Agency for Toxic Substances and Disease Registry (ATSDR). There is a provision in the CERCLA law for individual persons or local physicians to petition ATSDR to perform a health assessment if the probable source of exposure is a release. Further information on this procedures is available from the ATSDR Regional Office in New York City. Mr. Arthur Block, Regional ATSDR representative can be contacted at (212) 637-4307.

Residents who want a blood test for mercury levels should contact the local Health Department or their own physicians. G.E. officials suggested that anyone who was tested and had high levels of mercury in the blood report that to G.E. on an individual basis.

ATTACHMENT A

COMMUNITY RELATIONS ACTIVITIES
G.E. WIRING DEVICES SUPERFUND SITE

Community relations activities conducted at the G.E. Wiring Devices Superfund Site have included:

o EPA held a public meeting with the community to discuss the provisions of the Administrative Order and to receive and respond to comments regarding the Site (February 1984).

o EPA held a public meeting with the community to solicit comments on and discuss findings of the Remedial Investigation (April 1987).

o EPA held a public hearing with the community to discuss and receive comments on the draft Remedial Investigation/Feasibility Study (RI/FS) Report and Proposed Plan for the Site (September 15, 1988). This meeting took place in conjunction with a public comment period, which was held from September 1, 1988 to September 26, 1988.

o EPA conducted community interviews prior to the Remedial Design/Remedial Action phase of the Superfund process (April 1992).

o EPA prepared a Revised Community Relations Plan (CRP) (July 1992).

o EPA released a Spanish translation of the Revised CRP to the public (December 1992).

o EPA established an information repository at the San Juan City College library in Juana Diaz (February 1993).

o EPA conducted community interviews in preparation for the start of the Remedial Action phase (March 1997).

o EPA updated the 1992 Revised CRP (May 1997).

o EPA relocated the information repository to the Press Office at the Mayor's Office at Juana Diaz City Hall (March 1997).

o EPA prepared and sent letters to residents on Calle #2 regarding further explanation of 1993 sampling activities (May 1997)

o EPA prepared and distributed a fact sheet in English and in Spanish on the initiation of the Remedial Action, community issues and concerns, and an upcoming informational meeting (August 1997).

o EPA advertised an upcoming informational meeting via a press release and flyers for local distribution (September 1997).

o EPA held an informational meeting at Juana Diaz City Hall to discuss the Remedial Action process (September 23, 1997).

o EPA with the assistance of a translator visited residences on Calle #2 to answer questions and address concerns regarding Remedial Action activities (April, 1998).

o EPA conducted additional soil sampling in properties along Calle #2 and sent the results to residents (April, 1998).

o EPA prepared and distributed a Post-Decision Proposed Plan fact sheet which describes changes to the original remedy selected in the September 30, 1988 ROD (April 1999).

o EPA held a public comment period on the Focused Feasibility Study and Post-Decision Proposed Plan from April 26, 1999 to May 25, 1999.

o EPA held a public hearing at City Hall to solicit public comments regarding proposed changes to the 1988 ROD. A transcript of this hearing is available at the Mayor's Press Office at City Hall (May 13, 1999).

Document Number: GEW-001-0001 To 0001 Date: 06/12/79

Title: (Memorandum re: Mercury Sampling)

Type: CORRESPONDENCE
Author: Figueroa, Solange I.: General Electric
Recipient: Poland, J.B.: General Electric
Attached: GEW-001-0002 GEW-001-0004 GEW-001-0006 GEW-001-0009

Document Number: GEW-001-0002 To 0003 Parent: GEW-001-0001 Date: 06/18/79

Title: (Memorandum re: Mercury Sampling on 6/16/79)

Type: CORRESPONDENCE
Author: Figueroa, Solange I.: General Electric
Recipient: Poland, J.B.: General Electric

Document Number: GEW-001-0004 To 0005 Parent: GEW-001-0001 Date: 06/19/84

Title: (Memorandum re: Ground Samples/Mercury Percent)

Type: CORRESPONDENCE
Author: Figueroa, Solange I.: General Electric
Recipient: Culp, Dale: General Electric

Document Number: GEW-001-0006 To 0008 Parent: GEW-001-0001 Date: 06/20/79

Title: (Memorandum re: Mercury Sampling - Follow Up)

Type: CORRESPONDENCE
Author: Figueroa, Solange I.: General Electric
Recipient: Poland, J.B.: General Electric

Document Number: GEW-001-0009 To 0010 Parent: GEW-001-0001 Date: 06/22/79

Title: (Memorandum re: Mercury Button Handling, Plating Area, Juana Diaz)

Type: CORRESPONDENCE
Author: Figueroa, Solange I.: General Electric
Recipient: Poland, J.B.: General Electric

Document Number: GEW-001-0011 To 0011 Date: 06/25/79

Title: (Memorandum re: Juana Diaz Plating Area Situation)

Type: CORRESPONDENCE
Author: Figueroa, Solange I.: General Electric
Recipient: Poland, J.B.: General Electric
Attached: GEW-001-0012

Document Number: GEW-001-0012 To 0013 Parent: GEW-001-0011 Date: 10/21/76

Title: Resource Conservation and Recovery Act, Public law 94-580, as amended by the Quiet Communities Act of 1978

Type: LEGAL DOCUMENT
Author: none: US EPA
Recipient: none: none

Document Number: GEW-001-0014 To 0014 Date: 08/16/79

Title: (Letter re: Mercury Soil Contamination - Juana Diaz, P.R.)

Type: CORRESPONDENCE
Author: Feliu, Leo: General Electric
Recipient: Burns, William S.: General Electric
Attached: GEW-001-0015 GEW-001-0016

Document Number: GEW-001-0015 To 0015 Parent: GEW-001-0014 Date: 07/19/79

Title: (Memorandum re: Mercury Soil Samples)

Type: CORRESPONDENCE
Author: Figueroa, Solange I.: General Electric
Recipient: Poland, J.B.: General Electric

Document Number: GEW-001-0016 To 0016 Parent: GEW-001-0014 Date: 07/12/79

Title: Analytical results of mercury soil samples for samples received 06/26/79

Type: DATA
Author: none: General Electric
Recipient: none: none

Document Number: GEW-001-0017 To 0017 Date: 09/27/79

Title: (Memorandum re: Plant Soil Evaluation Program)

Type: CORRESPONDENCE
Author: Feliu, Leo: General Electric
Recipient: Poland, J.B.: General Electric

Document Number: GEW-001-0018 To 0019 Date: 10/11/79

Title: (Letter re: Juana Diaz Plant Soil Evaluation Samples)

Type: CORRESPONDENCE
Author: Figueroa, Solange I.: General Electric
Recipient: Feliu, Leo: General Electric
Attached: GEW-001-0020 GEW-001-0022

Document Number: GEW-001-0020 To 0021 Parent: GEW-001-0018 Date: 10/05/79

Title: Environmental Monitoring Analytical Services Request Forms

Type: OTHER
Author: none: General Electric
Recipient: Feliu, Leo: General Electric

Document Number: GEW-001-0022 To 0022 Parent: GEW-001-0018 Date: / /

Title: Juana Diaz Plant Soil Evaluation Samples: Location Sketch

Type: GRAPHIC
Author: none: none
Recipient: none: none

Document Number: GEW-001-0023 To 0023 Date: 11/02/79

Title: (Letter re: Laboratory Analysis of the Juana Diaz Plant Soil)

Type: CORRESPONDENCE
Author: Figueroa, Solange I.: General Electric
Recipient: Schauseil, Robert I.: General Electric
Attached: GEW-001-0024 GEW-001-0025

Document Number: GEW-001-0024 To 0024 Parent: GEW-001-0023 Date: 10/24/79

Title: Environmental Analysis of Mercury contained in soil samples received 10/12/79

Type: DATA
Author: none: General Electric
Recipient: none: General Electric

Document Number: GEW-001-0025 To 0025 Parent: GEW-001-0023 Date: / /

Title: Juana Diaz Plant Soil Evaluation Samples: Location Sketch

Type: GRAPHIC
Author: none: none
Recipient: none: none

Document Number: GEW-001-0026 To 0046 Date: 04/22/81

Title: Field notes made by W.J. Alexander during auger borings and test pit excavations at the West Field Site

Type: OTHER
Author: Alexander, W. Joseph: Law Engineering Testing
Recipient: none: none

Document Number: GEW-001-0047 To 0047 Date: 05/19/81

Title: (Certificate of Analysis for eight water samples received 04/30/81)

Type: DATA
Author: illegible: Stewart Laboratories
Recipient: Phillips, J.M.: General Electric

Document Number: GEW-001-0048 To 0098 Date: 06/19/81

Title: (Letter re: Attached Report Submittal, Hydrogeologic Investigatigation, Waste Fill Area, Juana Diaz, Puerto Rico, Law Engineering Job Number MH1223)

Type: CORRESPONDENCE
Author: Alexander, W. Joseph: Law Engineering Testing
Recipient: Phillips, J.M.: General Electric
Attached: GEW-001-0099

Document Number: GEW-001-0099 To 0099 Parent: GEW-001-0048 Date: 06/18/81

Title: (Certificate of Analysis on two samples of waste material)

Type: DATA
Author: illegible: Stewart Laboratories
Recipient: Phillips, J.M.: General Electric

Document Number: GEW-001-0100 To 0150 Date: 11/02/81

Title: (Letter re: Attached Report of Clay Continuity Study, Waste Fill Area, Juana Diaz Plant, Puerto Rico, Law Engineering Project No. MH1367)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: Germond, Bart J.: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-0151 To 0152 Date: 01/27/82

Title: (Letter re: EPA's review of comments regarding Law Engineering Testing Company's Clay Continuity Report)

Type: CORRESPONDENCE
Author: Frisco, John S.: US EPA
Recipient: Phillips, Marvin: General Electric

Document Number: GEW-001-0153 To 0157 Date: 02/15/82

Title: Attachment 2-5 Certified Laboratory Results (water samples from selected standpipes)

Type: DATA
Author: illegible: Omni Research Incorporated
Recipient: none: General Electric

Document Number: GEW-001-0158 To 0160 Date: / /

Title: Analytical data and field data from standpipes at the Juana Diaz site

Type: DATA
Author: none: Law Engineering Testing
Recipient: none: none

Document Number: GEW-001-0161 To 0162 Date: 02/19/82

Title: (Letter re: Water Level Monitoring Program, Waste Fill Area, Juana Diaz Plant, Puerto Rico, Law Engineering Project No. MH1440)

Type: CORRESPONDENCE
Author: Germond, II, Bart J.: Law Engineering Testing
Recipient: Marques, Jose A.: General Electric

Document Number: GEW-001-0163 To 0165 Date: 02/23/82

Title: (Letter re: Response to U.S. EPA'S Review, Juana Diaz, Puerto Rico Study, by Mr. John S. Frisco, Chief, Hazard Assessment Section, Law Engineering Project No. MH1367)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: White, Robert M.: Law Engineering Testing
Recipient: Phillips, Marvin: General Electric

Document Number: GEW-001-0166 To 0167 Date: 05/18/82

Title: (Letter re: Questions and answers from the March 4, 1982 letter that raised concerns about the Clay Continuity Report and Hydrogeologic Study)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: de la Cruz, Luis E.: PR Environmental Quality Board
Recipient: Colon, Javier: General Electric

Document Number: GEW-001-0168 To 0169 Date: 03/04/82

Title: (Letter re: General Electric Juana Diaz)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: de la Cruz, Luis E: PR Environmental Quality Board
Recipient: Colon, Javier: General Electric

Document Number: GEW-001-0170 To 0176 Date: 09/22/82

Title: (Letter re: Report of August, 1982 Site Visit, Juana Diaz Plant, Puerto Rico, Law Engineering Project No. MH2296)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: Alexander, M. Joseph: Law Engineering Testing
Recipient: Friss, James T.: General Electric
Attached: GEW-001-0177

Document Number: GEW-001-0177 To 0177 Parent: GEW-001-0170 Date: / /

Title: Figure 1 - Generalized Locations of August 1982 Test Pits 1 through 12

Type: GRAPHIC
Author: none: Law Engineering Testing
Recipient: none: none

Document Number: GEW-001-0178 To 0183 Date: 09/29/82

Title: (Letter re: Drilling and Monitoring Well Installation, General Electric Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: Jernigan, Bruce L.: Law Engineering Testing
Recipient: Castillo, Luis Vazquez: Vazquez Agrait, Vazquez Castillo & Despiau

Document Number: GEW-001-0184 To 0192 Date: 08/27/82

Title: General Electric Company, Juana Diaz Plant, Retaining Wall (Muro de Contencion)

Type: GRAPHIC
Author: Marques, Jose A.: General Electric
Recipient: none: none

Document Number: GEW-001-0193 To 0196 Date: 10/28/82

Title: (Letter re: Attached Technical Response to EQB's Clay Continuity and Alluvial Contamination Concerns, Juana Diaz Site, Puerto Rico, Law Engineering Project No. MH2317.01)

Type: CORRESPONDENCE
Author: Jernigan, Bruce L.: Law Engineering Testing
Recipient: Friss, James T.: General Electric

Document Number: GEW-001-0197 To 0197 Date: 11/05/82

Title: (Letter re: General Electric, Juana Diaz Site, P.R.)

Type: CORRESPONDENCE
Author: Jernigan, Bruce L.: Law Engineering Testing
Recipient: Castillo, Luis Vasquez: Vazquez Agrait, Vazquez Castillo & Despiau

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Document Number: GEW-001-0198 To 0217 Date: 11/22/82

Title: (Letter re: Attached Status Report of Hydraulic Conditions, Perched-Water Table; Waste Fill Area, Juana Diaz Plant, Puerto Rico, Law Engineering Project No. MH1440.03)

Type: CORRESPONDENCE
Author: Alexander, W. Joseph: Law Engineering Testing
Neal, Larry A.: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-0218 To 0218 Date: 12/13/82

Title: (Letter re: Enclosed copies of Driller's Logs)

Type: CORRESPONDENCE
Author: Schauseil, Robert I.: General Electric
Recipient: de la Cruz, Luis E.: PR Environmental Quality Board
Attached: GEW-001-0219 GEW-001-0220

Document Number: GEW-001-0219 To 0219 Parent: GEW-001-0218 Date: 12/10/82

Title: (Letter re: Enclosed copy of the original test boring field logs)

Type: CORRESPONDENCE
Author: Ramirez, Hector Laverone: Caribbean Soil Testing Company
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-0220 To 0230 Parent: GEW-001-0218 Date: 11/17/82

Title: (Copies of driller's logs for the monitoring wells recently installed from 10/03/82-11/17/82)

Type: OTHER
Condition: ILLEGIBLE
Author: none: Caribbean Soil Testing Company
Recipient: none: none

Document Number: GEW-001-0231 To 0233 Date: 12/20/82

Title: Permeability test results from boring locations MW-2 and MW-4 taken 12/13/82-12/20/82

Type: DATA
Author: O'Kelly, M.: Law Engineering Testing
Recipient: none: none

Document Number: GEW-001-0234 To 0242 Date: 01/11/83

Title: (Letter re: Attached Chemical Analyses on the Water and Sediment Samples)

Type: CORRESPONDENCE
Author: Maroncelli, James M.: Law Engineering Testing
Recipient: Alexander, W. Joseph: Law Engineering Testing

Document Number: GEW-001-0243 To 0245 Date: 01/13/83

Title: (Letter re: Attached Brief Statement on analyses of data gathered on the Hydrogeologic Investigation)

Type: CORRESPONDENCE
Author: Long, David T.: MI State University
Recipient: Jernigan, Bruce L.: Law Engineering Testing

Document Number: GEW-001-0246 To 0284 Date: 01/27/83

Title: Presentation materials used by GE and Law Engineering Testing Company

Type: OTHER
Author: none: none
Recipient: none: none

Document Number: GEW-001-0285 To 0285 Date: 02/24/83

Title: (Letter re: Results of Mercury Analysis, Juana Diaz Plant, Puerto Rico, Law Engineering No. MH2317)

Type: CORRESPONDENCE
Author: Alexander, W. Joseph: Law Engineering Testing
Recipient: Friss, James T.: General Electric
Attached: GEW-001-0286

Document Number: GEW-001-0286 To 0286 Parent: GEW-001-0285 Date: / /

Title: Results of Mercury Analyses, Law Engineering Project No. MH2317

Type: DATA
Author: Maroncelli, James M.: Law Engineering Testing
Recipient: none: none

Document Number: GEW-001-0287 To 0287 Date: 03/09/83

Title: (Letter re: Attached summary of CompuChem data)

Type: CORRESPONDENCE
Author: none: Head CompuChem Laboratory
Recipient: Maroncelli, James M.: Law Engineering Testing
Attached: GEW-001-0288

Document Number: GEW-001-0288 To 0384 Parent: GEW-001-0287 Date: / /

Title: Summary of CompuChem data

Type: DATA
Author: Bloom, Richard L.: Mead CompuChem Laboratory
Recipient: Maroncelli, James M.: Law Engineering Testing

Document Number: GEW-001-0385 To 0386 Date: 03/11/83

Title: (Letter re: Attached results of chemical analyses soil samples)

Type: CORRESPONDENCE
Author: Maroncelli, James M.: Law Engineering Testing
Recipient: Alexander, W. Joseph: Law Engineering Testing

Document Number: GEW-001-0387 To 0408 Date: 03/15/83

Title: (Letter re: Ground-water Quality Analyses, Juana Diaz Site, Puerto Rico, Reference Proposal MS3022.20 (Item 5), Law Engineering Project No. WM3233)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: Alexander, W. Joseph: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-0409 To 0413 Date: 04/18/83

Title: (Letter re: Test Boring Records, General Electric Company Plant Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Alexander, W. Joseph: Law Engineering Testing
Recipient: Pierre, Wayne N.: US EPA

Document Number: GEW-001-0414 To 0433 Date: 04/20/83

Title: (Letter re: Report of Test Results, Juana Diaz Site, Puerto Rico, Reference Proposal MS3022.20 (Items 3 and 4), Law Engineering Project No. WM3233)

Type: CORRESPONDENCE
Author: Alexander, W. Joseph: Law Engineering Testing
Neal, Larry A.: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-0434 To 0443 Date: 05/25/83

Title: (Letter re: Seismic Risk of the Proposed Encapsulation Alternative, Waste Fill Area, Item 1 of Proposal No. MS3022.20, Law Engineering Project No. WM3233)

Type: CORRESPONDENCE
Author: Parker, Mark: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-0444 To 0446 Date: 06/06/83

Title: (Letter re: Flooding Analyses, Juana Diaz Site, Puerto Rico, Reference Proposal MS3022.20 (Item 2), Law Engineering Project No. WM3233)

Type: CORRESPONDENCE
Author: Lawing, Raymond J.: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-0447 To 0447 Date: 07/19/83

Title: (Letter re: Intensity of Earthquakes, Law Engineering Project No. WM3233)

Type: CORRESPONDENCE
Author: Alexander, W. Joseph: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric
Attached: GEW-001-0448

Document Number: GEW-001-0448 To 0449 Parent: GEW-001-0447 Date: / /

Title: Principles of Engineering Geology and Geotechnics: Chapter 18: Earthquakes and Aseismic Design

Type: CORRESPONDENCE
Condition: INCOMPLETE
Author: Krynine, Dimitri P.: McGraw Hill Book Company
Recipient: none: none

Document Number: GEW-001-0450 To 0502 Date: 11/02/80

Title: (Letter re: Attached Report of Clay Continuity Study, Waste Fill Area, Juana Diaz Plant, Puerto Rico, Law Engineering Project No. MH1367)

Type: CORRESPONDENCE
Author: Germond, Bart J.: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric

Document Number: GEW-001-0503 To 0503 Date: 10/30/81

Title: (Letter re: Amendment to the June 19th Report, Hydrogeologic Investigation Waste Fill Area, Juana Diaz Plant, Puerto Rico, Law Engineering Job No. MH1223)

Type: CORRESPONDENCE
Author: Germond, Bart J.: Law Engineering Testing
Recipient: Schauseil, Robert I.: General Electric
Attached: GEW-001-0504

Document Number: GEW-001-0504 To 0504 Parent: GEW-001-0503 Date: 06/18/81

Title: Certificate of Analysis (for two samples of waste material)

Type: LEGAL DOCUMENT
Author: illegible: Stewart Laboratories
Recipient: Phillips, Marvin: General Electric

Document Number: GEW-001-0505 To 0508 Date: 06/05/81

Title: Notification of Hazardous Waste Site: General Electric Company - Wiring Devices Department

Type: OTHER
Author: Schauseil, Robert I.: General Electric
Recipient: Frisco, John S.: US EPA

Document Number: GEW-001-0509 To 0510 Date: 01/27/82

Title: (Letter re: U.S. EPA's comments on Law Engineering Testing Company's Continuity of Clay Report)

Type: CORRESPONDENCE
Author: Frisco, John S.: US EPA
Recipient: Phillips, Marvin: General Electric

Document Number: GEW-001-0511 To 0549 Date: 08/04/82

Title: Hazardous Ranking System Scores Package: General Electric - Wiring Devices of Puerto Rico

Type: OTHER
Author: Lipsky, David: US EPA
Recipient: none: none
Attached: GEW-001-0537 GEW-001-0549

Document Number: GEW-001-0537 To 0537 Parent: GEW-001-0511 Date: / /

Title: Results of Mercury Analyses, Law Engineering Project No. MH2317

Type: PLAN
Author: Maroncelli, James M.: Law Engineering Testing
Recipient: none: none

Document Number: GEW-001-0549 To 0549 Parent: GEW-001-0511 Date: 04/21/82

Title: Sampling Trip Report (at Juana Diaz site for sampling trip on 04/19/82 and 04/21/82 and stating "measurements taken with Bachrach Mercury Sniffer along fence perimeters- No mercury detected")

Type: PLAN
Condition: MISSING ATTACHMENT
Author: Lipsky, David: US EPA
Recipient: none: none

Document Number: GEW-001-0550 To 0552 Date: 12/22/82

Title: (Letter re: Response to December 16, 1982 letter relating to the inclusion of the Juana Diaz site as a priority project)

Type: CORRESPONDENCE
Author: DeSorbo, L.A.: General Electric
Recipient: Madera, Jose R.: PR Economic Development Administration

Document Number: GEW-001-0553 To 0553 Date: 12/09/82

Title: (Letter re: Receipt of November 29, 1982 letter)

Type: CORRESPONDENCE
Author: Schauseil, Robert I.: General Electric
Recipient: de la Cruz, Luis E.: PR Environmental Quality Board

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Document Number: GEW-001-0554 To 0554 Date: 02/04/82

Title: Water Analysis Report (for samples received 01/28/82)

Type: DATA
Author: illegible: Caribtec Laboratories
Recipient: none: none

Document Number: GEW-001-0555 To 0555 Date: 01/27/83

Title: Handwritten list of attendees to GE meeting

Type: OTHER
Author: none: none
Recipient: none: none

Document Number: GEW-001-0556 To 0607 Date: / /

Title: Map of Generalized Site Setting, Initial Assessment Findings, and other presentation materials for a GE Wiring meeting

Type: OTHER
Author: none: none
Recipient: none: none

Document Number: GEW-001-0608 To 0608 Date: 02/08/83

Title: (Letter re: On-site disposal of hazardous and/or toxic wastes)

Type: CORRESPONDENCE
Author: Madera, Jose R.: PR Economic Development Administration
Recipient: DeSorbo, L.A.: General Electric

Document Number: GEW-001-0609 To 0609 Date: 02/24/83

Title: (Letter re: Results of Mercury Analyses, Juana Diaz Plant, Puerto Rico, Law Engineering Project No. MH2317)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Alexander, W. Joseph: Law Engineering Testing
Recipient: Friss, James T.: General Electric

Document Number: GEW-001-0610 To 0611 Date: 02/25/83

Title: (Letter re: Comments on Proposed Amendment to National Oil and Hazardous Substance Contingency Plan; the National Priorities List, 47 Federal Register 54,476, December 30, 1982)

Type: CORRESPONDENCE
Author: Schauseil, Robert J.: General Electric
Recipient: Wyer, Russell H.: US EPA

Document Number: GEW-001-0612 To 0612 Date: 05/27/83

Title: (Letter re: General Electric Wiring Devices, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Umpierre, Victor R.: PR Economic Development Administration
Recipient: Diamond, Larry: US EPA
Attached: GEW-001-0613

Document Number: GEW-001-0613 To 0613 Parent: GEW-001-0612 Date: 04/11/83

Title: (Letter re: Technical Alternatives available for correcting the environmental problems created by the disposal of toxic wastes at the General Electric Manufacture Wiring Devices, Inc.)

Type: CORRESPONDENCE
Author: Madera, Jose R.: PR Economic Development Administration
Recipient: Rivera, Ignacio: General Electric

Document Number: GEW-001-0614 To 0614 Date: 09/28/83

Title: (Letter re: On-site encapsulation of toxic wastes)

Type: CORRESPONDENCE
Author: Madera, Jose R.: PR Economic Development Administration
Recipient: Rivera, Ignacio: General Electric
Attached: GEW-001-0615

Document Number: GEW-001-0615 To 0615 Parent: GEW-001-0614 Date: 08/04/83

Title: (Letter re: Immediate action for proper disposal of mercury contaminated wastes)

Type: CORRESPONDENCE
Author: Madera, Jose R.: PR Economic Development Administration
Recipient: Rivera, Ignacio: General Electric

Document Number: GEW-001-0616 To 0620 Date: 10/07/83

Title: (Letter re: Evaluation of hazardous sites in Puerto Rico for inclusion on the National Priorties List)

Type: CORRESPONDENCE
Author: Librizzi, William J.: US EPA
Recipient: Madera, Jose R.: PR Economic Development Administration

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Document Number: GEW-001-0621 To 0643 Date: 01/16/84

Title: Administrative Order on Consent (regarding actions and studies to be done at Juana Diaz site)

Type: LEGAL DOCUMENT
Condition: MARGINALIA
Author: Schafer, Jacqueline E.: US EPA
Recipient: Vineyard, William: General Electric
Attached: GEW-001-0644

Document Number: GEW-001-0644 To 0644 Parent: GEW-001-0621 Date: 02/01/84

Title: (Public Notice re: General Electric Company entering into Administrative order on Consent)

Type: CORRESPONDENCE
Author: Carlos, O'Neil: US EPA
Recipient: none: none

Document Number: GEW-001-0645 To 0646 Date: 12/15/83

Title: Resolution and notification (written in Spanish)

Type: LEGAL DOCUMENT
Author: Gelabert, Pedro A.: PR, Commonwealth of
Recipient: none: General Electric

Document Number: GEW-001-0647 To 0649 Date: 01/27/84

Title: (Letter re: Complete removal of toxic waste from the site)

Type: CORRESPONDENCE
Author: Madera, Jose R.: PR Economic Development Administration
Recipient: Rivera, Ignacio: General Electric

Document Number: GEW-001-0650 To 0651 Date: / /

Title: (News release: GE Consents to EPA order to Act on Juana Diaz, P.R. Contamination)

Type: CORRESPONDENCE
Author: none: US EPA
Recipient: none: none

Document Number: GEW-001-0652 To 0652 Date: 02/03/84

Title: (Public notice re: Administrative Order on Consent (written in Spanish))

Type: CORRESPONDENCE
Author: none: El Nuevo Dia
Recipient: none: none

Document Number: GEW-001-0653 To 0653 Date: 02/07/84

Title: (Newspaper article titled: "GE Will Cleanup Juana Diaz Site where Toxic Waste Was Dumped")

Type: CORRESPONDENCE
Author: Ghigliotty, Julio: San Juan Star
Recipient: none: none

Document Number: GEW-001-0654 To 0654 Date: 02/13/84

Title: (Newspaper article titled: "PA Exige GE Limpie Vertedero en Juana Diaz")

Type: CORRESPONDENCE
Author: none: El Mundo, San Juan
Recipient: none: none

Document Number: GEW-001-0655 To 0656 Date: 02/15/84

Title: (Article titled: "GE Will Cleanup Waste Disposal Site: Company signs consent order with EPA to attend to 27-year-old Juana Diaz dump")

Type: CORRESPONDENCE
Author: Echavarri, Christian M.: Carribean Business
Recipient: none: none

Document Number: GEW-001-0657 To 0659 Date: 03/09/84

Title: (Letter re: General Electric Company, EPA Order on Consent, Index No. II CERCLA-30301, To Clean Up Juana Diaz Plant Site)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Madera, Jose R.: PR Economic Development Administration
Recipient: none: US EPA

Document Number: GEW-001-0660 To 0660 Date: 07/16/84

Title: (Letter re: EPA's response to the public comments received on Order No. II-CERCLA-30301)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Dewling, Richard T.: US EPA
Recipient: Vineyard, William: General Electric
Attached: GEW-001-0661

Document Number: GEW-001-0661 To 0663 Parent: GEW-001-0660 Date: 06/01/84

Title: Response to comments on Administrative order

Type: PLAN
Author: none: US EPA
Recipient: none: none

Document Number: GEW-001-0664 To 0664 Date: 03/26/85

Title: (Letter re: GE Wiring Device Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Kaplan, Arthur L.: General Electric
Recipient: Font, Jose C.: US EPA
Attached: GEW-001-0665

Document Number: GEW-001-0665 To 0686 Parent: GEW-001-0664 Date: 03/11/85

Title: Work Plan for Remedial Investigation, Mercury Waste Site, Juana Diaz, Puerto Rico

Type: PLAN
Author: none: Law Engineering Testing
Recipient: none: General Electric

Document Number: GEW-001-0687 To 0688 Date: 04/09/85

Title: (Letter re: Request for data on ground-water wells in the vicinity of Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Shugart, Steven L.: Law Engineering Testing
Recipient: Font, Jose C.: US EPA

Document Number: GEW-001-0689 To 0689 Date: 04/24/85

Title: (Letter re: Analytical Results of Priority Pollutant Analysis of Water Sample from Stand-Pipe No. 11, General Electric Juana Diaz Facility)

Type: CORRESPONDENCE
Author: Hart, Steven W.: Law Engineering Testing
Recipient: Font Jose C.: US EPA
Attached: GEW-001-0690 GEW-001-0691 GEW-001-0692

Document Number: GEW-001-0690 To 0690 Parent: GEW-001-0689 Date: 03/19/85

Title: (Letter re: Analytical Results of Priority Pollutant, Analysis of Water Sample from Stand-Pipe No. 11, General Electric Juana Diaz Facility)

Type: CORRESPONDENCE
Author: Neal, Larry A.: Law Engineering Testing
Shugart, Steven L.: Law Engineering Testing
Recipient: Schauseil, Robert J.: General Electric

Document Number: GEW-001-0691 To 0691 Parent: GEW-001-0689 Date: 01/22/85

Title: (Letter re: Summary of data from requested sample analysis)

Type: CORRESPONDENCE
Author: Carrington, Pamela S.: CompuChem
Recipient: Neil, Larry A.: Law Engineering Testing

Document Number: GEW-001-0692 To 0700 Parent: GEW-001-0689 Date: / /

Title: Data Report Notice and Report of Data

Type: PLAN
Author: Scammell, Diana A.: CompuChem
Recipient: Neil, Larry A.: Law Engineering Testing

Document Number: GEW-001-0701 To 0753 Date: 10/23/87

Title: (Letter re: Results of Chemical Analysis of Water Samples from Water Wells and Monitoring Wells)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: Spiers, Charles A.: Law Environmental Services
Recipient: Schauseil, Robert J.: General Electric
Attached: GEW-001-0722 GEW-001-0730 GEW-001-0738 GEW-001-0746

Document Number: GEW-001-0722 To 0729 Parent: GEW-001-0701 Date: 08/22/85

Title: (Letter re: Report for analysis of sample from monitoring well No. 1)

Type: CORRESPONDENCE
Author: Scammell, Diana A.: CompuChem
Recipient: Neil, Larry A.: Law Engineering Testing

Document Number: GEW-001-0730 To 0737 Parent: GEW-001-0701 Date: 08/22/85

Title: (Letter re: Report for analysis of sample from monitoring well No. 2)

Type: CORRESPONDENCE
Author: Scammell, Diana A.: CompuChem
Recipient: Neil, Larry A.: Law Engineering Testing

Document Number: GEW-001-0738 To 0745 Parent: GEW-001-0701 Date: 08/22/85

Title: (Letter re: Attached report for analysis of sample from monitoring well No. 3)

Type: CORRESPONDENCE
Author: Scammell, Diana A.: CompuChem
Recipient: Neil, Larry A.: Law Engineering Testing

Document Number: GEW-001-0746 To 0753 Parent: GEW-001-0701 Date: 08/22/85

Title: (Letter re: Attached analysis results of sample from monitoring well No. 4)

Type: CORRESPONDENCE
Author: Scammell, Diana A.: CompuChem
Recipient: Neil, Larry A.: Law Engineering Testing

Document Number: GEW-001-0754 To 0754 Date: 10/29/85

Title: (Letter re: Review of possible trichloroethylene contamination at Juana Diaz site)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Kaplan, Arthur L.: General Electric
Recipient: Font, Jose C.: US EPA
Attached: GEW-001-0755 GEW-001-0756

Document Number: GEW-001-0755 To 0755 Parent: GEW-001-0754 Date: 12/13/85

Title: (Letter re: Proposed Schedule of Soil Sampling for Trichloroethylene, G.E. Juana Diaz, Puerto Rico Plant)

Type: CORRESPONDENCE
Author: Neil, Larry A.: Law Engineering Testing
Recipient: Font, Jose C.: US EPA

Document Number: GEW-001-0756 To 0756 Parent: GEW-001-0754 Date: 01/10/86

Title: (Letter re: Revised Schedule of Soil Sampling for Trichloroethylene, G.E. Juana Diaz, Puerto Rico Plant)

Type: CORRESPONDENCE
Author: Spiers, Charles A.: Law Environmental Services
Recipient: Font, Jose C.: US EPA

Document Number: GEW-001-0757 To 0757 Date: 05/05/86

Title: (Letter re: Revised Work Plan for Remedial Investigation, G.E. Wiring Devices Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Czapor, John V.: US EPA
Recipient: Kaplan, Arthur L.: General Electric

Document Number: GEW-001-0758 To 0758 Date: 06/03/86

Title: Favor De Firmar (handwritten list of names, organization and addresses), General Electric Wiring Devices

Type: OTHER
Author: none: none
Recipient: none: none
Attached: GEW-001-0759

Document Number: GEW-001-0759 To 0765 Parent: GEW-001-0758 Date: / /

Title: Community Relations Plan, General Electric Company, Juana Diaz Plant

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: GEW-001-0766 To 0766 Date: 06/18/86

Title: (Letter re: Revised Work Plan for Remedial Investigation, G.E. Wiring Devices Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Kaplan, Arthur L.: General Electric
Recipient: Czapor, John V.: US EPA
Attached: GEW-001-0767

Document Number: GEW-001-0767 To 0767 Parent: GEW-001-0766 Date: / /

Title: Remedial Investigation Work Plan Projected Schedule

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: GEW-001-0768 To 0769 Date: 08/20/86

Title: (Letter re: Notification of Time Extension, G.E. Wiring Devices Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Kaplan, Arthur L.: General Electric
Recipient: Czapor, John V.: US EPA

Document Number: GEW-001-0770 To 0770 Date: 09/23/86

Title: (Letter re: G.E. Wiring Devices Site, Juana Diaz, P.R., CERCLA #106 Order)

Type: CORRESPONDENCE
Author: Kaplan, Arthur L.: General Electric
Recipient: Font, Jose C.: US EPA
Attached: GEW-001-0771 GEW-001-0773 GEW-001-0774

Document Number: GEW-001-0771 To 0772 Parent: GEW-001-0770 Date: 06/01/86

Title: Table 1, Mercury Concentration, General Electric - Juana Diaz

Type: DATA
Author: none: none
Recipient: none: none

Document Number: GEW-001-0773 To 0773 Parent: GEW-001-0770 Date: 09/11/86

Title: (Letter re: Analyses of soil samples sent to Oxford Laboratories, Inc., for comparative Mercury study by Cold Vapor Technique)

Type: CORRESPONDENCE
Author: Tersegno, Vincent J.: Law Environmental Services
Recipient: Sellers, Mark A.: Law Engineering Testing

Document Number: GEW-001-0774 To 0774 Parent: GEW-001-0770 Date: / /

Title: Table 2, Comparative Analyses of Soil Samples for Mercury Concentration

Type: DATA
Author: none: none
Recipient: none: none

Document Number: GEW-001-0775 To 0775 Date: 10/08/86

Title: (Letter re: Submittal of Report, Remedial Investigation, General Electric Wiring Devices Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Sellers, Mark A.: Law Engineering Testing
Recipient: Czapor, John V.: US EPA
Attached: GEW-001-0776

Document Number: GEW-001-0776 To 1210 Parent: GEW-001-0775 Date: / /

Title: Remedial Investigation Report for General Electric Wiring Devices Site, Juana Diaz, Puerto Rico

Type: REPORT
Condition: MARGINALIA
Author: none: Law Engineering Testing
Recipient: none: General Electric

Document Number: GEW-001-1211 To 1211 Date: 04/09/87

Title: (Letter re: Remedial Investigation Report, General Electric Wiring Devices Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Ignacio, Rafael L.: PR Industrial Development Company
Recipient: Gelabert, Pedro A.: US EPA

Document Number: GEW-001-1212 To 1264 Date: 04/28/87

Title: Transcript of GE Meeting held 04/28/87 (written in Spanish)

Type: OTHER
Author: none: none
Recipient: none: none
Attached: GEW-001-1265

Document Number: GEW-001-1265 To 1314 Parent: GEW-001-1212 Date: 04/28/87

Title: English translation of transcript of GE Meeting held 04/28/87

Type: OTHER
Author: none: none
Recipient: none: none

Document Number: GEW-001-1315 To 1315 Date: 04/30/87

Title: News article titled: "Mercury Only Pollutant Found at GE Juana Diaz Waste Site: GE dump one of eight P.R. Superfund sites; total estimated cleanup cost could be $37M"

Type: OTHER
Author: Luxner, Larry: Caribbean Business
Recipient: none: none

Document Number: GEW-001-1316 To 1316 Date: 07/31/87

Title: (Transmittal slip re: Work Plan for Supplemental Soil Sampling and PCB Analyses)

Type: CORRESPONDENCE
Author: Coffuros, Glenn M.: Law Environmental Services
Recipient: O'Neil, Carlos E.: US EPA
Attached: GEW-001-1317 GEW-001-1324

Document Number: GEW-001-1317 To 1323 Parent: GEW-001-1316 Date: / /

Title: Document No. 1 - Work Plan for Supplemental Soil Sampling, General Electric Company Wiring Devices Facility, Juana Diaz, Puerto Rico

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: GEW-001-1324 To 1326 Parent: GEW-001-1316 Date: / /

Title: Document No. 2 - Work Plan for PCB Analyses, General Electric Company Wiring Devices Facility, Juana Diaz, Puerto Rico

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: GEW-001-1327 To 1343 Date: 08/01/87

Title: Work Plan for Feasibility Study, Mercury Waste Site, Juana Diaz, Puerto Rico

Type: PLAN
Author: none: Law Environmental, Inc.
Recipient: none: General Electric

Document Number: GEW-001-1344 To 1344 Date: 11/25/87

Title: (Letter re: Feasibility Study Report, Wiring Devices of Puerto Rico, Inc., Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Chopan, Phil M.: Law Environmental, Inc.
Recipient: Kaplan, Arthur L.: General Electric
Attached: GEW-001-1345

Document Number: GEW-001-1345 To 1493 Parent: GEW-001-1344 Date: 11/01/87

Title: Feasibility Study, Corrective Action Alternatives for Waste with Mercury Constituent, Wiring Devices of Puerto Rico, Inc., Juana Diaz, Puerto Rico

Type: PLAN
Condition: MISSING ATTACHMENT
Author: none: Law Environmental, Inc.
Recipient: none: General Electric
Attached: GEW-001-1395 GEW-001-1416

Document Number: GEW-001-1395 To 1415 Parent: GEW-001-1345 Date: 12/02/86

Title: (Letter re: Attached Report of Preliminary Testing and Evaluation, Solidification/Fixation Agent, G.E. Wiring Devices Plant, Juana, Puerto Rico)

Type: CORRESPONDENCE
Author: McNelis, Kathleen A.: Law Environmental Services
Recipient: Schauseil, Robert J.: General Electric

Document Number: GEW-001-1416 To 1493 Parent: GEW-001-1345 Date: 12/02/86

Title: (Letter re: Attached Chemical Analyses of Samples Received on August 4, 1986)

Type: CORRESPONDENCE
Author: Tersegno, Vincent J.: Law Environmental Services
Recipient: Wheeless, Dave: Law Environmental Services

Document Number: GEW-001-1494 To 1494 Date: 12/08/87

Title: (Letter re: Administrative Consent Order No. II-CERCLA-3030, dated January 16, 1984, General Electric Company, Juana Diaz, P.R. Plant)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Kaplan, Arthur L.: General Electric
Recipient: DiForte, Nicoletta: US EPA
Attached: GEW-001-1495

Document Number: GEW-001-1495 To 1631 Parent: GEW-001-1494 Date: 11/12/87

Title: (Letter re: Attached Addendum to the RI/FS Study, General Electric Wiring Devices Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Condition: DRAFT; MARGINALIA
Author: Sellers, Mark A.: Law Engineering Testing
Recipient: Kaplan, Arthur L.: General Electric

Document Number: GEW-001-1632 To 1632 Date: 03/15/88

Title: (Law Environmental Client Contact Form)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: none: Law Engineering Testing
Recipient: Messina, Frank J.: US EPA

Document Number: GEW-001-1633 To 1851 Date: 09/01/86

Title: QC Package for Project 6331 - GE/Juana Diaz, July, August, and September, 1986

Type: DATA
Condition: MARGINALIA
Author: none: none
Recipient: none: none
Attached: GEW-001-1852

Document Number: GEW-001-1852 To 1852 Parent: GEW-001-1633 Date: 04/11/88

Title: (Inter-office memorandum re: Project 6331 - GE Juana Diaz, Work Performed July to September, 1986)

Type: CORRESPONDENCE
Author: McBride, Clifford H.: Law Engineering Testing
Recipient: Sellers, Mark A.: Law Engineering Testing

Document Number: GEW-001-1853 To 1853 Date: 04/15/88

Title: (Letter re: Supplemental Data Submittal, Laboratory Quality Assurance/Quality Control, General Electric Wiring Devices Site, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Allen, David A.: Law Engineering Testing
Recipient: Kaplan, Arthur L.: General Electric

Document Number: GEW-001-1854 To 1856 Date: 05/12/88

Title: (Memorandum re: Mercury Validation Results)

Type: CORRESPONDENCE
Author: Messina, Frank J.: US EPA
Recipient: DiForte, Nicoletta: US EPA

Document Number: GEW-001-1857 To 1894 Date: 09/01/88

Title: G.E. Wiring Devices, Addendum Feasibility Study, September, 1988

Type: PLAN
Condition: MISSING ATTACHMENT
Author: none: US EPA
Recipient: none: none
Attached: GEW-001-1895 GEW-001-1919 GEW-001-1920

Document Number: GEW-001-1895 To 1918 Parent: GEW-001-1857 Date: 08/22/88

Title: (Letter re: Status report on the work performed by the Bureau of Mines with attached Bureau of Mines Report)

Type: CORRESPONDENCE
Author: Schmidt, William B.: US Dept of the Interior
Recipient: DiForte, Nicoletta: US EPA

Document Number: GEW-001-1919 To 1919 Parent: GEW-001-1857 Date: 09/01/88

Title: (Letter re: Quality Assurance Project Plan for EPA Work Assignment 649, Sampling and Analysis of Ground Water and Soil Samples, G.E. Wiring Devices, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Goltz, Robert D.: Camp Dresser & McKee (CDM)
Recipient: Harvell, Rose: US EPA

Document Number: GEW-001-1920 To 1941 Parent: GEW-001-1857 Date: 09/01/88

Title: Quality Assurance Project Plan, Sampling and Analysis of Groundwater and Soil Samples, G.E. Wiring Devices, Juana Diaz, P.R.

Type: PLAN
Author: none: Lee Wan & Associates
Recipient: none: US EPA

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ment Number: GEW-001-1942 To 1943 Date: 09/13/88

Title: (Letter re: Trip Report, Sampling Investigation Report, Data Summary, and Evaluation Report for EPA Work Assignment 649, G.E. Wiring Devices, Juana Diaz, Puerto Rico)

Type: CORRESPONDENCE
Author: Goltz, Robert D.: Camp Dresser & McKee (CDM)
Recipient: Harvell, Rose: US EPA
Attached: GEW-001-1944

Document Number: GEW-001-1944 To 2193 Parent: GEW-001-1942 Date: 09/13/88

Title: Trip Report, Sampling Investigation Report, Data Summary and Evaluation Report, G.E. Wiring Devices, Juana Diaz, Puerto Rico

Type: PLAN
Author: none: Lee Wan & Associates
Recipient: none: US EPA

Document Number: GEW-001-2194 To 2198 Date: 04/15/86

Title: (Memorandum re: Discharge of Wastewater from CERCLA Sites into POTWS)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: Longest, II, Henry L.: US EPA
Recipient: none: US EPA

Document Number: GEW-001-2199 To 2208 Date: 12/24/86

Title: (Memorandum re: Interim Guidance on Superfund Selection of Remedy)

Type: CORRESPONDENCE
Author: Porter, J. Winston: US EPA
Recipient: none: US EPA
Attached: GEW-001-2209

Document Number: GEW-001-2209 To 2209 Parent: GEW-001-2199 Date: / /

Title: Proposed Remedy Selection Process Under Reauthorization Chart

Type: GRAPHIC
Author: none: none
Recipient: none: none

Document Number: GEW-001-2210 To 2213 Date: 05/21/87

Title: (Letter re: Agency's implementation of the Superfund Amendments and Reauthorization Act of 1986 (SARA))

Type: CORRESPONDENCE
Author: Thomas, Lee M.: US EPA
Recipient: Florio, James J.: US Congress
Attached: GEW-001-2214

Document Number: GEW-001-2214 To 2217 Parent: GEW-001-2210 Date: 03/27/87

Title: (Letter re: Requirements of Section 121)

Type: CORRESPONDENCE
Author: Florio, James J.: US Congress
Recipient: Thomas, Lee M.: US EPA

Document Number: GEW-001-2218 To 2219 Date: 05/29/87

Title: (Memorandum re: Review of Interim Guidance on Compliance with ARAR's)

Type: CORRESPONDENCE
Author: Weissman, Arthur B.: US EPA
Recipient: none: none
Attached: GEW-001-2220

Document Number: GEW-001-2220 To 2227 Parent: GEW-001-2218 Date: / /

Title: Interim Guidance on Compliance with Applicable or Relevant and Appropriate Requirements

Type: PLAN
Condition: DRAFT
Author: none: none
Recipient: none: none

Document Number: GEW-001-2228 To 2236 Date: 07/09/87

Title: (Memorandum re: Interim Guidance on Compliance with Applicable or Relevant and Appropiate Requirements)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: Porter, J. Winston: US EPA
Recipient: none: none

Document Number: GEW-001-2237 To 2283 Date: 09/01/84

Title: Health Effects Assessment for Mercury

Type: PLAN
Author: none: US EPA
Recipient: none: none

Document Number: GEW-001-2284 To 2320 Date: 08/31/88

Title: Draft Cost Estimates for Remedial Action Alternatives

Type: FINANCIAL/TECHNICAL
Author: none: Lee Wan & Associates
Recipient: none: Camp Dresser & McKee (CDM)

Document Number: GEW-001-2321 To 2326 Date: 09/01/88

Title: (Proposed Remedial Action Plan for site, written in Spanish)

Type: PLAN
Author: none: US EPA
Recipient: none: none
Attached: GEW-001-2327

Document Number: GEW-001-2327 To 2332 Parent: GEW-001-2321 Date: 09/01/88

Title: Proposed Remedial Action Plan, G.E. Wiring Devices Superfund Site, Juana Diaz, Puerto Rico

Type: PLAN
Author: none: US EPA
Recipient: none: none

Document Number: GEW-001-2333 To 2334 Date: 09/22/88

Title: (Letter concurring with EPA that alternative 9, Hydrometallurgical Treatment, is the most environmentally sound and safe alternative while noting more detailed studies on groundwater are needed prior to taking any action)

Type: CORRESPONDENCE
Author: Torres, Heriberto: PR, Commonwealth of
Recipient: O'Neill, Carlos E.: US EPA

Document Number: GEW-001-2335 To 2336 Date: 09/23/88

Title: (Letter re: Receipt of Draft Feasibility Study Report)

Type: CORRESPONDENCE
Author: Ignacio, Rafael L.: PR Industrial Development Company
Recipient: O'Neill, Carlos E.: US EPA

Document Number: GEW-001-2337 To 2381 Date: 09/29/88

Title: Research and Development: Final Draft, Endangerment Assessment, General Electric Wiring Devices Site, Juana Diaz, Puerto Rico

Type: REPORT
Author: none: US EPA
Recipient: none: US EPA

Document Number: GEW-001-2382 To 2382 Date: 10/27/88

Title: (Letter re: Attached copies of the final version of the Bureau's report)

Type: CORRESPONDENCE
Author: Schmidt, William B.: US Dept of the Interior
Recipient: Diforte, Nicoletta: US EPA
Attached: GEW-001-2383

Document Number: GEW-001-2383 To 2408 Parent: GEW-001-2382 Date: 10/27/88

Title: Bureau of Mines Technologic Screening Study for Wastes from the G.E. Wiring Devices Superfund Site, Juana Diaz, Puerto Rico

Type: REPORT
Author: staff: Reno Research Center
Recipient: none: none

Document Number: GEW-001-2409 To 2425 Date: 10/01/87

Title: Research and Development: Site Analysis, G.E. Wiring Devices, Juana Diaz, Puerto Rico

Type: REPORT
Author: Fauss, L. Mike: Bionetics Corporation
Recipient: none: US EPA

Document Number: GEW-001-2426 To 2426 Date: 12/01/93

Title: (Letter re: Addendum to the Revised Baseline Risk Assessment, G.E. Wiring Devices Site, Juana Diaz, Puerto Rico, and Health and Endangerment Assessment Work Assignment)

Type: CORRESPONDENCE
Author: Graber, Scott B.: CDM Federal Programs Corporation
Recipient: Smieszek, Erwin: US EPA
Attached: GEW-001-2427

Document Number: GEW-001-2427 To 2463 Parent: GEW-001-2426 Date: 12/01/93

Title: Revised Baseline Risk Assessment Addendum for the G.E. Wiring Devices Site, Work Assignment No. C02120

Type: REPORT
Author: Oxford, Jeniffer: CDM Federal Programs Corporation
Recipient: none: US EPA

Document Number: GEW-001-2464 To 2464 Date: 08/26/93

Title: (Letter re: Draft Baseline Risk Assessment, G.E. Wiring Devices Site, Juana Diaz, Puerto Rico, and Health and Endangerment Assessment Work Assignment)

Type: CORRESPONDENCE
Author: Graber, Scott B.: CDM Federal Programs Corporation
Recipient: Smieszek, Erwin: US EPA
Attached: GEW-001-2465

Document Number: GEW-001-2465 To 0043 Parent: GEW-001-2464 Date: 08/26/93

Title: Draft Baseline Risk Assessment for the G.E. Wiring Devices Site, Work Assignment No. C02120

Type: REPORT
Author: Faulk, Jack: CDM Federal Programs Corporation
Recipient: none: US EPA

Document Number: GEW-002-0044 To 0075 Date: 09/30/88

Title: Record of Decision, G.E. Wiring Devices, Juana Diaz, Puerto Rico

Type: REPORT
Author: Muszynski, William J.: US EPA
Recipient: none: none

May 17th, 1999

Caroline Kwan
Remedial Project Manager
U.S. Environmental Protection Agency
290 Broadway, 20th Floor
New York, NY 10007-1866

Ref: Superfund Post-Decision Proposed Plan
G.E. Wiring Devices Superfund Site
Juana Díaz, Puerto Rico

Dear Ms. Kwan:

This letter is to provide further comments on the project of reference and to emphasize on questions that were not properly answered during the public meeting of May 13, 1999, in Juana Diaz. I am writing as a resident of Juana Diaz who is concerned with the safety and health of the community. My questions or comments are as follow:

1. Please make sure that the translation of the proceedings in Juana Díaz are properly addressed. EPA provided a translator to facilitate communication with the community during the meeting. The court reporter was only typing the comments and responses in Spanish and used an audio tape recorder for the duration of the meeting. The audio tape needs to be reviewed carefully because the translator was doing interpretation instead of translation. The translator put things on her own way and did not convey the information exactly as it was presented by EPA, GE and the public. It is very important that these proceedings be translated correctly since it was obvious that the translator is in favor of the project and not a neutral party. She added many comments of her own that were not expressed by EPA or GE.

2. As expressed and confirmed in the meeting there will be some residual mercury contamination (less than 39 ppm) left at the site. We were also informed that because the clay layer at the site is "very impermeable" there would not be a concern with groundwater contamination. No technical data on the permeability of the clays at the site was available. GE nor EPA were able to provide a specific answer on the permeability. Please provide this information.

3. We were informed at the meeting that the excavated area will be filled with permeable clean material. There was no justification or explanation provided for this action. EPA and GE must justify the rationale for the decision to backfill the excavated area with clean soil

that is more permeable than the underlying clay layer. Even under the Subtitle D regulations there is a requirement for installation of a protective cap that has the same or lower permeability as the underlying soil. Clay materials are readily available in Juana Diaz and the cost of this clay would probably be similar to any other imported clean material. EPA should also evaluate the use of an HDPE cover system if more permeable material is used as fill material.

4. Based on the explanation of how the contaminated soil was removed and the presence of "very impermeable" clay one must conclude that at the end there will be a clay bowl filled with permeable material. We must also assume that rain water will not migrate away from this bowl and will remain there for extended periods of time. What will happen with the water when this bowl overflows? Where will it go? Will the water carry mercury contamination with it? Is the remaining mercury in a form that it could leach? Please explain.

5. The question on long term liability on GE was asked several times and was never answered. Once the project is completed and GE closes the operations in Juana Diaz, what happens with the site? Does GE continue to be responsible and liable or is GE released from all liability? If after GE is gone there is an environmental incident at or near the site involving GE's mercury, who is responsible for the remediation? Please explain.

6. Please explain and justify the decision to stop ground water monitoring only after three years. The only answer we heard at the meeting is that nothing has happened in 30 years and nothing should happen in the future. Should there be ground water monitoring for a longer period of time?

7. I respectfully request that EPA and GE conduct an additional public meeting as soon as practicable. The people that conducted this meeting were not properly prepared for it. There should have been immediate answers to the questions that were presented. One could tell that the attitude of some of the presenters was not the best one and were uncomfortable with the questions being asked. The body language of the gentleman representing EPA's Region II in New York said it all. Too many times people asked him questions directly and his response would be *"Who me?"* or *"Why are you asking me?"*. One did not need to hear what he said, his gestures said it all.

A new meeting needs to be conducted since the people left the meeting on May 13 feeling that the presenters did not know what is going on. No clear answers were provided in many cases. Former GE employees at the meeting are not confident that all mercury has been removed. We were expected to just accept the general information in good faith. At a new meeting EPA and GE should present technical data that supports the decisions made regarding this project. There should be diagrams depicting the hydro-geology of the site and its surroundings, surface water management, ground water analytical data, and analytical data of the contaminated soil remaining onsite. In general the meeting should

contain sufficient technical information justifying the project so the citizens of Juana Diaz feel comfortable with the remedy selected. At this time I am not convinced that this remedy is fully protective of the environment and the surrounding community.

I trust that GE and EPA will provide us with the information that we need for our peace of mind.

Cordially,

René R. Rodriguez
PO Box 864
Juana Diaz, PR 00795-0864

c Santiago Martinez, Juana Diaz Mayor

May 24, 1999

VIA FEDERAL EXPRESS AND FIRST CLASS MAIL

Caroline Kwan, Remedial Project Manager
U.S. Environmental Protection Agency
290 Broadway, 20th Floor
New York, NY 10007-1866

Re: GE Wiring Devices Superfund Site
Juana Diaz, Puerto Rico

Dear Ms. Kwan:

Enclosed for filing on behalf of the General Electric Company ("GE") are an original and two copies of GE's comments on EPA's Post-Decision Proposed Plan for the GE Wiring Devices Superfund Site.

If you have any questions concerning these comments, please do not hesitate to contact me at (216) 266-3026.

Sincerely,

Matthew O. Tanzer

Enclosures

COMMENTS OF THE GENERAL ELECTRIC COMPANY ON THE POST-DECISION PROPOSED PLAN FOR THE GE WIRING DEVICES SUPERFUND SITE, JUANA DIAZ, PUERTO RICO

MAY 22, 1999

Prepared by

Matthew O. Tanzer
GE Lighting
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COMMENTS OF THE GENERAL ELECTRIC COMPANY ON THE MARCH 1999 POST-DECISION PROPOSED PLAN FOR THE GE WIRING DEVICES SUPERFUND SITE, JUANA DIAZ, PUERTO RICO

The General Electric Company (GE) submits the following comments on the March 1999 Post-Decision Proposed Plan for the GE Wiring Devices Superfund Site, Juana Diaz, Puerto Rico. GE strongly supports EPA's recommended remedy change to allow for the off-site disposal of mercury impacted materials in a permitted RCRA Subtitle C hazardous waste landfill in the United States. These comments provide additional details regarding GE's support for this proposed remedy change.

GE SUPPORTS EPA'S POST-DECISION PROPOSED PLAN

As stated above, GE provides its unequivocal support for EPA's Post-Decision Proposed Plan. The change in remedy recommended by EPA provides the best balance and is the most suitable remedy with respect to the NCP evaluation criteria. It will provide complete protection of human health and the environment, greater implementability, fewer short-term risks and significantly lower costs as compared to waste treatment in the GEMEP treatment system with on-site disposal of treated materials. The chosen remedy satisfies not only the statutory and regulatory criteria, but also is the best option for the people of Juana Diaz and Puerto Rico. Off-site disposal will completely remove the contaminated waste fill materials from the island of Puerto Rico and dispose of them in a permitted, RCRA Subtitle C landfill in the US. Thus, not only will the contaminants will be removed from the site, but there will be no backfilling of treated, iodine and mercury containing residuals as was contemplated under the original remedy.

GE SUPPORTS THE LIMITED SCOPE OF THE COMMENT PERIOD

As explained by EPA in the Proposed Plan,

> "EPA is soliciting comment only on a focused portion of the 1988 ROD for the site. This change deals only with the off-site disposal of mercury impacted material at a permitted RCRA Subtitle C hazardous waste landfill on the mainland Uninted States, as an alterative [sic] to on-site treatment using the GEMEP treatment system and subsequent backfill. EPA is not proposing to change the established site-specific cleanup goals."

(Emphasis in original.)

GE fully supports the limited purpose and scope of the comment period, since the only issue subject to review, and therefore open to public comment, is EPA's recommended remedy change to off-site disposal instead of GEMEP treatment.

Due to recent events at GE's plant in Juana Diaz, there may be comments submitted to EPA which seek to open issues unrelated to EPA's proposed remedy change (e.g., issues related to the plant closure, or requests for additional investigation activities). Any such comments are not germane to the limited purpose of the public comment period, and should not properly be considered in EPA's decision-making process. EPA has clearly and carefully delineated the limited scope and purpose of the public comment period, and comments received which do not relate specifically to the proposed change of remedy should not be entertained by EPA. GE strongly encourages EPA not to address or include such unrelated or irrelevant comments in its deliberations relative to this Proposed Plan.

GE BELIEVES NO FURTHER SITE INVESTIGATION IS NECESSARY, ABSENT NEW INFORMATION ABOUT THE SITE

As mentioned above, some commenters may request additional investigations at or around the Juana Diaz site, or even at other locations in the Juana Diaz area, perhaps due to GE's announced plant closing. However, the site was the subject of numerous investigations in the 1980's and 1990's, and the remedial investigation was formally completed and approved by EPA in 1993. In addition, since commencing on-site remediation in 1997, GE has excavated to the edges of the waste fill area, and documented, through hundreds of confirmatory samples, that the residential cleanup standard has been achieved. Therefore, in the absence of new information dictating a need to reopen past investigations, GE hereby states its opposition to conducting any additional investigations on, at or around the Site.

GE NOTES THAT THE PROPOSED PLAN WILL RESULT IN LESS RESIDUAL MERCURY-CONTAINING MATERIAL AT THE SITE

GE supports the Proposed Plan and the removal and off-site disposal of Site waste materials since that will result in less residual mercury-containing material remaining at the site. While both the GEMEP remedy and the proposed off-site remedy would reduce mercury concentrations at the site to the residential cleanup standard of 39 ppm, the off-site remedy will ***remove*** all of the washed, oversized material from the site, whereas the GEMEP remedy would have this material – which still contains low concentrations of mercury – backfilled on-site. In addition, the off-site remedy will completely remove the approximately 10,000 tons of untreated fines from the site, whereas the GEMEP remedy would also have had this material backfilled on-site following treatment, when it also would contain low concentrations of mercury and high concentrations of iodide.

GE RECOMMENDS FLEXIBILITY IN THE PROPOSED PLAN TO ALLOW FOR EFFECTIVE IMPLEMENTATION OF THE REMEDY

As GE begins preparations for implementation of the remedy, it has become apparent that a reasonable degree of flexibility in the logistics for completing the remedy will be necessary. Consequently, GE recommends that any change to the ROD allow sufficient flexibility for alternative logistical requirements, if necessary. For example, GE is currently negotiating with its neighbor, PRIDCO, to obtain rights to transport Site materials across a portion of PRIDCO's property to access an appropriate transportation route to the Port of Ponce. This right of access route remains to be negotiated. If GE is unsuccessful in obtaining access rights to PRIDCO property, it may be necessary to follow an alternative route from the GE Site. Any amendment to the ROD should not prevent or pose obstacles to such alternative routes.

In addition, due to the large volume of site materials to be bagged and transported and the relatively limited amount of space remaining on-site to maneuver vehicles, GE's contractor, Safety-Kleen, has suggested that it may be necessary to move some bagged material to an alternative location pending arrival of the barge for transport to the US. This potential eventuality also should not be precluded or obstructed by any amendment to the ROD.

In summary, GE strongly supports EPA's recommended decision in the Post-Decision Proposed Plan, and provides these comments in the spirit of cooperation and a desire to have the off-site remedy completed as smoothly and efficiently as possible. If you have any questions regarding these comments, please contact any of the undersigned.

APPENDIX 3

GOVERNOR OF PUERTO RICO / OFFICE OF THE GOVERNOR
ENVIRONMENTAL QUALITY BOARD
EMERGENCY RESPONSE AND SUPERFUND AREA

CORE & RPM Divisions
Superfund Program

November 18, 1998

Mr. Melvin Hauptman, P.E., Leader
Sediments/Caribbean Team
New York / Caribbean Superfund Branch II
USEPA Region II
290 Broadway
New York, N.Y. 10007-1866

RE: FOCUSED FEASIBILITY STUDY (FFS)
G.E. WIRING DEVICES, NOVEMBER, 1998

Dear Mr. Hauptman:

The two remedial alternatives presented by GE for the completion of the remedy at General Electric Company Wiring Devices Superfund Site in Juana Díaz, Puerto Rico are the following:

1. GE Mercury Extraction Process (GEMEP)
2. Off-Site Disposal in a Subtitle C Landfill on Mainland United States

After a thorough evaluation of the alternatives suggested, the Puerto Rico Environmental Quality Board (PREQB) does not agree with the GEMEP alternatives for the following reasons:

- High costs
- Delays
- Plugged Pumps, Eroded Pipes, and Inadequate Mixing
- Reduced Clay Removal
- Poor Filter Press Performance
- Overloaded Polishing Filters
- Plugged Iron Filing Bed
- Ineffective Mercury Removal
- Incomplete Iron Removal
- Incomplete Iodide Oxidation (Iodine Loss)
- Inadequate Recovery of Iodine Crystals (Iodine Loss)
- Personnel Exposure to Process Chemicals

Additionally, this alternative will require 21 months or more to complete along with a long term monitoring.

On the contrary, the Off-Site Disposal in a Subtitle C Landfill on Mainland US alternative is favored by the PREQB because it only requires 6 months or so to complete, long term monitoring is not required, relatively low costs, and finally, as indicated on page 3-18 of the Focused Feasibility Study (FFS) of April, 1998, off-site transportation of contaminated material represents only a minimal risk.

For any question or comments please contact Mr. Miguel A. Maldonado Negrón, Chief of the CORE & RPM Divisions at phone number 767-8181, extension 2230.

Cordially,

Héctor Russe Martínez
Chairman

PV/MAM/inj

c: Ms. Caroline Kwan, USEPA, Region III

APPENDIX 4

DECLARATION STATEMENT

RECORD OF DECISION

SITE NAME AND LOCATION

GE Wiring Devices, Juana Diaz, Puerto Rico

STATEMENT OF BASIS AND PURPOSE

This decision document presents the selected remedial action for the GE Wiring Devices Site, in Juana Diaz, Puerto Rico, developed in accordance with CERCLA, as amended by SARA, and, to the extent practicable, the National Contingency Plan. This decision is based on the administrative record for this site. The attached index identifies the items that comprise the administrative record upon which the selection of the remedial action is based.

The Commonwealth of Puerto Rico has concurred in the selected remedy.

DESCRIPTION OF THE SELECTION REMEDY

The remedial action would remediate the waste-fill area, perched water, and the mercury contaminated near-surface soils to levels which would be protective of public health. With respect to contaminated soils downgradient of the waste-fill area, since the mercury is primarily in the upper six inches of soil, the remedial action would include remediation of the upper six inches of soil at a minimum. Since groundwater data is limited, further investigation and monitoring will be conducted during design to determine the extent of groundwater contamination.

The major components of this remedial action are:

- Further treatability studies during remedial design to insure the implementability of hydrometallurgical processes, as well as continued study of other treatment alternatives.

- On-site hydrometallurgical treatment of the waste-fill materials (approximately 4000 cubic yards), perched water (approximately 1/2 million gallons) and contaminated near surface soils (approximatedly 1500 cubic yards);

- Treatment of the material to below health-based levels and back-filling the waste fill area with the treated materials. This area will then be covered with two feet of clean soil.

- Additional investigation of the groundwater to determine the extent of groundwater contamination;

- Limited groundwater monitoring (i.e. for a minimum of three years), provided that the additional groundwater investigation establishes that there is no need for groundwater remediation; and

- Confirmatory air monitoring and re-sampling of soil in residential yards.

DECLARATION

Consistent with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 as amended by the Superfund Amendments and Reauthorization Act of 1986, and the National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300, I have determined that the selected remedy is protective of human health and the environment, attains Federal and State requirements that are applicable or relevant and appropriate for this remedial action, and is cost-effective. This remedy satisfies the statutory preference for remedies that employ treatment that reduces toxicity, mobility, or volume as a principal element and utilizes permanent solutions and alternative treatment (or resource recovery) technologies to the maximum extent practicable.

Because this remedy will not result in hazardous substances remaining on-site above health-based levels, the five-year remedial action review will not apply to this action.

9-30-88
Date

William J. Muszynski, P.E.
Acting Regional Administrator

Site Background

The G.E. Wiring Devices Site is located in the south central part of the Island in Juana Diaz, Puerto Rico. The Site is northeast of Ponce, close to the intersection of Routes 14 and 149 (See, Figures 1 and 2). The General Electric Company (G.E.) operates a wiring devices plant at this site that occupies approximately 5 acres of land. The property was originally leased from the Puerto Rico Industrial Development Company (PRIDCO); the property is now owned by G.E.

The source of contamination at the site is the waste-fill area where defective parts from silent mercury switches were discarded. These switches were assembled at the plant from 1957 until 1969. Each switch contained a hermetically sealed stainless steel button that encased a ceramic core, containing elemental mercury. Off-specification buttons were generally broken to reclaim the mercury. The steel button shells, with residual mercury and ceramic cores, were then discarded in the on-site waste-fill (pile) area where other defective switch parts and plastic scraps were also discarded. Based on test pit excavations, the waste-fill area is approximately 1 to 4 feet thick 110 feet wide and 440 feet long. As calculated in the Remedial Investigation, it is probable that roughly half a ton of mercury was discarded in the waste-fill area, based on mercury switch production and rejection documentation.

Several residences are located approximately 400 feet south of the waste-fill area. A concrete retaining wall and fence exist between the site and the residences. Groundwater in the area is used as a source of potable water. A public supply well is located approximately 1500 feet west of the waste-fill area.

Site History

The site was proposed for inclusion to the National Priorities list in December 1982. The original scoring was changed in June 1983 based on public comment. A Remedial Investigation and a Feasibility Study (RI and FS) were conducted by the General Electric Company (GE) through its contractor Law Environmental Services at the G.E. Wiring Devices Site. These activities were performed pursuant to an Administrative Consent Order II-CERCLA-30301 dated January 16, 1984. An RI report was submitted to the U.S. Environmental Protection Agency for review in October 1986. EPA determined that additional investigation was necessary in order to further define the nature and extent of contamination at the Site. A Supplemental RI and an FS report were submitted to EPA in draft in October and November 1987, respectively. The data collected during the RI were reviewed for conformance with EPA data validation requirements. Subsequently, EPA concluded that the quality of the data did not meet EPA specifications. Accordingly, in August 1988 EPA in cooperation with G.E., collected additional samples to complete the RI activities. Maps depicting sampling locations and a summary of results are presented in Figure 3 and 4 and Table 1, respectively.

The draft FS did not fully evaluate treatment alternatives for remediation of the Site and did not fully conform with the criteria set forth in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (CERCLA). As a result, EPA entered into an agreement with the U.S. Bureau of Mines to evaluate additional treatment technologies. The objectives of this evaluation were to identify and assess additional treatment technologies which, if implemented, could result in achieving a more permanent remedy by reducing the toxicity, mobility or volume of the contaminant. EPA then prepared an FS Addendum to further comply with CERCLA.

Community Relations

EPA has kept the local citizens and officials advised throughout the Superfund process. Several public meetings were held in Juana Diaz to discuss site developments. Specifically, a public meeting was held in February 1984 to discuss the provisions of the Administrative Order, as well as, to receive and respond to comments concerning the site. In April 1987, a public meeting was held to solicit comments on and discuss the findings of the RI. In September 1988, a public meeting was held to discuss and receive comments on the studies and EPA's proposed remedial action plan. Questions and comments with their corresponding responses are summarized in the attached Responsiveness Summary.

Site Characteristics

A silty clay to clayey silt unit exists immediately beneath the waste-fill materials. This unit is believed to be continuous as evidenced by its presence at 103 test pit excavations. The unit appears to be from 1 to 4 feet thick based on monitoring well logs. The permeability of the unit is in the range of 6.0×10^{-4} to 8.0×10^{-5}. However, roots were observed in the shallow soils which could increase the permeability of the soil by developing channels through which contaminated leachate could flow. The silty clay unit overlies the Holocene alluvial sediments deposited by the Rio Jacaguas River as illustrated schemetically in Figures 5 and 6. This alluvium is divided into four strata (See Figure 6): a very silty fine to coarse sand, a sandy clayey silt, a silty sand and a sand and gravel unit. Results of a resistivity survey indicate low resistivities at depths of up to 12 feet in the central and western portions of the waste-fill. This may be indicative that a zone of high moisture content is present in the alluvial sands which underlie the clay stratum in some areas of the waste-fill.

This moisture could be the result of slow downward migration of perched water through the silty clay stratum. Groundwater was encountered within the alluvial sand and gravel formation at a depth of about 45 feet below the existing grade. The groundwater potentiometric gradient has been reported to be on the order of 0.01 to 0.006 ft./ft., with a groundwater flow direction to the west towards the Rio Jacaguas River.

Perched water accumulates within the waste-fill area as a result of precipitation/recharge; the perched water generally consists of a few feet of water perched above the top of the above-referenced clay layer. The depth to the top of the perched water is approximately 2 feet below the existing grade at the waste-fill surface.

The primary route for migration of mercury appears to be through surface runoff from the waste-fill area. This results in the contamination of surface soils to the south of the waste-fill area (downgradient). The waste-fill area formerly received storm-water runoff directly from the plant area, the runoff has since been diverted by the construction of a drain pipe in 1982. The potential for vaporization of the mercury also exists. In addition, as stated above, the permeability of the clay underlying the fill area is moderate and roots were observed in these soils. Also, the resistivity data suggests that the migration of perched water through the silty clay stratum has occurred.

Furthermore, groundwater sampling suggests that the mercury has migrated to the water table. The highest concentration of mercury in the deeper groundwater (i.e., 2.2 ppb) is slightly above the Maximum Contaminant Level (2.0 ppb). However, this result was obtained only in one sampling round approximately 50 feet away from the waste-fill area. The location, number and depth of monitoring wells are inadequate to fully characterize the extent of groundwater contamination at the site. Therefore, further investigation of the groundwater will be conducted during design of the remedial action to determine the nature and extent of groundwater contamination. This work will include installation of additional groundwater monitoring wells and groundwater sampling. Additional remedial action may be necessary pending the results of this investigation.

The data collected during supplemental sampling indicates that mercury was found in the following areas:

1) In an on-site surficial waste-fill (pile) area. This area is approximately 110 feet in width and 440 feet in length and about 4 feet deep, containing roughly 4000 cubic yards of contaminated waste. The highest concentration observed in the waste-fill area is 1400 parts per million (ppm) of mercury.

2) In perched groundwater within the waste-fill area. Approximately 1/2 million gallons of contaminated water is found at shallow depths (approximately 2 feet below the ground surface). The highest concentration of mercury detected in the perched water is 6.917 ppm.

3) In soils found approximately within the upper six inches of the surface* (hereinafter referred to as "near-surface

* In general, mercury concentrations decreased with depth in these soils. At depths below six inches mercury concentrations were below health-based levels and approached background levels.

soils") in an area which is in the direction of surface water runoff from the waste-fill area (i.e., south or downgradient). Since the number of valid soil samples is limited, the volume of contaminated soil has been calculated by multiplying the estimated areal extent of contamination by a depth of six inches. The volume of contaminated soil has been estimated at 1500 cubic yards using this conservative approach. The highest concentration of mercury detected in soils is 61.630 ppm.

Site Risks

An endangerment assessment was conducted to determine exposure routes and concentrations of mercury which may pose a risk to human health. The endangerment assessment evaluated the baseline public health risks associated with the site in the absence of any remedial action. The primary exposure routes of concern which were evaluated were ingestion of contaminated soils/waste-fill material and inhalation of mercury vapors.* Data gathered for the EPA Mercury Health Effect Update (1984) indicates that diet and ambient air inhalation yield an intake of methyl mercury that is 18% of the Reference Dose (the Reference dose is 0.0003 mg/kg-day). Therefore, in evaluating the risks posed by ingestion of contaminated soils/waste-fill material, the daily intake which would result in exceedence of 82% of the reference dose was calculated using various assumptions. This analysis indicates that mercury concentrations in excess of 88.8 ppm may result in exceeding the reference dose. The sampling data indicates that the concentrations of mercury in the soils and waste-fill area exceed this value. In addition, air modelling was conducted to predict the concentration of mercury vapors which could be emitted given the concentration of mercury detected in the soils and waste-fill materials. The modelling showed that soil concentrations in excess of 16.4 ppm may cause the EPA National Emission Standard for a Hazardous Air Pollutant (NESHAP) to be exceeded. The NESHAP for mercury is 1 ug/m^3. The modelling also indicates that there is a potential risk associated with vaporization of mercury from the waste-fill area. Additional air sampling will be conducted during the design to verify whether the NESHAP is being exceeded.

Scope of Response Action

The objectives of the remedial action are, in general, to achieve clean-up levels of mercury in the waste-fill area (including perched water) and downgradient soils which: adequately protect human health

* As discussed previously, the groundwater database for the site must be supplemented in order to fully characterize groundwater contamination. Therefore, a supplemental groundwater investigation will be conducted during design. Consequently, the risks posed by groundwater contamination will be evaluated after completion of the investigation.

and the environment, are cost-effective, and utilize permanent solutions and alternative treatment technologies (e.g., those which reduce the toxcity, mobility or volume of a hazardous substance) to the maximum extent practicable. The remedial action must also substantively comply with applicable or relevant and appropriate requirements.

The remedial action would remediate the waste-fill area and the mercury contaminated near-surface soils to levels which would be protective of public health. With respect to contaminated soils downgradient of the waste-fill area, since the mercury is primarily in the upper six inches of soil, the remedial action would include remediation of the upper six inches of soil, at a minimum. This conservative approach should ensure the removal of all soil with mercury concentrations above health-based levels. Since groundwater data is limited, further investigation and monitoring will be conducted during design to determine the extent of groundwater contamination.

Description of Alternatives

A total of nine remedial alternatives were identified in the Feasibility Study and addendum for dealing with the mercury contamination at the G.E. Wiring Devices site. They were numbered as follows:

1 No Action
*2 Cap with Extraction Wells
3 Fixation
4 Cap, Cut-off Walls and Extraction Wells
*5 Separate Waste by Mechanical Screening
*5a Alternative 5 with Only Off-site Disposal
*6 Separate Wastes by Mechanical Screening and Washing
*6a Alternative 6 with Only Off-site Disposal
7 Excavation and Redisposal On-site
7a Alternative 7 with Off-site Disposal
8 Thermal Treatment
9 Hydrometallurgical Treatment

The six alternatives that EPA considered in greatest detail are summarized below. Each alternative addresses remediation of approximately 4000 cubic yards of waste-fill material, 1/2 million gallons of contaminated perched water and 1500 cubic yards of contaminated near-surface soils.

* Although evaluated in the FS, Alternative 2 was eliminated because it is ineffective compared to Alternative 4. Alternatives 5, 5a, 6 and 6a were eliminated based on technical feasibility since the waste is not amenable to physical separation.

Alternative 1

NO ACTION - This alternative is used as a baseline for comparing other alternatives and consists of leaving the site as it is. No response actions would be implemented other than long-term monitoring which would include a minimum of three wells hydraulically downgradient of the waste-fill area and three wells south of the waste-fill area (i.e., in the area where contaminated soils have been detected). Because the waste is left on-site EPA must review the remedial action no less than each 5 years after the initiation of such action to ensure that the remedial action remains protective of public health and the environment. This review of the remedial action is required under Section 121 of CERCLA. Land use restrictions would be required.

Alternative 3

FIXATION - This alternative consists of physically fixing the waste with cement to resist erosion. Trenches would be dug within the waste-fill area to facilitate drainage towards a sump. The sump, along with a leachate extraction well, would be installed at the downgradient end of the waste-fill area. Perched water within the waste-fill area would be pumped, via one extraction well and would be pretreated on-site prior to disposal at a publically owned treatment works (POTW). Treatment would consist of filtration then carbon adsorption. Contaminated near-surface soils will be excavated and consolidated in the waste-fill area. The soils and waste-fill material would then be mixed with cement to blend into an aggregate solid waste. A soil cap would be placed over the waste-fill area. This alternative does not require any long-term pumping of leachate. Long-term groundwater monitoring would be conducted to verify the long-term performance of this remedial alternative. Such monitoring would be consistent with the description provided in Alternative 1, the No Action Alternative. In addition, the remedial action would be reviewed every five years as with Alternative 1. Land use restrictions would be required for this alternative in order to ensure that the integrity of the remedial action or the function of any of the monitoring systems are not disturbed where contaminated materials are left on site.

Alternative 4

CAP, CUT-OFF WALL WITH EXTRACTION WELLS - This alternative consists of providing a multilayer impervious cap, slurry wall and leachate collection system. Trenches would be dug within the waste-fill area to facilitate drainage towards a sump. The sump with a leachate extraction well would be installed at the downgradient end of the waste-fill area. Perched water within the waste-fill area would be pumped, via one extraction well and would be pretreated on-site prior to disposal at a POTW. Contaminated near-surface soils will be excavated and consolidated in the waste-fill area. The cap and slurry wall would then be installed. The cap would be constructed of clay underlain by a synthetic membrane

liner to further reduce infiltration, sand to promote drainage, and top soil to promote vegetation and mininmize erosion. The slurry wall would surround the landfill and would be keyed into the clay stratum. Pumping and treatment of leachate from the landfill would be conducted on an as-needed basis and may be required for an indefinite period of time. The treatment system constructed for the treatment of perched water would be used to treat the leachate and would consist of filtration followed by carbon adsorption. The treated leachate would also be disposed of at a POTW. Long-term groundwater monitoring, consistent with the description provided in Alternative 1, will be conducted to assess the long-term effectiveness of this remedial alternative. Since waste remains on-site above health-based levels the remedial action must be reviewed every five years as with Alternative 1. Land use restrictions would be required for this alternative.

Alternative 7

EXCAVATION AND CONSOLIDATION ON-SITE - This alternative proposes to remove the contaminated material from the site and consolidate them in a newly constructed on-site landfill to be located in the area of contamination. The perched water would be pumped from the waste-fill area in the same manner as in Alternative 4. The waste-fill area would then be excavated and an impervious liner (i.e., with a 10^{-7} permeability) would be placed on top of the clay stratum. The waste and contaminated soils would then be placed on the liner. A cap, slurry wall and leachate collection system would be installed as with the preceding alternative. Pumping and treatment of leachate from the landfill would be conducted on an as-needed basis and may be required for an indefinite period of time. The treatment system used for treating the perched water would be used to treat the leachate and would consist of filtration followed by carbon adsorption. The treated leachate would also be disposed of at a POTW. Long-term groundwater monitoring, consistent with the description provided in Alternative 1, will be conducted to assess the long-term effectiveness of this remedial alternative. Since waste remains on-site above health-based levels, the remedial action must be reviewed every five years as with Alternative 1. Land use restrictions would be required for this alternative.

Alternative 7a

ALTERNATIVE 7 WITH OFF-SITE DISPOSAL - This alternative is the same as Alternative 7 except that the soils and waste from the waste-fill area would be shipped to a RCRA Subtitle C hazardous waste landfill in the mainland U.S., since there are currently no permitted Subtitle C disposal facilities in Puerto Rico.

Confirmatory sampling would be necessary to verify that contaminated materials left on site were below health-based levels If further investigation of the groundwater confirms that there is no significant health risked posed by groundwater, then limited long term monitoring would be conducted (i.e., a minimum of three

years consistent with the description provided in Alternative 1). Land use restrictions would not be required.

Alternative 8

THERMAL TREATMENT - This alternative proposes to treat the contaminated material on-site by heating the waste until all the mercury is vaporized. Mercury has a relatively low boiling point (375°C) and most of its compounds decompose into metallic mercury readily upon heating. The mercury could then be recovered and recycled. This material may have to be reclaimed in the mainland since currently there are no facilities on the island which recover mercury. There is a range of temperatures at which a thermal treatment system for recovery of mercury from the waste could be operated. At the high end of the range is incineration of the waste. Since a high percentage of mercury is adsorbed to the plastic materials in the waste-fill area, the low end of the range would be a temperature at which the mercury could be recovered from the plastic without decomposing the plastic (between 375°C and 850°C). The optimal operating temperature of the thermal treatment system would be evaluated during design. Another potential thermal treatment option is vacuum distillation. In this process the waste would also be heated to drive-off the mercury and a vacuum would be applied to extract the mercury out of the plastic. With either type of thermal treatment the mercury vapor would be trapped and condensed. If selected, this process would be designed to achieve levels protective of public health. The residue from the process would be disposed of on-site in the former waste-fill area. A two foot soil cap would then be placed over the former waste-fill area. Since the source of contamination would be treated and the residuals left on-site would be below health-based levels, no land use restrictions would be necessary. In addition, if further investigation reveals no significant ground water contamination, then only limited groundwater monitoring would be conducted with this alternative (i.e., a minimum of three years consistent with the description provided in Alternative 1).

Alternative 9:

HYDROMETALLURGICAL TREATMENT - This type of treatment would be utilized to treat the contaminated near-surface soil, perched water and waste-fill materials. This alternative involves putting the mercury into solution by using a leaching agent such as cyanide, hypochlorite or nitric acid. The mercury would then be recovered from the aqueous solution by using various metallurgical techniques such as filtration and cementation/ precipitation. The waste would be mixed with the leaching agent until the desired level of mercury is extracted from the waste and put into solution. The process stream from the leaching stage would then be filtered. The residue from filtering would be disposed of in the former waste-fill area and capped with soil as in Alternative 8. The process would be designed to achieve treatment of mercury from the waste to below health-based levels (i.e., less then 16.4 ppm). Since it is anticipated that the treatment process could attain treatment of mercury to below acceptable levels, the actual

performance standard for the treatment process would be determined by the maximum removal efficiency associated with the technology with due consideration to the corresponding incremental cost involved in achieving further removal. The mercury-laden liquid from the filtering stage would then be subjected to cementation or precipitation to remove the mercury. This result is achieved by bringing the liquid in contact with materials such as stainless steel, zinc, copper or aluminum.

During cementation, the mercury is exchanged with the metal and precipitated out. The liquid would then be recycled back through the process. It is anticipated that only one batch of leaching agent would be needed. Upon completion of the process, the remaining liquid would be treated on-site prior to discharge to a POTW. Further treatability studies will be conducted during design to optimize the treatment process. The process would be designed to meet or exceed levels protective of public health. Since the source of contamination would be treated and the residuals left on-site would be below health-based levels, no land use restrictions would be necessary. In addition, if further investigation reveals no significant ground water contamination, then only limited groundwater monitoring would be conducted with this alternative (i.e., a minimum of three years consistent with the description provided in Alternative 1).

Analysis of Remedial Action Alternatives

The remedial action alternatives described above, were then evaluated in accordance with the requirements of the National Contingency Plan (NCP) and the Comprehensive Environmental Response, Compensation and Liability Act as amended by the Superfund Amendments and Reauthorization Act of 1986 (CERCLA). Nine criteria relating directly to the factors mandated in Section 121 of CERCLA, including subsection 121(b)(1)(A-G) and EPA's Interim Guidance on Selection of Remedy (December 24, 1986 and July 24, 1987) were utilized for this evaluation and are as follows:

- Protection of human health and the environment
- Compliance with applicable or relevant and appropriate requirements (ARARs)
- Long-term effectiveness and permanence
- Reduction of toxicity, mobility or volume
- Short term effectiveness
- Implementability
- Cost
- Community acceptance
- State acceptance

PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT

Protection of human health and the environment is the central mandate of CERCLA. Protection is achieved primarily by taking appropriate action to ensure that there will be no unacceptable risks to human health or the environment.

Except for the No Action Alternative each of the alternatives affords adequate protection of public health and the environment.* Alternatives 4 and 7 afford protection by providing a combination of engineering (cap, slurry wall, etc.) and institutional controls (land use restrictions). Alternative 3 provides protection by fixing the waste which limits the availability of mercury for human exposure. Alternative 7 provides protection by removing the contaminated material from the site. Alternatives 8 and 9 provide protection through treatment of the waste which reduces the concentration of mercury down to or below health-based levels.

COMPLIANCE WITH ARARs

Section 121(d) of CERCLA requires that remedial actions comply with all applicable or relevant and appropriate Federal and State requirements for the hazardous substances, pollutants or contaminants that are present on site, as well as any action-specific and locational requirements.

Applicable requirements refer to those situations where the specific legal or regulatory jurisdictional prerequisites of a particular statute or regulation are met. Relevant and appropriate requirements apply only to on site portions of remedial actions and are those which were developed to address problems similar to those encountered at a site. A relevant and appropriate requirement must be complied with to the same extent as if it were applicable.

With respect to requirements which are chemical-specific for mercury contaminated soil and debris, there are no applicable or relevant and appropriate requirements (ARARs).** Therefore, an Endangerment Assessment was performed to determine the concentration of mercury that would result in an acceptable risk level if left on-site. All of the alternatives evaluated, with the exception of the No Action Alternative, will result in site remediation which would minimize exposure to mercury concentrations above acceptable health-based levels. Air modelling indicates that 16.4 ppm is the lowest concentration of mercury which would pose a risk to public health.

* Note, any potential risks posed by groundwater contamination will be addressed following the supplemental investigation to be conducted during design.

** Note, there are chemical specific ARARs for groundwater contaminated with mercury (i.e., the Maximum Contaminant Level promulgated pursuant to the Safe Drinking Water Act), however, the risks posed by groundwater contamination will be addressed using the data obtained during the additional groundwater investigation to be conducted during the design of the remedial action.

Air sampling will be conducted during remedial design to confirm the results of this air modelling. If the monitoring verifies this value, then 16 ppm will be the cleanup level for remedial action. However, if the air monitoring indicates that there are no levels exceeding the NESHAP, then 21 ppm, the lowest concentration of mercury which would pose a risk to public health through ingestion, will be used as the site cleanup level.

Potential action-specific ARARs were identified for the remedial alternatives which were evaluated. A discussion of such potential ARARs and the rationale for determining whether the requirement should be considered as an actual ARAR is presented below.

With respect to locational ARARs, the site appears to be in close proximity to known historic sites. A Stage IA survey will be conducted during design to identify any potential undocumented resources on or eligible for nomination to the National Register of Historic Places.

For the alternatives which involve landfill closure (Alternatives 4 and 7) the RCRA closure regulations would be relevant and appropriate. For Alternatives 4 and 7, the landfill would be closed in conformance with 40 CFR Part 264, Subpart N which describes the closure requirements for a RCRA hazardous waste landfill. Alternatives 3, 8 and 9 which treat the contaminated materials to below health-based levels would be closed consistant with a RCRA clean closure regulations.

For alternatives which involve discharge of perched water to a POTW, guidance from the EPA memorandum entitled "Discharge of Wastewater from CERCLA Sites into POTWs" would be used, as well as the permit requirements for the specific POTW. The guidance would preclude the use of a POTW which is out of compliance with its permit requirements. Accordingly, the treated perched water may only be discharged to a POTW that is permitted to accept such wastes and is operating in compliance with that permit. The on-site pretreatment must achieve the levels set forth in the POTW's permits.

The applicablity, relevance and appropriateness of the Land Disposal Restrictions (LDRs) under RCRA were considered with respect to the remedial alternatives evaluated. The LDRs would not be applicable since the contaminated materials are not hazardous wastes. With respect to relevancy and appropriateness, currently the only LDR treatment standards which have been promulgated are for non-soil and debris wastes. Treatment standards for soil and debris wastes are currently being developed by EPA. In the interim, because there are no treatment standards for soil and debris wastes and since the contaminated materials found at the site are not sufficiently similar to those for which such standards exist, the LDRs are not considered relevant and appropriate.

Section 121(d)(3) of CERCLA requires that if a remedial action involves off-site disposal at a RCRA hazardous waste landfill, such disposal may only take place if releases are not occuring from the unit which would receive the waste and any other releases from the disposal facility are controlled under a corrective action pursuant to RCRA. Alternative 7a, which provides for off-site disposal, will comply with this requirement.

While permits are not required for on-site remedial actions at Superfund sites, any on-site remedial action must meet the substantive requirements of the permitting process. Therefore, any alternative which includes on-site treatment (i.e., all alternatives except No Action) would be designed and implemented so as to comply with the substantive requirements of applicable permitting processes.

LONG-TERM EFFECTIVENESS AND PERMANENCE

Long-term effectiveness and permanence addresses the long-term protection and reliability of an alternative. This is a relative term and is therefore expressed in the degree of long-term effectiveness and permanence associated with an alternative in comparison to other alternatives being evaluated.

Alternative 1 The No Action Alternative offers no long-term protection to human health or the environment. The potential for direct contact with contaminated materials still exists. Furthermore, erosion from the waste-fill area would continue to contaminate downgradient (south of the waste-fill area) soils. This alternative will require long-term monitoring indefinitely. This alternative does not offer any degree of permanence.

Alternative 3 The Fixation Alternative would be somewhat effective in the long term in that contamination in excess of acceptable health-based levels would be bound up in the cement and thus exposure pathways (e.g., ingestion, inhalation) would be eliminated. However, the ability of this alternative to effectively prevent the migration of mercury from the fixed material indefinitely is uncertain. Therefore, long-term monitoring would be necessary and the possibility exists that other remedial actions may also be needed. Although quality control problems could be minimized by removing the waste and then processing it instead of in-situ fixation the waste remaining on-site would be above health-based levels. Therefore, this alternative would not be more permanent than Alternatives 7a, 8 and 9. The degree of permanence associated with this alternative is greater than that which would be achieved by Alternatives 1, 4, and 7 since the durability of cement is greater than the construction material which would be used to implement Alternatives 4 and 7.

Alternative 4 The Impervious Cap with Extraction Well Alternative is of limited effectiveness in the long term with respect to the reliabilty of the remedial action. There is the potential for remedy failure since the clay unit and underlying clay may not be adequate barriers to mercury migration. This potential appears to be further substantiated by the detection of mercury in the groundwater. Since the waste is left on site untreated, this alternative would require monitoring and maintenance indefinitely. As stated above, this alternative is considered less permanent than Alternative 3.

Alternative 7 The Excavation Alternative is of limited effectiveness in the long term with respect to its ability to function indefinitely. Although less likely, the potential for remedy failure exists, as with Alternative 4. The potential for leakage through the clays is mitigated relative to Alternative 4 by the installation of a synthetic membrane liner under the contaminated material and above the clay stratum. As with Alternative 4, this alternative would also require indefinite monitoring and maintenance. With respect to the degree of permanence, although this alternative offers a greater degree of permanence relative to Alternative 4, it is far less permanent than Alternative 3.

Alternative 7a Alternative 7 with Off-Site Disposal, calls for contaminated materials to be excavated down to acceptable health-based levels. Since all wastes in excess of health-based levels would be transported off site there would be limited groundwater monitoring to confirm that the action was satisfactorily completed and no long-term operation or maintenance. With respect to the site this alternative offers a higher degree of permanence than does Alternative 3.

Alternative 8 The Thermal Treatment Alternative is effective in the long term in that it reduces toxicity of contaminated material on site and decrease the concentration of mercury found on site to acceptable health-based levels. As with the preceding alternative, there would be limited confirmatory groundwater monitoring and no long term operation or maintenance. Since the toxicity and the concentration of mercury in the waste is reduced to health-based levels, this alternative offers a higher degree of permanence than does Alternative 3. With respect to the site, the degree of permanence associated with this alternative is equivalent to Alternative 7a. However, in a broader perspective this alternative is more permanent than Alternative 7a because the waste is treated instead of being relocated.

Alternative 9 The Hydrometallurgical Alternative is effective in the long term in that it effectively reduces the toxicity and concentration of mercury in the contaminated material on site resulting in a decrease in exposure to acceptable health-based levels. As with the preceding alternative, groundwater monitoring would be limited confirmatory sampling with no long-term operation or maintenance. Because the waste is treated this alternative has a higher degree of permanence associated with it than Alternative 3. The degree of permanence is essentially equal to Alternative 8.

REDUCTION OF TOXICITY, MOBILITY OR VOLUME

This evaluation criterion relates to the performance of a remedial alternative which involves treatment in terms of eliminating or controlling risks associated with the toxicity, mobility or volume of a hazardous substance. Since Alternatives 1, 4, 7 and 7a do not involve treatment these alternatives were not evaluated against this criterion.

With respect to toxicity, the data indicates that a substantial portion of the total mercury present is in the organic form. Organic mercury is much more toxic than inorganic mercury. Therefore, alternatives which convert organic mercury into inorganic mercury would result in a reduction in the toxicity of mercury.

Alternative 3 The Fixation Alternative is effective in reducing the mobility of the contaminant by preventing further erosion and reducing infiltration. This alternative, however, would increase the volume of contaminated material. The toxicity of the waste could potentially be reduced and exposure to mercury from the waste is also reduced because the waste is bound up with the cement.

Alternative 8 The Thermal Treatment Alternative would result in a substantial reduction of the volume of contaminated material on-site. Since the organic mercury is converted back into the elemental form, the toxicity of the waste is significantly reduced. The mobility of the waste is reduced proportionally to the reduction in concentration. This alternative would result in a reduction in the concentration of mercury in the contaminated material by roughly two orders of magnitude.

Alternative 9 The Hydrometallurgical Treatment Alternative would also result in a substantial reduction of the volume of contaminated material on-site. As with Alternative 8, the organic mercury is converted back into the elemental form, thus the toxicity of the waste is significantly reduced. In addition, the mobility of the waste is reduced proportionally to the reduction in concentration. This alternative would result in a reduction in the concentration of mercury in the contaminated material by roughly two orders of magnitude.

Short-Term Effectiveness

The short-term effectiveness criterion measures how well an alternative is expected to perform, the time to achieve performance, and the potential adverse impacts of its implementation.

Alternative 1 The No Action Alternative does not offer any degree of protection, and therefore is not effective in the short-term. There are however, no adverse impacts associated with implementation of this alternative.

Alternative 3 The Fixation Alternative would involve excavation of contaminated material. In the short term, there would be a small potential for worker exposure to mercury contamination during consolidation of contaminated near-surface soils and during the fixation process. However, this concern would be addressed in the health and safety plan for construction activities. This alternative should take approximately 2 years to implement.

Alternative 4 The Cap with Extraction Well Alternative would also involve excavation of contaminated materials. Consequently, in the short term, there would be the potential for worker exposure to mercury contamination during consolidation of the near-surface soils. The health and safety plan would address minimizing this exposure. This alternative should take approximately 2 years to implement.

Alternative 7 The Excavation and Consolidation On-site Alternative would involve excavation of a greater volume of contaminated material (approximately 5500 cubic yards) relative to Alternatives 3 and 4 (1500 cubic yards). This may result in an incremental increase in the potential for worker exposure to mercury contamination during implementation. As stated above, this concern would be addressed in the health and safety plan. This alternative should take approximately 2 years to implement.

Alternative 7a Alternative 7 with Off-Site Disposal involves off-site disposal and would thus increase truck traffic in the area as well as the potential for accidents involving releases of contaminated materials. As with the preceding alternatives, in the short term there is the potential for worker exposure to mercury contamination during implementation. The health and safety plan would address minimizing this exposure. This alternative should take approximately a year and a half to implement.

Alternative 8 The Thermal Treatment Alternative, as with the preceding alternatives would involve the potential for worker exposure to mercury contamination during implementation. The health and safety plan would address minimizing this exposure. With this alternative mercury from the off-gases would be condensed and recovered, however, controls may be necessary to ensure that mercury and other vapors are not released above acceptable levels. This alternative should take approximately 2 years to implement

Alternative 9 The Hydrometallurgical Alternative, as with the preceding alternatives, involves the potential for worker exposure to mercury contamination during implementation. The health and safety plan would address minimizing this exposure. In addition, each of the leaching agents used in the process present health and safety and process control considerations. Specifically, for nitric acid, since the waste-material contains plastic there is the potential for formation of picric acid which is explosive; for cyanide there is the potential for evolution of hydrogen cyanide gas; and for hypochlorite there is the potential for evolution of chlorine gas. It should be noted, however, that these are standard processes which are used in industry. These potential health and safety concerns would be addressed in the design of the process. For example, the formation of picric acid would be controlled by adjusting the concentration of the acid, the formation of hydrogen cyanide gas would be controlled by buffering the pH with a base solution, and the formation of chlorine gas would also be eliminated by buffering the pH using a basic solution. This alternative should take approximately 2 years to implement.

IMPLEMENTABILITY

Implementability addresses how easy or difficult, feasible or infeasible it would be to carry out a given alternative. This covers implementation from design through construction and operation and maintenance.

The implementability of the alternatives is evaluated in terms of technical and administrative feasibility, the availability of needed goods and services. All alternatives evaluated are technically feasible. However, some implementation problems are inherent in each of the alternatives.

Alternative 1 The No Action Alternative does not have any implementation problems, however, it does not offer any degree of protection.

For alternatives which involve handling of mercury-contaminated soils it will be necessary to develop and implement a site specific health and safety plan to reduce the potential for worker exposure to mercury. Mercury contaminated material would be handled in each of the Alternatives with the exception of Alternative Number 1, the No Action Alternative.

Alternatives which involve the off-site disposal of contaminated perched water at a POTW may pose implementation problems with respect to the availability of a POTW which complies with EPA's guidance Memorandum entitled "Discharge of Wastewater from CERCLA Sites into POTWS", dated April 15, 1986. In addition, permission from the POTW to accept the waste may be necessary.

Alternatives 8 and 9 are considered to be implementable. Both the data collected by the U.S. Bureau of Mines in their screening of potential treatment alternatives and available information on similar industrial processes suggest that these alternatives are viable options. However, further bench and pilot scale studies would be necessary prior to design and construction to further evaluate the effectiveness of these alternatives and to optimize the operating and design parameters of the treatment process.

COST

The cost evaluation of each alternative is based on the capital cost (cost to construct), long term monitoring, operation and maintenance cost (O&M) and present worth costs.

Present worth analysis was used so that the cost of each alternative could be compared on the same basis. The present worth value represents the amount of money, if invested in the base year and then expended as needed, would be sufficient to cover all costs of the remedial action over its planned life.

The capital, O&M and present worth value for each alternative is provided in Table 2.

COMMUNITY ACCEPTANCE

This evaluation criterion addresses the degree to which members of the local community might support the remedial alternatives being evaluated; and is addressed in the responsiveness summary.

COMMONWEALTH ACCEPTANCE

This criterion addresses the concern and degree of support that the commonwealth government has expressed regarding the remedial alternatives being evaluated. Puerto Rico's Environmental Quality Board concurs with EPA's selection of Alternative 9.

Selected Remedy

The selected remedial action is Alternative 9: Hyrometallurgical Treatment.

This general type of treatment would be used for the contaminated near-surface soil, perched water and waste-fill materials (approximately 1500 cubic yards, 1/2 million gallons and 4000 cubic yards, respectively). This alternative involves putting the mercury into solution by using a leaching agent such as cyanide, hypochlorite or nitric acid. The mercury would then be recovered from the aqueous solution by using various metallurgical techniques such as filtration and cementation/precipitation. The waste would be mixed with the leaching agent until the desired level of mercury is extracted from the waste and put into solution. The process stream from the leaching stage would then be filtered. The residue from filtering would be disposed of in the former waste-fill area and capped with two feet of clean soil. The process would be designed to achieve treatment of mercury from the waste to below health-based levels (See ARAR discussion). Since it is anticipated that the treatment process could attain treatment of mercury to below acceptable levels, the actual performance standard for the treatment process would be determined by the maximum removal efficiency associated with the technology with due consideration to the corresponding incremental cost involved in achieving further removal. The mercury-laden liquid from the filtering stage would then be subjected to cementation or precipitation. This process is achieved by passing the liquid through a material such as stainless steel, zinc, copper or aluminum.

During cementation the mercury is exchanged with the metal and precipitated out. The liquid would then be recycled back through the process. It is anticipated that only one batch of leaching agent would be needed. Upon completion of the process, the remaining liquid would be treated on-site prior to discharge to a POTW. Further treatability studies will be conducted during design to optimize the treatment process. The process would be designed to meet or exceed levels protective of public health. The estimated cost associated with Alternative 9 is $1,912,870.

As discussed above, the location and number of existing monitoring wells are inadequate to fully characterize the extent of groundwater contamination at the site. Therefore, further investigation of the groundwater will be conducted during design of the remedial action. This work will include installation of additional groundwater monitoring wells and groundwater sampling. Additional remedial action may be necessary pending the results of this investigation. If further groundwater investigation determines that there are no current or future risks posed by groundwater contamination, then limited groundwater monitoring would be conducted to provide further verification (i.e., a minimum of three years). In addition, air

modelling was used in the endangerment assessment to predict the concentration of mercury vapors which could be emitted given the concentration of mercury detected in the soils and waste-fill materials. The modelling showed that the concentration of mercury in soils and in the waste-fill area may cause the NESHAP to be exceeded. The NESHAP for mercury is 1 ug/m^3. Therefore, confirmitory air sampling will be conducted during the design to verify the whether the NESHAP is being exceeded. During design, confirmitory soil samples will also be collected from residential yards which are downgradient in terms of surface water runoff from the site.

Statutory Determinations

Section 121 of CERCLA mandates that EPA select a remedial action that is protective of human health and the environment, cost-effective, and utilizes permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. Remedial actions in which treatment which permanently and significantly reduce the volume, toxicity or mobility of a hazardous substance is a principal element are to be preferred over remedial actions not involving such treatment.

Based upon the analyses presented herein the following conclusions are reached:

° Overall Protection of Public Health and the Environment

Alternative 9 provides protection through treatment of waste above health-based levels for mercury

° Compliance with ARARs

Alternative 9 would be designed to meet or exceed ARARs. As stated above, this alternative would reduce the concentration of mercury down to or below health-based levels in the absence of chemical specific ARARs for soils and debris. The residuals will be deposited on site and covered with clean soil consistent with a RCRA clean closure.

° Utilization of Permanent Solutions and Alternative Treatment Technologies to the Maximum Extent Practicable

Alternative 9 is considered to be a permanent remedial action since the concentration of mercury remaining on site would be below health-based levels. For this reason Alternative 9 has a greater degree of permanence relative to Alternatives 1,

4 and 7 where wastes are left on-site, untreated, in concentrations exceeding health-based levels. Although Alternative 3 uses treatment to reduce the mobility of the waste (and possibly the toxicity) the concentration of mercury in the waste remaining on-site would be above health-based levels. Therefore, Alternative 9 is preferred over Alternative 3 because it does not require indefinite management and monitoring of the site.

The degree of permanence associated with Alternative 9 is equivalent to Alternatives 8 and 7a with respect to the site. The degree of permanence associated with Alternative 7a is limited in that it only addresses permanence in terms of on-site conditions. Alternatives 8 and 9 would be permanent with respect to off-site as well as on-site conditions.

Alternative 9 uses alternative treatment technologies to the maximum extent practicable since it includes treatment of all waste with mercury concentrations in excess of health-based levels. The other treatment alternatives (i.e., Alternatives 3 and 8) also require the treatment of all waste with mercury concentrations in excess of health-based levels. However, Alternative 3 does not provide for recovery of mercury from the waste. Thus, Alternatives 8 and 9 have the added benefit of using alternative treatment technologies to the maximum extent practicable while recovering mercury from the waste thereby resulting in the conversion of a waste into a usable material.

° Preference for Treatment as a Principal Element

Alternative 9 satisfies the statutory preference for treatment as a principal element of a remedial action since it provides for treatment of organic mercury to inorganic mercury which significantly reduces the toxicity of the wastes.

° Cost-Effectiveness

Although Alternative 9 is not the least costly treatment option it is cost-effective. The costs are reasonable in light of the relatively small incremental (approximately 1 million dollars) cost associated with attaining a permanent remedial action, with limited monitoring, no land use restrictions and which utlizes treatment as a principal element.

In summary, Alternative 9 is the selected alternative, it is protective of public health, is cost-effective, and utilizes treatment as a principal element. Alternative 9 would provide protection of public health by using treatment to reduce the concentration of mercury on site to below health-based levels (See ARAR discussion).

The treatment process employed would reduce the toxicity of the waste by converting organic mercury into a less toxic inorganic form and would reduce the volume of contaminated materials which are above health-based levels. Since the residual mercury concentration in materials left on site would be below health-based levels, this alternative is considered a permanent remedial action. Studies conducted by the U.S. Bureau of Mines and available information on related industrial processes suggest that this alternative could be implemented. Further bench and pilot scale studies would be required to optimize the treatment process and minimize any potential short-term impacts. Alternative 9 would be designed to meet or exceed ARARs. The estimated cost for implementing Alternative 9 is $1,912,870, which is reasonable in light of the degree of protection, treatment and permanence afforded by this alternative.

Currently, Alternative 9 appears to provide the best balance of trade-offs among the alternatives examined in detial with respect to the nine evaluation criteria. In addition to satisfying the statutory preference for remedies which utilize treatment as a principal element and for permanent remedies. EPA believes that Alternative 9 is implementable based on current information. However, since this alternative has not been fully demonstrated and further treatability studies are necessary, EPA believes that it is prudent to conduct additional treatability studies on other treatment options concurrently with those to be performed for Alternative 9. This approach would minimize any delay in remediating the site, in the event that hydrometallurgical treatment is not implementable.

TABLE 1

CDM-FPC G.E. Wiring TES III WA 649 LWA Project 87525

INORGANIC RESULTS
Groundwater Samples

LSDG	LSDG SEG	SAMPLE	MERCURY -----UNITS: UG/l----- TOTAL	INORG	ORG	AMMONIA --UNITS: MG/L-- as N	as NH3	REMARKS
8073	1	GE-GW-01	0.0	0.0	0.0	0.17	0.21	
8073	2	GE-GW-15	6525.0	10.4	6514.6	570.00	690.00	
8073	3	GE-GW-14	3862.8	6.4	3856.4	340.00	411.00	
8073	4	GE-GW-12	3445.2	15.2	3430.0	300.00	363.00	
8073	5	GE-GW-11	5011.2	14.1	4997.1	340.00	411.00	
8073	6	GE-GW-10	5778.0	22.8	5755.2	420.00	508.00	\
8073	6-DUP	GE-GW-10-DUP	X	X	X	410.00	496.00	/ Lab Duplicates
8074	1	GE-GW-08	6917.0	14.9	6902.1	400.00	484.00	
8074	2	GE-GW-07	4046.0	5.0	4041.0	760.00	920.00	
8074	3	GE-GW-06	6786.0	18.0	6768.0	590.00	714.00	
8074	4	GE-GW-05	5220.0	13.0	5207.0	560.00	678.00	
8074	5	GE-GW-16	3654.0	6.4	3647.6	890.00	1077.00	\Blind dup.-GE-GW-07
8074	5-DUP	GE-GW-16-DUP	X	X	X	940.00	1137.00	/Lab Duplicates
8074	6	GE-GW-B2	0.0	0.0	0.0	0.00	0.00	-Bailer Rinsate Blank
8074	7	GE-GW-02	0.3	0.0	0.3	0.00	0.00	
8074	8	GE-GW-03	0.0	0.0	0.0	0.00	0.00	
8074	9	GE-GW-04	2.2	0.4	1.8	0.00	0.00	
8074	10	GE-GW-B3	0.0	0.0	0.0	0.00	0.00	-Field Blank
8074	11	GE-GW-B4	0.0	0.0	0.0	0.00	0.00	-Source Water Blank
8075	17	GE-GW-B5	0.0	0.0	0.0			Spoon Rinsate Blank
8075	18	GE-GW-B6	0.0	0.0	0.0			Dish Rinsate Blank
8075	19	GE-GW-B7	0.0	0.0	0.0			Auger Rinsate Blank

Soil Samples

LSDG	LSDG SEG	SAMPLE	-----UNITS: UG/KG----- TOTAL	INORG	ORG	REMARKS
8075	1	GE-S-1SU	19000.0	5360.0	13640.0	
8075	3	GE-S-2SU	5188.0	3870.0	1318.0	
8075	5	GE-S-3SU	24950.0	3790.0	21160.0	
8075	6	GE-S-3DE	61630.0	8710.0	52920.0	
8075	7	GE-S-4SU	1330.0	390.0	940.0	
8075	9	GE-S-5SU	6180.0	2430.0	3750.0	
8075	10	GE-S-6SU	4790.0	530.0	4260.0	
8075	11	GE-S-6DE	270.0	170.0	100.0	
8075	12	GE-S-7SU	310.0	220.0	90.0	
8075	13	GE-S-7DE	588.0	0.0	588.0	Blind Dup. GE-S-7SU
8075	14	GE-S-8SU	2850.0	980.0	1870.0	
8075	15	GE-S-8DE	485.0	450.0	35.0	
8075	16	GE-S-14SU	270.0	160.0	110.0	

MERCURY values reported as 0.0 are actually < 0.2

AMMONIA values reported as 0.00 are actually < 0.1 for N and < 0.12 for NH3.

TABLE 1 CONTINUED

VOLATILE ORGANIC RESULTS

Groundwater Samples

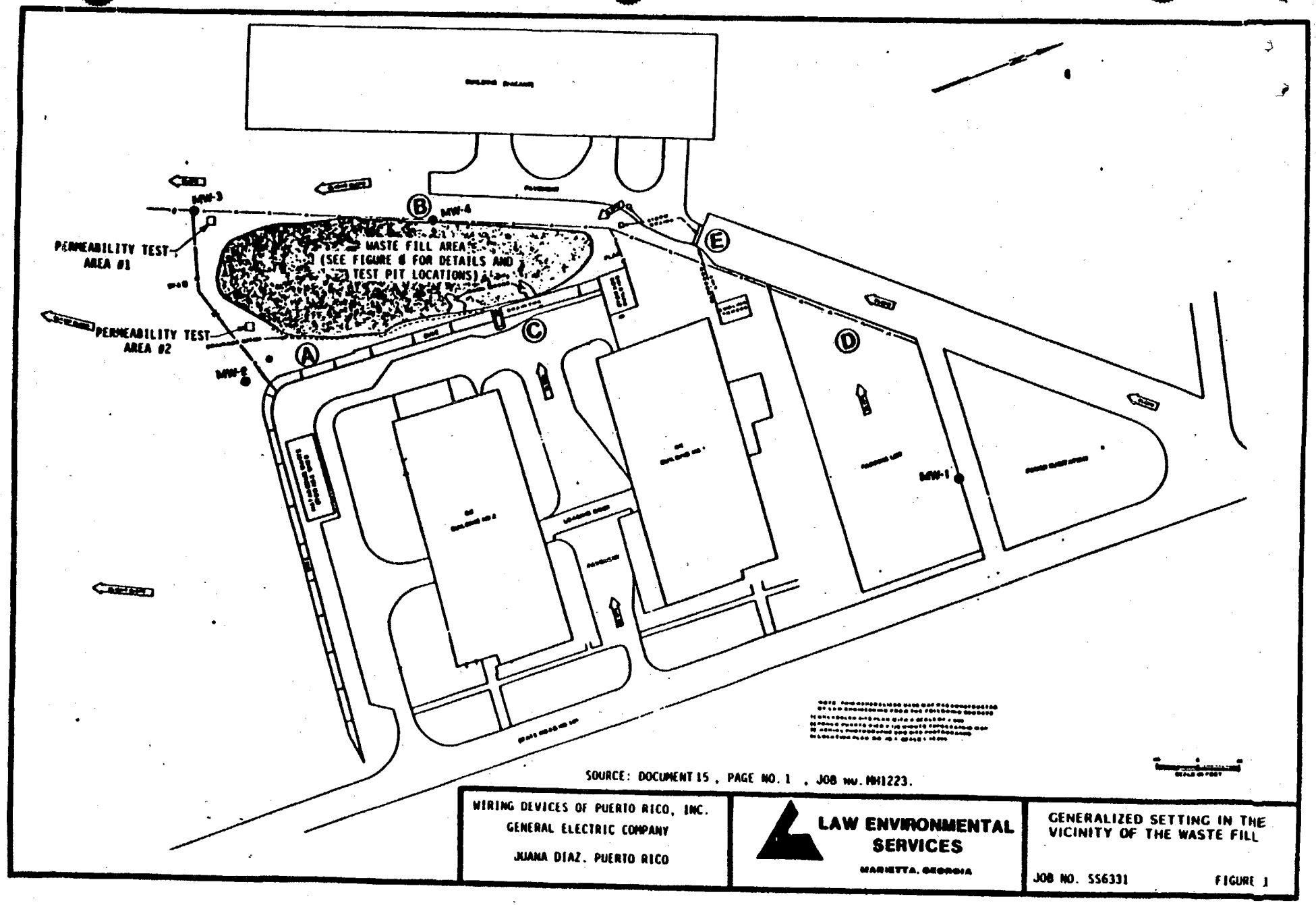
LSDG	REMARKS LSDG SEG	SAMPLE	-----VOA----- UG/L* TOTAL COMPOUND	REMARKS
8073	1	GE-GW-01	ND	
8073	2	GE-GW-15	5.0 BENZENE	
8073	3	GE-GW-14**	ND	
8073	4	GE-GW-12**	ND	
8073	5	GE-GW-11**	ND	
8073	6	GE-GW-10**	ND	
8073	7	GE-GW-B1	2.0 CHLOROFORM	Trip Blank
8074	2	GE-GW-07**	ND	
8074	4	GE-GW-05**	ND	
8074	5	GE-GW-16**	ND	(1)
8074	6	GE-GW-B2	ND	Bailer Blank
8074	7	GE-GW-02	ND	
8074	8	GW-GW-03	ND	
8074	9	GE-GW-04	ND	
8074	11	GE-GW-B4	ND	Source water blank

* - All analyses performed at CLP detection limits

** - These samples appeared to contain surfactants (foamed). Analyses were performed on diluted samples.

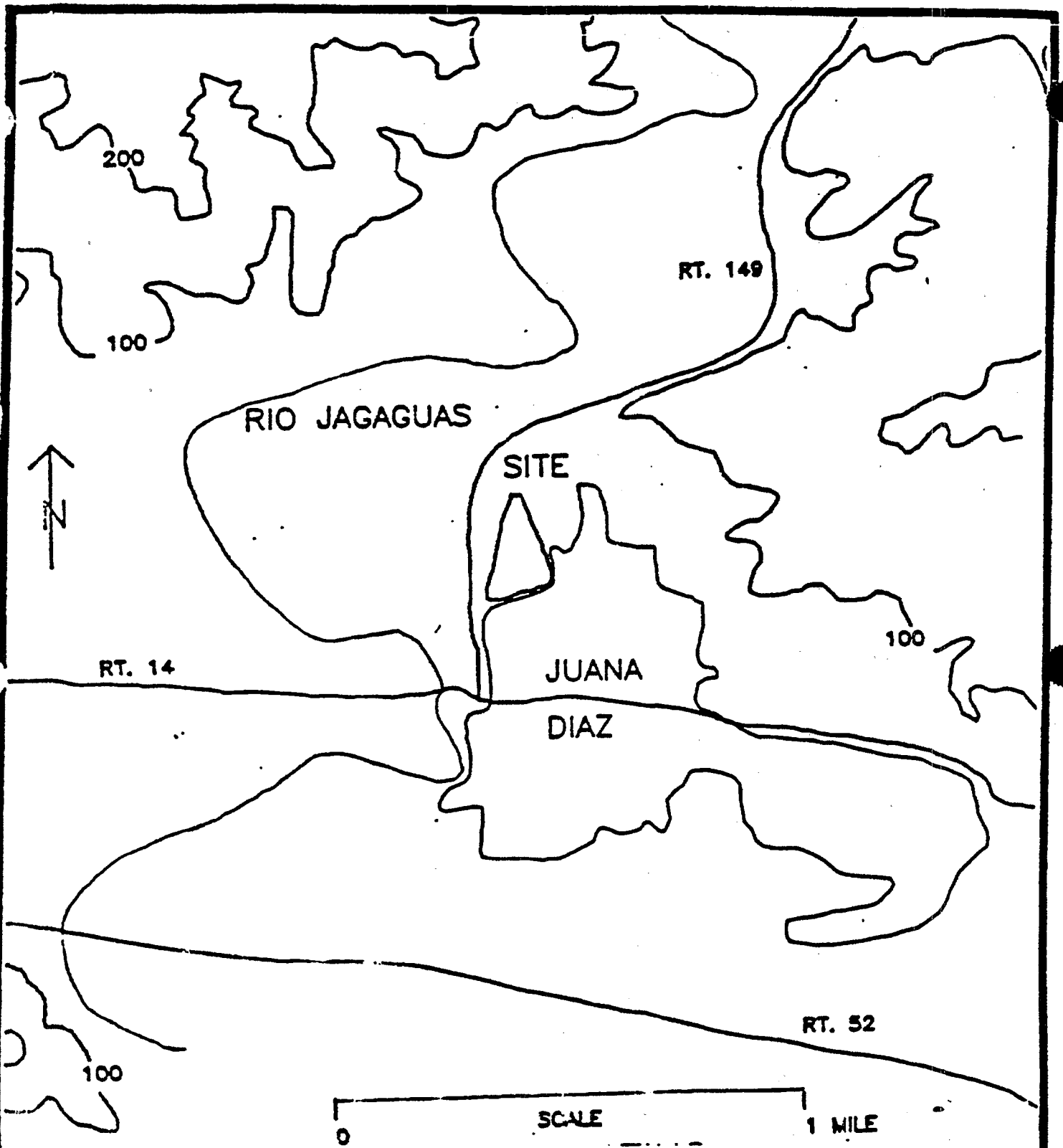
(1) - Blind duplicate of GE-GW-07

ND - Not detected or below CLP detection limit.



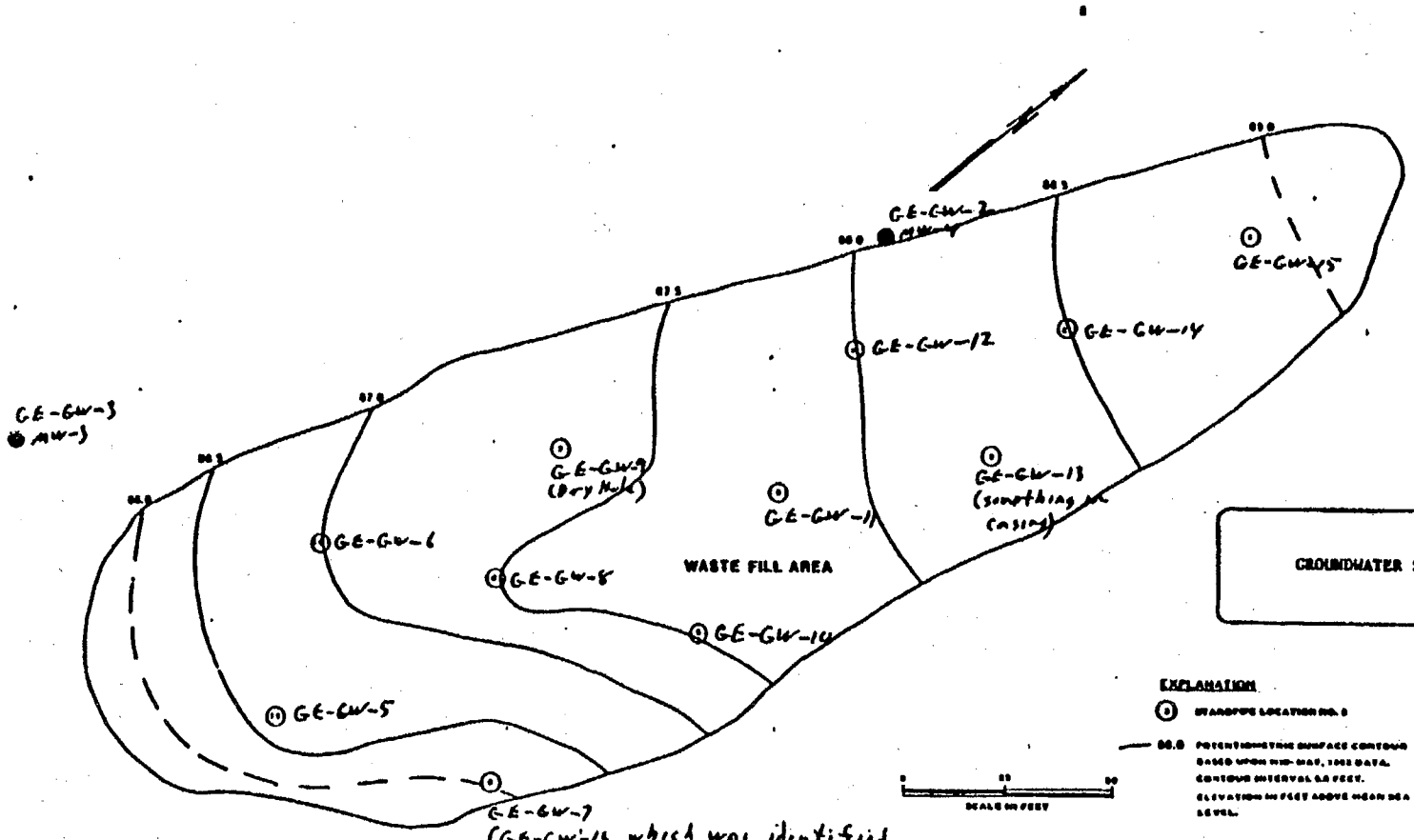
SOURCE: DOCUMENT 15 , PAGE NO. 1 , JOB no. MH1223.

WIRING DEVICES OF PUERTO RICO, INC. GENERAL ELECTRIC COMPANY JUANA DIAZ, PUERTO RICO	LAW ENVIRONMENTAL SERVICES MARIETTA, GEORGIA	GENERALIZED SETTING IN THE VICINITY OF THE WASTE FILL JOB NO. SS6331 FIGURE 1



SOURCE: DOCUMENT 30, PAGE NO. 10, JOB NO. MH2317.

WIRING DEVICES OF PUERTO RICO, INC. GENERAL ELECTRIC COMPANY JUANA DIAZ, PUERTO RICO	LAW ENVIRONMENTAL SERVICES MARIETTA, GEORGIA	SITE SETTING JOB NO. SS6331 FIGURE 2



(GE-GW-16, which was identified as leachate was used as a blind duplicate of GE-GW-7 since no leachate was detected)

REFERENCE: RI REPORT

WIRING DEVICES OF PUERTO RICO, INC. GENERAL ELECTRIC COMPANY JUANA DIAZ, PUERTO RICO	LAW ENVIRONMENTAL INC.	POTENTIOMETRIC SURFACE ELEVATION OF PERCHED WATER (MID-MAY 1982) JOB NO. 55-6331 FIGURE 3

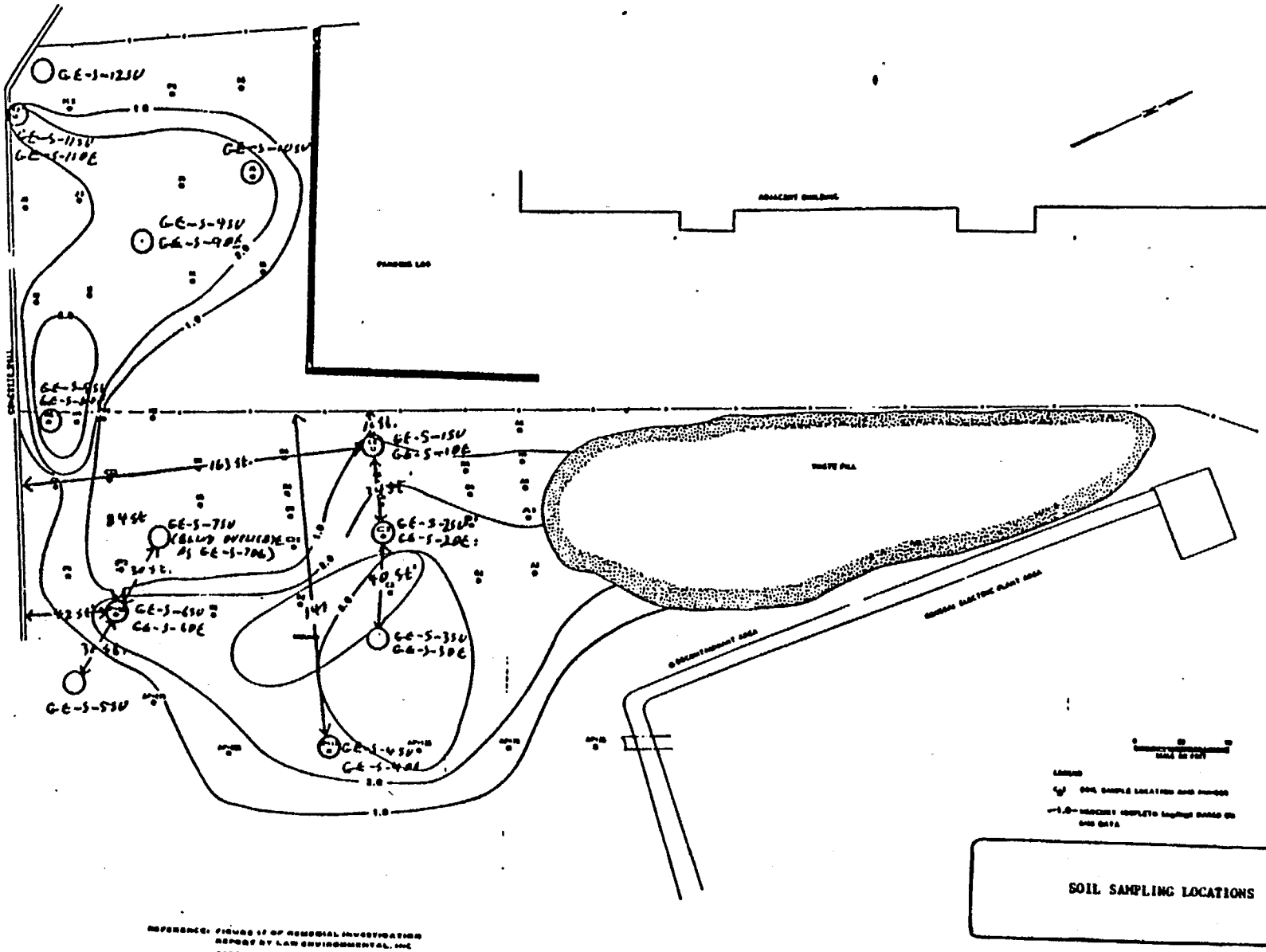
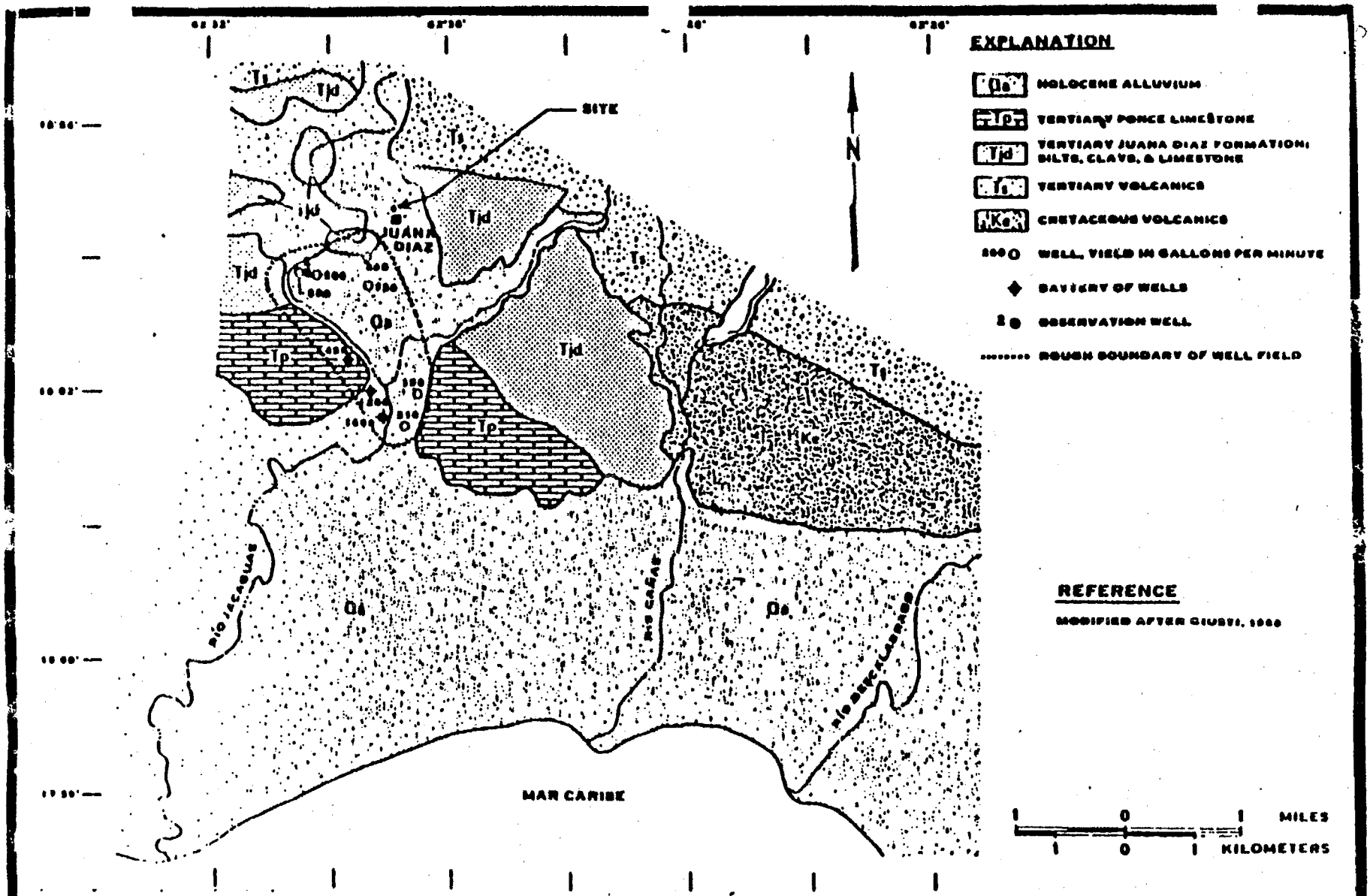
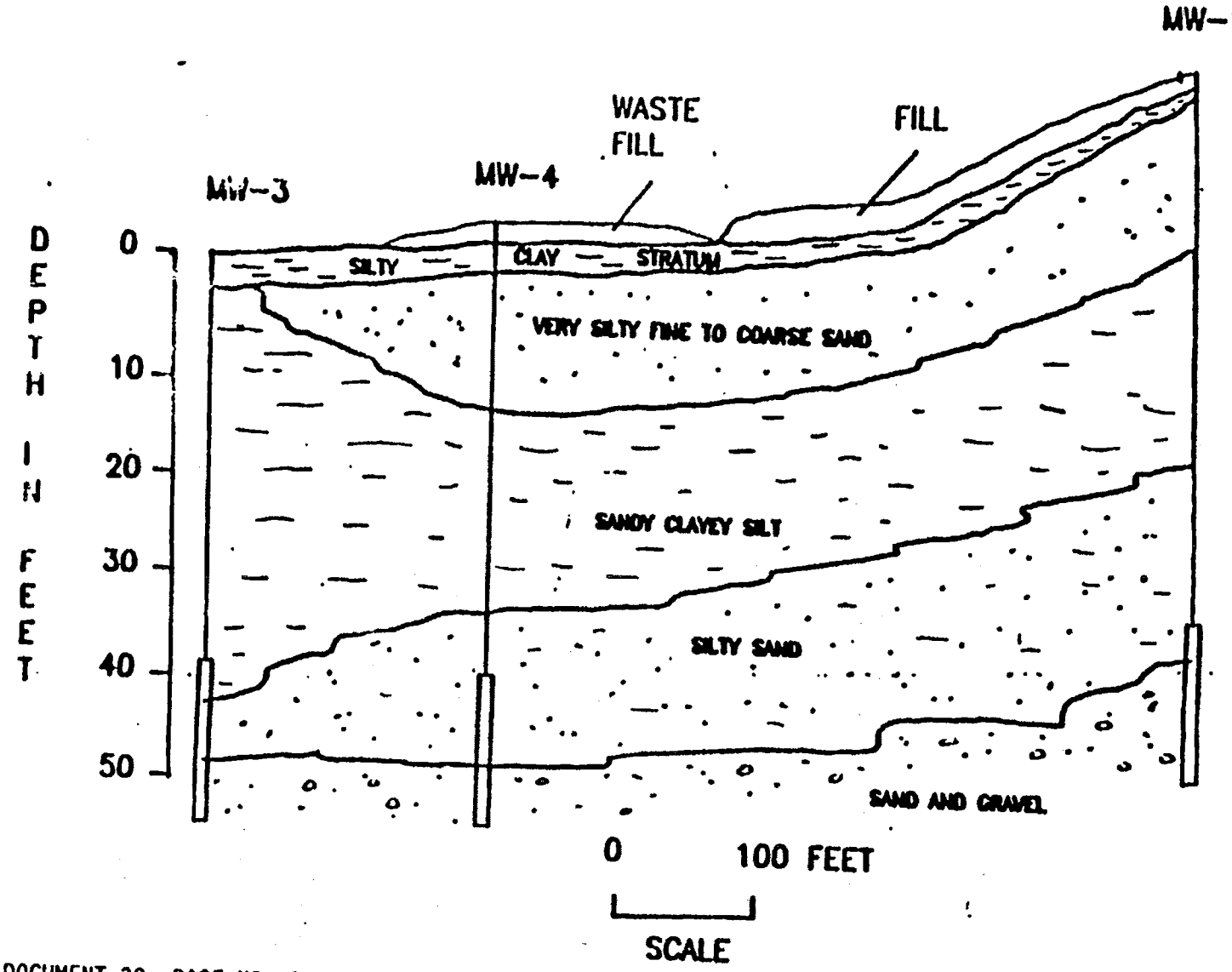

GE-S-12SV
GE-S-11SV
GE-S-11DE
GE-S-10SV
GE-S-9SV
GE-S-9DE
GE-S-8SV
GE-S-8DE
GE-S-15SV
GE-S-15DE
GE-S-7SV
(SOLID OBTAINED AS GE-S-7DE)
GE-S-2SV
GE-S-2DE
GE-S-6SV
GE-S-6DE
GE-S-3SV
GE-S-3DE
GE-S-5SV
GE-S-4SV
GE-S-4DE
ADJACENT BUILDING
WASTE PILL
GENERAL ELECTRIC PLANT AREA
SOIL SAMPLING LOCATIONS

FIGURE 4



SOURCE: DOCUMENT 13, PAGE NO. 29, JOB NO. MH2317.

WIRING DEVICES OF PUERTO RICO, INC. GENERAL ELECTRIC COMPANY JUANA DIAZ, PUERTO RICO	LAW ENVIRONMENTAL SERVICES MARIETTA, GEORGIA	GEOLOGIC UNITS AND WELL LOCATIONS IN THE VICINITY OF THE SITE JOB NO. SS6331 FIGURE 5



SOURCE: DOCUMENT 30, PAGE NO. 33, JOB NO. MH2317.

WIRING DEVICES OF PUERTO RICO, INC. GENERAL ELECTRIC COMPANY JUANA DIAZ, PUERTO RICO	LAW ENVIRONMENTAL SERVICES MARIETTA, GEORGIA	SITE HYDROGEOLOGIC PROFILE JOB NO. SS6331 FIGURE 6

TABLE 2

SUMMARY OF COSTS

	ALTERNATIVE	CAPITAL ($)	MONITORING and O&M ($)
1.	No Action	- 0 -	71,270
3.	Fixation	834,150	82,540
4.	Capping in place with slurry wall	374,540	82,540
7.	Excavation	529,380	82,540
7a.	Alt. 7 with off-site disposal	2,563,110	4,000
8.	Thermal treatment	5,473,900	4,000
9.	Hydrometallurgical treatment	1,912,870	- 0 -

RESPONSIVENESS SUMMARY

G.E. WIRING DEVICES SUPERFUND SITE

JUANA DIAZ, PUERTO RICO

A. OVERVIEW

On September 1, 1988, the U.S. Environmental Protection Agency (EPA) Region II began a public comment period on the proposed remedial action plan (PRAP) and supporting information for the G.E. Wiring Devices Superfund site in Juana Diaz, Puerto Rico. Prior to the public comment period, EPA had proposed an alternative for cleanup of the G.E. Wiring Devices site. The preferred alternative outlined in the PRAP is hydrometallugical treatment, which involves mixing on-site waste containing mercury with a leaching agent to create a solution containing the mercury. The solution is filtered, then the mercury is removed by precipitation or cementation. The mercury could then be recovered.

This responsiveness summary addresses questions and comments about the G.E. Wiring Devices site received during the public comment period. These sections follow:

- Community Involvement in the Selection Process
- Summary of Comments Received During the Public Comment Period and Agency Responses
- Remaining Concerns
- Attachment: Proposed Remedial Action Plan (English Version)
- Attachment: Proposed Remedial Action Plan (Spanish Version).

B. COMMUNITY INVOLVEMENT IN THE SELECTION PROCESS

On the evening of September 15, 1988, EPA held a public meeting in the Municipal Assembly Office in Juana Diaz, Puerto Rico, to present the PRAP and supporting documents for the G.E. Wiring Devices site. Because Spanish is the primary language of the majority of the local residents, the meeting was held in Spanish and English to foster public involvement. A member of the EPA Caribbean Field Office staff translated questions to and responses for non-Spanish speaking EPA representatives at the meeting. In addition to being available at the information repositories, copies of the PRAP and mercury contamination fact sheets, in English and Spanish, were distributed at the meeting. The two-and-one-half hour public meeting was attended by approximately 25 persons.

Earlier in the day, EPA held a briefing for Commonwealth and local officials that was attended by approximately 15 people. Questions raised during both the public meeting and the briefing, as well as written questions and comments received by EPA during

the public comment period are addressed in Section C of this responsiveness summary.

C. SUMMARY OF COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD

Comments received during the G.E. Wiring Devices public comment period on the PRAP and supporting documents are summarized below. The comment period was held from September 1, 1988, to September 26, 1988. The comments are categorized by topic and similar questions have been consolidated and summarized.

Site Remediation Schedule

1. A local official asked about the schedule for site remediation.

   EPA Response: EPA expects to sign the Record of Decision (ROD) for the G.E. Wiring Devices site at the end of September. After the ROD is signed, six to twelve months of treatability studies will be performed; therefore, it will be about one year before the remedial action is undertaken.

2. Several people asked how long remedial action would take once the treatability studies were completed.

   EPA Response: The time frame for remediation will depend greatly on the volume of waste that can be treated at any particular time. It is difficult to make an accurate prediction as to the actual length of time for remediation until the treatability studies are completed.

Rationale for Selection of the Preferred Alternative

1. A local official asked if Alternative 9 was proposed by EPA because it was one of the least expensive alternatives.

   EPA Response: Although Alternative 9 is less expensive than Alternatives 7a and 8, it is more expensive than all of the other alternatives. EPA believes that Alternative 9 is the most effective method of site remediation and did not select it purely on a lower-cost basis.

Past Sampling

1. It was asked if the residential yards near the site were sampled.

EPA Response: Yes, but the data were not validated. Further sampling will be performed during the remedial design phase to attempt to confirm these data.

2. One citizen asked what steps EPA took to talk to people who live near the site. She stressed that she lived near the site and her yard was not sampled.

EPA Response: Not all of the houses near the site were sampled. The decision to sample or not was based on the probability of finding contamination. Houses that had the highest probability of contamination were sampled --that is those houses which are in the direction of surface ground-water runoff. With respect to keeping local residents informed as to the status of the site, EPA has held several public meetings in the area. A public notice in the newspaper was used to announce the recent meeting. In addition, local officials are kept informed of the current site status, and they in turn, inform their constituents.

Health Effects

1. Several people asked if EPA had considered the effects of the site on health of local residents.

EPA Response: An Endangerment Assessment was conducted by EPA which indicated potential emissions of mercury vapor above health-based levels. With respect to worker exposure, no exposure levels above the Occupational Safety and Health Administration (OHSA) standard were found or predicted at this site. Although General Electric (G.E.) performed some testing during the Remedial Investigation, EPA will perform more air sampling during remedial design.

2. Several people wanted to know if EPA will perform a health assessment on the site community and plant workers.

EPA Response: The Federal agency responsible for this type of investigation is the Agency for Toxic Substances and Disease Registry (ATSDR). There is a provision in the law for individual persons or local physicians to petition ATSDR to perform a health assessment if the probable source of exposure is a release. Further information on this procedure is available from the EPA Regional Office or the Caribbean Field Office.

Volatile Organic/Waste Water Contamination

1. A local official asked if EPA had investigated a report

that a sump was used to dispose of waste water at the G.E. plant.

EPA Response: EPA met with the Puerto Rico Industrial Development Corporation (PRIDCO) to obtain blueprints of the plant in order to find the sump. The plans for the plant were inconclusive regarding the existence of the sump. EPA followed up with more monitoring well and soil sampling and will continue sampling during the design phase. If a problem is found, EPA will respond to it at that time.

2. The concern was raised that EPA was not addressing the trichloroethlyene (TCE) problem at the site.

EPA Response: EPA has performed some testing for volatile organic compounds (VOCs) such as TCE. The only VOC that was found was very low levels of benzene. EPA will conduct further testing for VOCs during site remediation.

Public Notice

1. A concern was raised that adequate public notice was not given for the meeting.

EPA Response: EPA used several methods to inform the public of the meeting. EPA published a public notice in a newspaper announcing the meeting and summarizing the PRAP. A press release was issued by the Caribbean Field Office. Fliers announcing the meeting were distributed to all of the homes in Juana Diaz one week before the meeting and a sound truck was used on the two days preceding the meeting. At the last minute, due to construction at the Mayor's Office, it was necessary to change the meeting location to the temporary Municipal Assembly meeting room down the street. A member of the Mayor's staff was posted at his office to direct attendees to the new location.

Site History

1. One citizen asked for information concerning the years that G.E. disposed of contaminated materials at the site.

EPA Response: G.E. assembled mercury switches and disposed of the resulting waste products on site from 1957 until 1969. After 1969, mercury switches were no longer assembled at the Juana Diaz plant.

D. The following comments from General Electric were received in writing during the public comment period.

Comment 1:

The data relied upon does not fully characterize the site. Specifically, there is a lack of data with respect to air releases, groundwater conditions and the nature of mercury in the waste.

Response:

Data collected by G.E. during the remedial investigation was reviewed by EPA for conformance with EPA quality assurance/quality control protocols. The data was determined to be unusable because it did not meet EPA specifications. In addition, the groundwater monitoring wells at the site are insufficient and improperly located.

In August 1988, EPA collected additional samples with the objective of obtaining data which would be in accordance with EPA guidelines and representative of the nature and degree of contamination in the waste-fill materials, perched water and contaminated near-surface soils. Groundwater samples were also collected and analyzed from existing wells to provide some valid data on groundwater conditions. (Because it was recognized the number and placement of monitoring wells is limited, EPA was aware that this data could not be used to conclusively demonstrate that no groundwater contamination exists at the site. However, if positive results were obtained, they could provide a basis for determining whether leakage had occurred through the waste-fill area through the underlying strata and into the aquifer.)

While EPA recognizes that the database is somewhat limited with respect to air and groundwater sampling, we believe that the data is sufficient to characterize the nature and extent of contamination in the waste-fill area and with reasonable interpretation the contaminated near-surface soils. The waste-fill area and contaminated soils may pose unacceptable risks to public health if unremediated. Rather than delay the remediation of these areas pending additional study of the groundwater, EPA believes it is more prudent to address the risks posed by these areas since selection and implementation of a remedial alternative for these areas is not contingent upon the results of the groundwater investigation.

In EPA's endangerment assessment an air model was used to calculate the concentration of mercury in soils and the waste-fill area which could result in exceeding levels protecive of public health. The model predicted that a concentration of 16.4 ppm would result in exceeding health based criteion. The model provides a reasonable indication of actual field conditions. However, confirmatory air sampling will be conducted during design to verify the results of the model since the confirmatory air monitoring will affectd the

volume of contaminated materials which are above health-based levels. One should note, that each remedial alternative evaluated in the addendum FS used the same exact baseline assumptions for the volumes of materials to be remediated. Therefore, any change in the volume would not effect the evaluation or selection of a remedial alternative.

With respect to limited groundwater data, the need for further investigation is substantiated by, among other things, the detection of mercury in one sample of the groundwater above health-based levels (i.e., the Maximum Contaminant Levels promulgated pursuant to the Safe Drinking Water Act). This work will be conducted during design. As stated above, the remediation of the waste-fill area and contaminated soils is not contingent upon the results of this investigation.

In regard to the data defining the nature of mercury in the wastes, EPA found that the mercury in the perched water, near-surface soils and groundwater is predominantly in an inorganic form. The U.S. Bureau of Mines analyzed the plastic portion of the waste in the waste fill area for organic forms of mercury. The results indicated low levels of organic mercury in the plastic.

Comment 2:

EPA used air modelling results from its endangerment assessment for determining cleanup levels. Adequate air monitoring has not been conducted and therefore the cleanup level has not been defined.

Response:

EPA has used the air modelling results in the endangerment assessment as a tool for determining preliminary cleanup levels for the site. confirmatory air modelling will be conducted during design to refine this value. Since EPA has demonstrated in its endangerment assessment that the site may pose unacceptable risks to public health through ingestion pathways, confirmatory air sampling would not negate the need for site remediation. The air sampling, however, could affect the volume of contaminated material which is remediated.

Comment 3:

The documents supporting the chosen alternative are by their own statement preliminary in nature and subject to further change and clarification.

Response:

EPA encourages public involvement, comment and participation in the remdy selection process. Accordingly, it is standard Agency practice to publish draft RI/FS reports and endangerment assessments so that EPA may solicit public input prior to the finali-

zation of these documents. For this particular site, these documents have undergone continued agency review concurrent with the public comment period. Although the endangerment assessment has been modified somewhat as a result of this review it continues to establish a need for site remediation. Specifically, the modifications have resulted in a reduction of the acceptable mercury exposure level due to ingestion of contaminated materials from 38 ppm to 21 ppm. Moreover, for reasons stated above, such changes do not affect the evaluation or selection of remedial alternatives.

Comment 4:

"The A[ddendum] FS applied unfounded or improper assumptions regarding the potential (emphasis added) risk to human health and environment..." Specifically, "the possibility of leakage through the clay layer to the groundwater is the basis of rejecting other alternatives [in particular Alternative 4 which is basically on-site containment]. Without the data confirming such an assumption, that conclusion is unsupported."

Response:

EPA's determination that the potential for current and future groundwater contamination exists is based in part on the work conducted by G.E. and statements contained in their RI report. In particular, the RI indicates that the permeability of the clay layer is in the range of 10^{-4} - 10^{-5} cm/sec. EPA considers these values as demonstrating moderate permeability. (Model RCRA specification would require a 10^{-7} cm/sec permeability for an "impervious" liner). In addition, the RI reports that roots were observed in this unit, which would further facilitate the migration of mercury through the clay by providing channels for the contamination to flow through, and thus increase the permeability of the soils. Furthermore, the RI finds low resistivity readings in portions of the waste-fill area. The report then explains that these readings may be indicative of a zone of high moisture content underlying the waste-fill area. The report states that this moisture could be the result of slow downward migration of perched water through the silty clay stratum.

Notwithstanding the information provided by G.E., the inability of the clays underlying the waste-fill area to act as an adequate barrier to contaminant movement to the groundwater appears to be evidenced by the detection of mercury in the groundwater.

Comment 5:

EPA selected ARARs used to evaluate the selected alternative which were less stringent then those tentatively used to evaluate the original alternatives. Specifically, "[w]hen the original FS was prepard remedies were evaluated based on a tentatively established level of 4mg/kg mercury in soil. The hydrometallurgical treatment is being evaluated based on a standard between 16-38 mg/kg of mercury."

Response:

G.E. prepared the draft FS using a tentative level of 4 ppm based on the average background concentrations found in Eastern U.S. soils and on a qualitative risk assessment performed by its contractor. EPA had not selected either tentatively or definitively 4 ppm as a cleanup level. The background documentation used by G.E. to tentatively set this level were transmitted to EPA concurrently with the draft FS, subject to Agency review.

Since there are no chemical-specific ARARs for mercury-contaminated soils and debris EPA performed an endangerment assessment to quantitatively determine the levels of mercury which would pose unacceptable risks to public health. EPA used these health-based levels consistently as ARARs in the evaluation of each and every alternative.

Comment 6:

Alternative 4 (Containment), "was completely supported in the FS." The addendum FS "has given undue weight to one factor - treatment of the waste - to reduce toxicity, mobility or volume as stated in Section 121(b) of [C]ERCLA."

Response:

One of the deficiencies of the GE draft FS was that it did not fully conform with the criteria set forth in Section 121 of CERCLA. In particular, the alternatives were not evaluated with respect to: long-term effectiveness or permanence; reduction of toxicity, mobility or volume; and short-term effectiveness. In addition, due consideration was not given to alternatives which utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable as directed by CERCLA. Furthermore, CERCLA mandates that remedial actions in which treatment that permanently and significantly reduces the volume, toxicity or mobility of a hazardous substance is a principal element are to be preferred over remedial actions not involving such treatment. The GE draft FS did not address evaluation of the alternatives with respect to this preference.

EPA believes that Congress' intent is clear with regard to this issue. We disagree with the assertion that this criterion was given undue weight to the exclusion of all other criteria. It is self evident that EPA in the addendum FS fully considered all of the criteria while giving the proper preference (as mandated by law) to remedial actions which involve treatment and which permanently and significantly reduce the toxicity, mobility or volume of a hazardous substance.

As stated above, the criterion which involves reduction of toxicity, mobility or volume was applied to the pertinent alternatives (See language and discussion in FS).

Comment 7:

The process proposed by EPA has not been demonstrated as being viable. Although some processes identified may be practiced in the extraction industries, no location has been identified where wastes similar to that at the Site has been successfully processed on a scale similar to that required at the Site.

Response:

EPA believes that hydrometallurgical treatment is a viable process. It appears to be implementable based upon laboratory studies conducted, as well as, other work performed by the U.S. Bureau of Mines and published literature. As stated above, aspects of the process are currently and routinely practiced in the extraction industries. However, EPA recognizes that further treatability studies are necessary and has committed to conduct such studies during design. With respect to the concern that no location has been identified where wastes similar to that at the Site has been successfully processed on a scale similar to that required at the Site, Section 121 of CERCLA clearly allows EPA to select remedial actions with alternative treatment technologies which meet the objectives of the evaluation criteria, whether or not such action has been achieved in practice at any other facility or site that has similar characteristics.

Comment 8:

The degree of reduction of mercury is highly speculative. All of the assumptions are based on processing cinnebar ores, generally containing higher concentrations of mercury. The wastes found at the site may not pose the same processing issues as ores.

Response:

Again, Section 121 of CERCLA allows EPA to select remedial actions with alternative treatment technologies which meet the objectives of the evaluation criteria, whether or not such action has been achieved in practice at any other facility or site that has similar characteristics. EPA is aware that the wastes found at the site may not pose the same processing issues as ores which is among the reasons for performing further treatability studies during design. In addition, the percent reduction achieved in current industrial extraction processes should not be used as a basis for determining the upper limits of the selected treatment alternative. These are commercial processes where the extraction goals are primarily based on cost and benefits of further treatment verses value of recoverd materials. EPA's treatment goals are based on attaining conformance with the criteria specified in CERLCA. EPA's objective is to select a remedial action which provides the best balance in terms of tradeoffs with respect to such criteria. While cost-effectiveness is a criterion which is considered, it does not necessarily drive EPA's decision making process.

Comment 9:

The short-term effectiveness has not been addressed with respect to hydrometallurgical treatment.

Response:

The short-term effectiveness was assessed and short-term impacts were noted in the addendum FS for each alternative including hydrometallurgical treatment. This criterion was applied consistently to each alternative. That is, potential short-term impacts during implementation were identified for each alternative. A conservative approach was taken in identifying such potential impacts. For example, the formation of picric acid is possible when concentrated nitric acid reacts with phenols in the presence of sulfates. Although there is nothing in the waste that suggest that there are high levels of sulfates or sulfite, since the plastic materials contain phenolic compounds, the potential formation of picric acid was flagged. Moreover, in laboratory tests the waste was analyzed using concentrated nitric acid, and picric acid was not formed. Potential short-term impacts were also addressed in the same manner for each alternative. That is, EPA believes that the issues raised can be addressed in the site health and safety plan for construction. EPA also believes that any short-term impacts associated with hydrometallurgical treatment can be addressed through data collected during the treatability studies.

Comment 10:

"With all the uncertainties associated with this process [hydrometallurgical treatment] any cost estimates are at best an educated guess." "Cost could easily balloon to half again or more."

Response:

EPA's goal when developing cost estimates for the FS is to achieve a level of accuracy between + 50% to - 30%. EPA realizes that this goal may not be pratical for remedial actions which entail excavation and treatment of wastes. EPA believes that the assumptions made in the cost estimates are reasonable. However, the cost estimates will be further refined upon completion of the treatability studies and subsequent design.

Comment 11:

"The Fixation Alternative was rejected without adequate evaluation. Although it would meet the necessary requirements for human health and environmental protection, there appears to be some concern over its permanence. Some of this is traced back to the erroneous assumptions that this would be performed in situ." The resultant material from fixation "has a high degree of permanence and no specific evidence was presented in the A[ddendum] FS to the contrary."

Response:

The evaluation of the degree of long-term effectiveness or permanence associated with the Fixation Alternative was not solely dependent upon the difficulties encounted with respect to in-situ treatment processes. Quality control concerns, such as achieving proper mixing of the waste, may be addressed by removing the waste for processing and then returning it to the waste-fill area. And, these activities may also increase the degree of permanence associated with this alternative. However, the degree of permanence is still uncertain. Although acid leaching tests have been performed on a fixed sample from the waste-fill area, and these tests give a good indication of the initial short-term effectiveness of fixation. However, the tests offer no information with respect to the long-term ability for this alternative to be effective under a variety of in-situ conditions. Processing the waste outside of the waste-fill area would still not make the Fixation alternative a more permanent solution than the chosen alternative, since wastes would remain on-site above health-based levels.

Comment 12:

"EPA states that Alternatives 5, 5a, 6 and 6a were eliminated based on technical fesibility since the waste is not amenable to physical separation; this appears to directly contradict Law Environmental's report of November 1987 which references a Granulametric Study Report of November 1986 which indicates that some physical separation can be achieved by screening. EPA provides no supporting documentation for their rejection of Alternatives 5, 5a, 6 and 6a."

Response:

Because no mass balance was performed, the work conducted by Law Environmental with respect to the above-referenced alternatives is inconclusive. The data presented in the Bureau of Mines report demonstrates that some physical separation of the mercury from the waste materials could be achieved. However, these physical separation methods do not achieve sufficient reduction and are therefore inefficient and impractical. The data and information is presented in the Bureau of Mines report which is an attachment to EPA's addendum FS.

Comment 13:

"EPA does not indicate in their summary that extensive safety features would need to be designed into a temporary facility because of the use of hazardous leaching materials, nor do they state that the leachates would require treatment and disposal after removal of the mercury."

Response:

The addendum FS does provide for neutralization of the leaching agent prior to disposal at a POTW. As stated in the addendum FS, safety concerns will be addressed in the design and health and safety plan.

Comment 14:

"There is no supporting data to demonstrate that the hazardous leaching materials (cyanide, nitric acid, or hypochlorite) can themselves be removed sufficiently that the soil will meet relevant disposal criteria".

Response:

See response to Comment 7. The remedial action will be designed to meet relevant disposal criteria.

Comment 15:

"Treatment of perched water is based on an estimated 500,000 gallons already in the area; no allowance appears to be made for recharge due to nine months percipitation over a 1.16 acre area, which would amount to an additional 1,140,000 USgal over the nine month period, assuming 48 inches of percipitation per year."

Response:

EPA used the same value (i.e., 1/2 million gallons) for the volume of perched water to be treated when assessing each and every alternative. The amount of time estimated for implementation of each alternative is sufficiently similar (between 18 to 24 months) and therefore, the incremental amount of perched water generated should be roughly equivalent. Consequently, each alternative would be affected in a similar manner if rainfall increases the volume of perched water to be treated.

Comment 16:

"EPA states that the mercury could be recovered from plastic by low temperature retorting between 375°C and 850°C, implying that this is an established process. However, the U.S. Bureau of Mines letter of August 22, 1988, states only that additional tests are being run to determine <u>if</u> this could be achieved."

Response:

The first statement in the comment is part of a sentence The sentence in the addendum FS is explaining the range of possible temperatures which should be explored to determine the optimal operating temperature for a thermal treatment process. EPA does not state or imply that low temperature retorting for this waste is an established process; this is an inference drawn by the commentor by taking a statement contained in the addendum FS out of context.

Comment 17:

"EPA has proposed using cyanide, hypochlorite or nitric acid to leach mercury from the waste materials and soils based on the August 22, 1988 letter from the U.S. Bureau of Mines (USBM). However, the USBM eliminated nitric acid as a leaching medium because of the hazard of forming potentially explosive nitrated organic compounds from the phenolic plastics present in the waste". "Although USBM rejected cyanide as a leaching medium, cyanide leaching of gold and silver ores is a commercial process typically yielding extration efficiencies on finely divided

ores (less then 300 mesh) of 95-96%. "The USBM started testing on the wastes only (no soils were received for testing), but discontinued the work because the leaching medium was gradually acidified by the waste, releasing toxic hydrogen cyanide gas.

Response:

The Bureau of Mines did not eliminate nitric acid as a leaching medium, they did not reject cyanide as a leaching medium, and hydrogen cyanide gas was not released during the Bureau of Mines testing of the waste; nor are such statements made in the Bureau of Mines report.

Comment:

EPA failed to consider the potential problems associated with finding a POTW to accept the aqueous streams generated from Alternative 9.

Response:

EPA did consider the potential problems associated with sending aqueous streams generated by hydrometallurgical treatment to a POTW. As stated in the Addendum FS, the EPA memorandum entitled "Discharge of Wastewater from CERCLA Sites into POTWs" would be used, as well as the permit requirements for the specific POTW to determine the apropriate treatment plant. The guidance would preclude the use of a POTW which is out of compliance with its permit requirements. Accordingly, the treated perched water may only be discharged to a POTW that is permitted to accept such wastes and is operating in compliance with that permit. The on-site pretreatment must achieve the levels set forth in the POTW's permits.

EPA is aware that there are several POTWs in the area which are currently out of compliance with their permit requirements and are under Judicial Consent Orders to correct these problems. There is also a facility in the area which is currently in compliance with its permit. Because the status of a facility's compliance could change at the time of implementation of the remedial action, EPA believes that the POTW to which the effluent is sent should be designated, and discussions for acceptance of the waste stream should begin close to the time that the remedial action will be initiated.

Comment:

EPA failed to consider the proper method of disposal for each process stream generated with respect to Alternative 9.

Response:

These process streams, as well as their ultimate disposal were identified in the addendum FS. Hydrometallurgical treatment consists of leaching mercury from the waste with a leaching agent. This generates a liquid-sludge stream. This stream is then filtered. The concentration of mercury in the residual material (sludge) from the filtering stage is below health-based levels. The residuals are then rinsed to ensure that all of the leaching material is removed. The rinsate is treated on-site, prior to discharge to a POTW. Treatability studies will determine the design parameters which will ensure that the residuals will be below health-based levels and not contain hazardous byproducts from the leaching stage. The residuals will then be disposed of on site. The liquid stream separated from the sludge during the filtration stage will then undergo precipitation/ cementation to remove the mercury. This process consists of passing the liquid through a material such as stainless steel, copper, aluminum or zinc. The mercury is then removed from the solution and sent to a reclaimer or proper disposal in accordance with its characteristics. The liquid is then recycled back to the leaching reactor. When the processing of all waste is completed the leaching agent is neutralized and sent to a POTW for disposal.

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