

**EPA Superfund
Record of Decision:**

**GRAND STREET MERCURY
EPA ID: NJ0001327733
OU 01
HOBOKEN, NJ
09/30/1997**

DECLARATION FOR THE RECORD OF DECISION

SITE NAME AND LOCATION

Grand Street Mercury Site
City of Hoboken, Hudson County, New Jersey

STATEMENT OF BASIS AND PURPOSE

This Record of Decision presents the selected remedial action for the Grand Street Mercury Site ("the Site"), which was chosen in accordance with the requirements of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended, 42 U.S.C. § 9601 et seq, and, to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This decision document explains the factual and legal basis for selecting the remedy. This decision is based on the administrative record for the Site.

The New Jersey Department of Environmental Protection concurs with the selected remedy. A copy of the related concurrence letter can be found as Attachment 2. The public comment period Responsiveness Summary is included as Attachment 3. The information supporting this remedial action is contained in the Administrative Record for this Site, the index of which is Attachment 4 to this document.

ASSESSMENT OF THE SITE

Actual or threatened releases of hazardous substances from the Site, if not addressed by implementing the response action selected in this Record of Decision, may present an imminent and substantial endangerment to public health, welfare, or the environment.

DESCRIPTION OF THE SELECTED REMEDY

The selected remedy described in this document represents the first planned remedial action for the Site. It addresses the threats to human health posed by the contaminated buildings and soil at the Site and provides for the permanent relocation of the former residents. This Record of Decision also requires an investigation of the soils on adjacent properties and the groundwater underlying the Site.

The major components of the selected remedy include the following:

- ! Permanent relocation of the former residents of the Site;
- ! Continuation of temporary relocation of the former residents until permanent relocation has been implemented;
- ! Historic preservation mitigation measures for the buildings at the Site, as appropriate;
- ! Gross mercury decontamination of the buildings at the Site including recovery of available mercury, whenever possible;
- ! Identification and abatement of friable asbestos in the buildings at the Site;
- ! Removal and recovery of reusable fixtures, appliances, and recyclable scrap metal and other building components;
- ! Demolition of the two buildings at the Site using measures to minimize releases of mercury into the environment;
- ! Removal and off-site disposal of all demolition debris at EPA-approved facilities;
- ! Sampling of soils at the Site;
- ! Excavation and off-site disposal of contaminated soils at EPA-approved facilities;
- ! Sampling of soils at off-site adjacent locations;
- ! Sampling of groundwater at the Site; and
- ! Assessment of off-site soil and groundwater data to evaluate the need for future remedial action.

DECLARATION OF STATUTORY DETERMINATIONS

The selected remedy is protective of human health and the environment, complies with Federal and State requirements that are legally applicable or relevant and appropriate to the remedial action, and is cost-effective. The remedy utilizes permanent solutions and alternative treatment or resource recovery technologies to the maximum extent practicable and satisfies the statutory preference for remedies that employ treatment that reduces toxicity, mobility, or volume as a principal element.

Because this remedy will not result in hazardous substances above health-based levels remaining at the Site after implementation of the remedy, a five-year review pursuant to Section 121(c) of CERCLA, 42 U.S.C. §9621(c) is not required.

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DECISION SUMMARY

RECORD OF DECISION

GRAND STREET MERCURY SUPERFUND SITE

SITE NAME, LOCATION, AND DESCRIPTION

The Grand Street Mercury Site ("the Site") is located at 720 and 722-732 Grand Street, Hoboken, Hudson County, New Jersey (see Figures 1 to 3). The Site includes a former industrial building converted from 1993 to 1995 into 16 residential/studio spaces (722-732 Grand Street), a townhouse formerly used for various purposes which was also intended for residential conversion (720 Grand Street), and an adjacent asphalt-covered parking lot. The building has approximately 57,500 square feet of interior floor space, and the average area of each residential/studio space is approximately 2,600 square feet. The building is approximately 100 feet by 150 feet, five stories high, and is constructed of brick and masonry walls with an interior wooden structural system and wood floors. The townhouse is approximately 25 feet by 40 feet and has approximately 4,000 square feet of interior floor space on four floors.

Hoboken High School is located across the street to the northeast and there are over 40,000 residents that live within a one-half mile radius of the Site. A high-density housing complex is located across the street to the northwest. Residents in the vicinity of the Site use public water as their source of drinking water. Ground water in the area is not used as a drinking water source. The Site is located in a floodplain of the Hudson River.

The surrounding area is primarily residential, lightly mixed with commercial and industrial properties. In 1979, much of Hoboken (including where the Site is located) was rezoned from - 1 (Manufacturing) to its present zoning classification of R-2 Residence District (Stabilization). The R-2 zoning encourages new residential development and conversion of existing non-residential structures to residential use as a fundamental component of the zoning change. Recent changes in area use from manufacturing to residential in the area are readily observable.

SITE HISTORY AND ENFORCEMENT ACTIVITIES

Based on information gathered to date, owners of the Site include: the Cooper-Hewitt Electric Company, first incorporated in New York (1910-1911), later incorporated in New Jersey (1911 to approximately 1919); the General Electric Vapor Lamp Company (approximately 1919-1939); General Electric Company (1939-1948); Cooper-Hewitt Electric Company (1948-1955; a/k/a Sperti Sun Lamp, Sperti-Faraday, and Sperti Drug Company); the Quality Tool and Die Company and John Pascale and Marie Escolino (1955-1969); the Quality Tool and Die Company and John Pascale (1969-1979); the Quality Tool and Die Company and David and Sherrill Pascale (1979-1993); the Grand Street Artists Partnership (1993-Present); the Grand Street Artists Condominium Association (1994-Present); and various individual Unit owners (1995-Present).

Temporary and permanent certificates of occupancy were granted to occupants of 15 of the 17 planned residential Units beginning in 1994.

The Cooper-Hewitt Electric Company (Cooper-Hewitt 1) purchased the Site, apparently transferring its operations from New York City in 1910, and manufactured mercury vapor lamps at the Site thereafter. The lamps were composed of cylindrical glass tubes approximately four feet in length. Mercury vacuum pumps were utilized to exhaust the interior airspace within the glass tube. The tubes had an iron electrode on one end. A pool of liquid mercury on the other end provided the mercury vapor source which emitted light when subjected to an electrical current induced through the iron electrode.

The General Electric Vapor Lamp Company (GEVLC) purchased the Site from Cooper-Hewitt 1 in approximately 1919 and manufactured mercury vapor lamps similar in structure to those manufactured by Cooper-Hewitt 1. Mercury-containing connector switches and "Glow Lamps" containing either neon or argon gas (those containing argon gas also requiring a small amount of mercury) were also manufactured. GEVLC apparently continued the

manufacture of mercury-containing products at the Site until 1939, when its name was changed to the General Electric (GE) Company. GE continued these operations until 1948.

In 1948, a "new" Cooper-Hewitt (Cooper-Hewitt 2) was formed (a different entity from Cooper - Hewitt 1). Cooper-Hewitt 2 purchased the Site from GE and manufactured mercury vapor lamps similar to those described above, as well as other lamps requiring mercury in their manufacture (e.g., Sperti Sun Lamps, Glow lamps, and fluorescent tubes). From 1948 - 1955, Cooper-Hewitt 2 leased the portions of the industrial building to Quality Tool and Die Company and John Pascale, Sr.

In 1955, Cooper-Hewitt 2 sold the Site to John J. Pascale, Sr., Marie Pascale, and Quality Tool and Die Company, a company which was operated by John J. Pascale, Sr., from 1940 to 1979. In the 1950's, John J. Pascale, Sr., formed an additional corporation, Majoda Tool and Manufacturing (Majoda), which operated a tool manufacturing facility at the Site. In 1963, Majoda moved to 51 Newark Street, Hoboken, NJ, then moved back to the Site in 1966. Quality Tool and Die Company and Majoda manufactured precision tools and fabricated precision dies for the medical, pharmaceutical, commercial and aerospace industries. After 1955, Quality Tool and Die Company leased part of the Site to Cooper-Hewitt 2 which continued its lamp manufacturing operations until approximately 1965, apparently including at least the fifth floor. From 1955 to approximately 1965, Cooper-Hewitt 2 did business, at the Site, apparently under the names of Cooper-Hewitt Electric Company, Sperti Sun Lamp, Sperti-Faraday, and Sperti Drug Company. Cooper-Hewitt 2 apparently moved all operations to Erlanger, Kentucky in approximately 1965.

Mercury associated with vacuum pumps and the manufacture of mercury vapor lamps and mercury-containing switches are believed to be the primary contaminant sources for the mercury contamination prevalent throughout the buildings and the parking lot. Lamps of this type, among numerous other types of lamps requiring lesser amounts of and/or no mercury in the manufacturing process, were manufactured at the facility from 1910 to approximately 1965.

In 1971, all stock in Majoda was given to John Pascale, Jr. By May 1979, John Pascale Sr. and the Quality Tool and Die Company transferred the property at 720 and 722-732 Grand St. and all shares of stock in Quality Tool and Die Company to David Pascale. Sherrill Pascale was added to the Deed to the property in 1993. In August 1982, John Pascale Sr. initiated a lawsuit seeking to set aside these transfers. In October 1985, a New Jersey Court (Chancery Division) upheld the transfer of the property and Quality Tool and Die Company. In March 1987, a New Jersey Appellate Court reversed the 1985 decision and set aside the transfers. In October 1988, the New Jersey Supreme Court reversed the Appellate Court Decision and reinstated the judgement of the Chancery Division. Quality Tool and Die Company ceased conducting business at the premises in approximately 1988.

In 1990, David Pascale filed an application for cessation of operation for Quality Tool and Die Company under the New Jersey Environmental Cleanup and Responsibility Act (ECRA) statute. In his initial notice to the New Jersey Department of Environmental Protection (NJDEP), including discussions of previous operational history on the Site, Mr. Pascale certified to the NJDEP that the only area of concern was an underground heating oil tank, which he had removed prior to his ECRA application. In follow-up correspondence with the NJDEP, David Pascale indicated that "[b]oth GE and Cooper-Hewitt Electric Company manufactured light bulbs [at the Site] as a joint venture." In his ECRA application, David Pascale of Quality Tool and Die Company did not identify previous manufacturing of mercury vapor lamps at the Site. After removing soil which contained petroleum hydrocarbons and placing an asphalt cap over the parking lot, and recording a Declaration of Environmental Restriction and Grant of Easement (DERGE) with the County Clerk's office, David Pascale received an approval of his ECRA "negative declaration" by NJDEP on February 8, 1993. The DERGE restricted future disturbance of the asphalt cap. NJDEP rescinded the negative declaration approval in December 1996. This rescission was based upon the fact that the application did not accurately depict the full type, extent, and magnitude of the contamination, both inside the buildings on the premises and outside on the land around the buildings. The rescission indicates that since all areas of concern at the Quality Tool and Die Company were not identified, a cleanup plan necessary to address mercury contamination at the industrial establishment was not developed and implemented.

David Pascale sold the Site in 1993 to the GSAP. The GSAP is a partnership formed primarily by the dissociated residents of the Site. The partnership was formed to hold title to the Site during the time from

its purchase of the Site in August 1993 until final certificates of occupancy were issued for each unit, allowing the individual unit owners to "purchase" their units from the GSAP (in essence "purchasing" the units from themselves). The GSAP intended to subdivide and renovate the property into 16 units in the industrial building and one unit in the adjacent townhouse. During subsequent subdivision and renovation activities at the Site, members of the GSAP noticed small amounts of a silvery substance which appeared to be mercury in the building on two occasions in 1993 and one in 1994. These observations were attributed to demolition of air handler units and associated thermostat or switching controls, and to a jar of mercury that was broken and spilled in one of the units.

After renovation and the construction of residential/artist studios, residents began moving into the building under temporary Certificates of Occupancy (COs) in mid to late 1994. Title was transferred for the common areas in the buildings from the GSAP to the Grand Street Artists Condominium Association ("Condo Association") in October 1994. From March to December 1995, title was transferred from the GSAP to 15 of the 17 individual unit owners which had obtained final COs from the City of Hoboken. Two of the 17 planned units were never granted Final COs. Two of the units which had been granted final COs were sold to other parties after transfer from the GSAP. One unit owner lived in the space and also rented out space in the unit to four individuals.

During renovation of 5th floor Unit 5D in January 1995, puddles of mercury were observed in the subflooring. The prospective future unit owner unsuccessfully attempted a cleanup by collecting and consolidating the puddles of mercury into vials and by removing mercury contaminated flooring. Mercury contamination continued to be problematic in that unit after the cleanup attempt.

As a result of the contamination in this unit, the Condo Association hired a private contractor, ENPAK, in March '95, to conduct a mercury vapor survey of the building. In a March 28, 1995 draft report prepared by ENPAK, mercury vapor concentrations ranging from 5 micrograms per cubic meter (Ig/m^3) (5th floor) to 888 Ig/m^3 (see description at Chapter 2.1.1., below) were detected in six units on the 3rd, 4th and 5th floors. ENPAK recommended that a mercury cleanup be performed in the building.

On August 25, 1995, a private contractor, Environmental Waste Management Associates, Inc. (EWMA), was hired to perform a mercury abatement on the 5th floor. Abatement activities occurred in September and October and involved removal of the entire top layer of flooring in Unit 5D as well as a small area in Unit 5A. To suppress the mercury vapor generated by this activity, and to restrict the migration of free mercury during the abatement, a mercury amalgamating powder was applied over the entire surface area and then vacuumed. The vacuumed powder was then consolidated into a 55-gallon drum. This 55-gallon drum along with the contaminated flooring generated during both this abatement as well as the contaminated flooring generated during the previous abatement attempted by the owner were removed from the building and placed into a small cargo trailer located in the parking lot and then transferred to a shed which remains in the parking lot. During this abatement, mercury was found to be extensively present in Units 5A and 5D as well as in common hallways shared between these two units. Since the extent of mercury contamination was found to be much greater than anticipated, as was the cost of remediation, the abatement was discontinued.

The Hudson Regional Health Commission (HRHC) became aware of the mercury problem and visited the Site in September 1995 to inspect the remediation activities. The HRHC observed mercury contamination on the fifth floor of the building.

Immediately after the October abatement activities in Unit 5D, on November 2, 1995, a resident of Unit 4A reported seeing drops of mercury on the oven and kitchen countertops in that unit. On November 3, 1995, EWMA returned to the Site, cleaned the kitchen area, and sealed a crack that ran the length of the ceiling along the brick wall in Unit 4A.

On November 8, 1995, a mercury vapor survey was performed in units 3A, 4A, and common areas of the building, by Detail Associates, at the request of the occupants of 3A and 4A. In a report prepared subsequent to that survey, mercury vapor levels detected in the breathing zone air in 3A ranged from 4 to 9 Ig/m^3 , and from 24 to 77 Ig/m^3 at wall and floor openings. Mercury vapor levels in the breathing zone air in 4A ranged from 7 to 21 Ig/m^3 and from 14 to 26 Ig/m^3 at wall and floor openings. Common areas on the 3rd and 4th floor yielded mercury vapor concentrations from 12 to 18 Ig/m^3 . Mercury vapors were detected at all interior

sampling points 2. After the investigation, Detail recommended that investigated areas "...be vacated until such time that the exact source and extend (sic) of contamination is identified and full remediation and cleanup procedure [sic] implemented."

In late November and early December 1995, five residents provided urine samples to their private physicians for analysis. Results from three of the tests were provided to the Agency for Toxic Substances and Disease Registry (ATSDR) for review in December 1995. Two of these samples had elevated mercury concentrations (36 micrograms per liter (Ig/L) and 65 Ig/L). Both of these elevated samples were from young children.

In November 1995, the Hoboken Health Department (HHD) was notified by one of the residents that a mercury contamination problem existed and the HHD's assistance was requested.

On December 22, 1995, the U.S. Environmental Protection Agency (EPA) received a request from the New Jersey Department of Environmental Protection, to assist the HHD in assessing the extent of elemental mercury contamination at 720 and 722-732 Grand Street.

On December 27, 1995, EPA and its contractor surveyed 15 units, the attached townhouse and common areas on each floor 3 for mercury vapor. A Jerome 431-X Mercury Vapor Analyzer was utilized in obtaining concentration values of mercury vapor. Air concentrations of mercury were measured at several locations in each unit at heights of six inches and five feet above the floor. Detectable levels of mercury vapor were encountered in nine condominium units. Detectable concentrations of mercury vapor were not found in the hallways. EPA personnel observed two separate puddles of mercury on a tar layer in the subflooring of a fifth floor unit, 5D.

In addition to the environmental testing performed on December 27, 1995, representatives from the HHD and the Hudson Regional Health Commission (HRHC) collected urine samples from 31 persons (28 owner/occupants, one owner/non-occupant, and two workers), which were analyzed for total mercury. Mercury concentrations ranged from 3 to 102 Ig/L, and 20 of the 31 samples had mercury concentrations equal to or greater than 20 Ig/L. Additionally, 5 of the 6 children monitored exhibited mercury levels in excess of 20 Ig/L in their urine. ATSDR later stated in a Public Health Advisory that adverse health effects are associated with mercury levels greater than 20 Ig/L.

On January 2, 1996, EPA received a request from the NJDEP to conduct an emergency removal action under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 ("CERCLA" or " Superfund"), as amended, 42 U.S.C. § 9601 et seq., and to continue assisting the HHD in assessing the extent of mercury contamination at 720 and 722-732 Grand Street.

On January 3, 1996, ATSDR issued a Public Health Consultation which concluded that an imminent health hazard existed at the Site, based upon the elevated levels of mercury in the urine of the residents, presence of puddles of elemental mercury in the floors, and elevated levels of mercury vapor in the air. ATSDR recommended that the residents be dissociated from further exposure to mercury in the buildings.

On January 4, 1996, the HHD, based on advice from the New Jersey Department of Health (NJDOH), issued an "Order of Health Officer", which ordered the residents to vacate the buildings by January 9, 1996. Due to a severe snowstorm, the deadline of January 9, 1996 was extended two days. All occupants had vacated the buildings by 4:00 PM on January 11, 1996.

On January 4, 1996, EPA authorized a Superfund removal action at the Site. The removal action included providing temporary relocation for residents of the Grand Street Site, providing for security and maintenance of the buildings, continued sampling and screening of the buildings as well as the personal possessions of the residents, and transportation, treatment, and/or disposal of contaminated materials generated during previous remediation efforts.

On January 22, 1996, ATSDR issued a Public Health Advisory (PHA) that proclaimed "an imminent public health hazard is posed to prior occupants of [720 and] 722[-732] Grand Street from past, current and potential future exposures via inhalation, direct dermal contact and possible ingestion of metallic (elemental) mercury and mercury vapor." In addition, the PHA states "the potential exists for mercury-contaminated possessions

to be taken out of the building to continue to expose residents of [720 and] 722[-732] Grand Street, contaminate other areas and expose other members of the public."

EPA proposed the Grand Street Mercury Site for inclusion on its National Priorities List (NPL) on December 23, 1996 (61 FR 67678). The NPL is a list of priority releases for long-term remedial evaluation and response under EPA's Superfund program. Only those Superfund sites on the NPL are eligible for fund-financed remedial action. The Site was declared Final on the NPL on September 25, 1997 (62 FR 50441).

In order to assist in developing and analyzing remedial alternatives for the Site, EPA developed an evaluation of means of remediating mercury in the buildings at the Site. Accordingly, a "Technical Engineering Evaluation for Mercury Remediation at the Grand Street Site" was completed on March 11, 1997. In addition, in April 1997, EPA completed a Baseline Risk Assessment for the Site. A draft Focussed Feasibility Study (FFS) that analyzed remedial alternatives for the Site was completed in July 1997.

From February to November 1996, Information Request Letters were sent to parties which EPA believed to have information regarding the Site. In August 1996, General Notice Letters, issued pursuant to Section 104(e) of CERCLA were sent to several potentially responsible parties (PRPs), including past owner/operators of the Site, informing them of their potential liability and affording them the opportunity to take over the removal action at the Site. The PRPs declined to take over the removal action.

In February 1997, EPA issued an Unilateral Administrative Order (UAO) to General Electric and John J. Pascale, Sr., to take over temporary relocation, site security, building maintenance, and other activities from EPA. EPA modified the UAO in May 1997 to remove temporary relocation activities. In May 1997, the PRPs notified EPA of their intent to comply with the UAO. EPA approved the PRP's Site Work Plan, required by the UAO, on July 15, 1997. The PRPs initiated work at the Site on August 4, 1997. Temporary relocation of prior building residents is ongoing and continues to be administered by EPA. EPA plans to continue to perform periodic monitoring of mercury at the Site.

HIGHLIGHTS OF COMMUNITY PARTICIPATION

The FFS report and the Proposed Plan for the Site were released to the public for comment on July 9, 1997. These documents were made available to the public in the following information repositories: the EPA Region 2 Office, 290 Broadway, New York, NY, and the City of Hoboken Public Library, 500 Park Avenue, Hoboken, NJ.

The notice of availability for the above-referenced documents was published in the Jersey Journal on July 9 and 12, 1997, and the Hoboken Reporter on July 13, 1997. The Proposed Plan was mailed to approximately 150 individuals on a mailing list maintained by EPA for the Site on July 8, 1997. The public comment period on these documents was scheduled to be held from July 9, 1997 through August 7, 1997. However, at the request of PRPs, the public comment period was extended through September 8, 1997. A notice extending the comment period was published in the Jersey Journal on August 2, 1997, and the Hoboken Reporter on August 3, 1997, and the notice was mailed to individuals on the mailing list on August 4, 1997. On July 16, 1997, EPA conducted a public meeting at the Hoboken High School. At this meeting, EPA representatives informed local officials and members of the audience about the Superfund process, discussed the findings of the FFS and Proposed Plan, received comments from interested citizens, and responded to questions regarding the remedial alternatives under consideration. Responses to the comments received at the public meeting, and in writing during the public comment period, are included in the Responsiveness Summary which is included in this Record of Decision (ROD) as Attachment 3.

This decision document presents the selected remedial action for the Site. This decision was chosen in accordance with CERCLA and, to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This decision was based on the Administrative Record for the Site.

SCOPE AND ROLE OF RESPONSE ACTION

This ROD selects permanent relocation of the former residents of the Site. In addition, it addresses the imminent threat to human health and the environment posed by mercury contamination in the two buildings and in soil at the Site by requiring demolition of the buildings and excavation of off-site disposal of the soil

at the Site. This ROD also requires an investigation of groundwater underlying the Site and soils at adjacent properties.

SUMMARY OF SITE CHARACTERISTICS

EPA conducted investigations intermittently from December 1995 to August 1997. The purpose of these investigations was to determine the nature, range and extent of contamination at the Site and included the following activities, confirmatory sampling of visible elemental mercury in flooring in the building; air sampling for mercury vapors within the buildings at the Site and inside two buildings on properties adjacent to the Site; sampling for mercury contamination in wood, brick, tar and sediments in the buildings at the Site; sampling for mercury contamination in soil under the parking area at the Site and in the back yard of a property adjacent to the Site.

Detailed results of these investigations can be found in the Chapter 2 of the FFS report, which was completed in July 1997. These results, summarized in the following sections, identify the principal threats (areas of significant contamination) posed by the Site, which are addressed in this ROD.

Buildings

Air

Using a combination of field analytical and laboratory analytical techniques, approximately 2,000 air samples have been collected to monitor interior air space within the buildings at the Site for mercury vapors. Mercury vapors were detected in approximately 70 percent of these samples. Mercury vapors were detected in all areas within the buildings at varying concentrations.

Mercury vapor concentrations have been observed to be temperature dependent, rising proportionally to temperature increases. Mercury vapor concentrations from samples taken at heights representative of occupant breathing zones (from two to five feet) have been detected as high as 301 micrograms of mercury per cubic meter of air (301 $\mu\text{g}/\text{m}^3$). Mercury vapor concentrations from samples taken in cracks and holes in flooring have been observed to be high enough to exceed the upper detection limit of 0.999 $\mu\text{g}/\text{m}^3$ for field instrumentation on numerous occasions. Tables 1A and 1B present the results of two detailed air sampling events conducted by EPA.

Interior air was also monitored at two properties adjacent to the Site using field analytical techniques. Mercury vapors were not detected at levels of concern at either location.

Flooring

Dense, silvery liquids observed in the flooring in the building were collected and confirmed by laboratory analyses to be elemental mercury. Liquid elemental mercury has been observed in the flooring of 13 of the 16 units in the building.

Sediments

Sediments in floor drains and sump pits were collected and analyzed for mercury contamination. Results of these analyses identified mercury concentrations ranging from 36 to 2,540 milligrams per kilogram (mg/kg). Table 2 presents the results of sediment sampling conducted by EPA.

Wooden Structure

Wooden structural components of the building were field screened with an X-Ray Fluorescence (XRF) analyzer, which identified mercury contamination on screened surfaces up to 6,300 mg/kg.

Brick

Brick components on the fourth and fifth floors of the building were field screened with an XRF analyzer,

which identified mercury contamination on all surfaces screened. Samples of brick were collected and all were laboratory confirmed to be mercury-contaminated, at concentrations ranging from 40 to 9,110 mg/kg. Table 4 presents the results of brick sampling conducted by EPA.

Asbestos

Asbestos has been identified as being likely present in two media at the Site: in tar paper between finished flooring and sub-flooring, and in roofing materials.

Soil

Fifty-two soil samples were collected from underneath the asphalt-capped parking lot at the Site which were analyzed for the presence of mercury. Mercury concentrations ranged from 0.77 to 290 mg/kg. Table 5 presents the results of discrete on-site soil sampling conducted by EPA.

Twenty-one soil samples were collected from the backyard and two samples were collected from the basement of a property adjacent to the Site which were analyzed for mercury to assess potential site-attributable impacts. Mercury was not observed above the lower detection limit of instrumentation in one sample from the basement. All other analyses detected mercury concentrations ranging from 0.06 mg/kg to 39 mg/kg which, as will be explained below in the Summary of Site Risks section, are levels which do not present a risk to human health. Table 6 presents the results of discrete off-site soil sampling conducted by EPA.

Historic Preservation Analysis

The nature of operations and type of building at the Site indicate that the Grand Street Mercury Site may be eligible for inclusion in the National Register of Historic Places (NRHP). During Remedial Design, a Stage I Cultural Resources Survey will be conducted which will assess the Site's eligibility. Should the Site be eligible for inclusion, EPA would be required to conduct some recordation prior to the demolition of the building in accordance with the National Historic Preservation Act.

SUMMARY OF SITE RISKS

A Baseline Human Health Risk Assessment was developed as part of the FFS to evaluate the potential current and future impacts of mercury vapors in the building and mercury contamination in soil on human health and the environment, assuming the Site is not remediated.

Baseline Human Health Risk Assessment

To perform a Baseline Human Health Risk Assessment, the reasonable maximum human exposure is evaluated. The following four-step process was used by EPA to conduct the Baseline Human Health Risk Assessment:

1. Hazard Identification, Tables 7A and 7B - identifies the contaminants of concern at the Site based on their toxicity, frequency of occurrence, and concentration.
2. Exposure Assessment, Table 8 - estimates the reasonable maximum concentration of contaminants to which people may be exposed by considering the frequency and duration of these exposures, and the potential pathways (for example, inhalation of chemical vapors).
3. Toxicity Assessment, Table 9 - determines the toxic effects of exposure to the contaminants,
4. Risk Characterization, Tables 10A and 10B - provides a quantitative assessment of the overall current and future risk to people, plants and wildlife from Site contaminants, based on the exposure and toxicity information, including a discussion of uncertainties.

The baseline risk assessment began with the determination that mercury was the primary contaminant of concern which is representative of Site risks (see Table 8). EPA monitoring of the buildings and soil at the Site identified this contaminant as potentially available to human receptors in environmental media, including

indoor air and outdoor soil under a parking lot. The baseline risk assessment then evaluated the health effects which could result from exposure to contamination as a result of various exposure pathways including:

- 1) inhalation of elemental mercury vapor in indoor air by adult and child residents;
- 2) inhalation of elemental mercury vapor in indoor air by adult workers;
- 3) ingestion of elemental mercury in outdoor soil on-site by child residents;
- 4) ingestion of elemental mercury in outdoor soil on-site by adult workers; and
- 5) ingestion of elemental mercury in outdoor soil off-site by child residents.

In the exposure assessment, the potential for human exposure to the chemicals of concern, in terms of the type, magnitude, frequency, and duration of exposure, is estimated. The assessment is made for potentially exposed populations at or near the property considering both the current situation and potential future conditions. Since residential activities have taken place on the property most recently, and because the area where the Site is located is zoned R-2 Residence District (Stabilization), and residential development is anticipated by the City of Hoboken, residential exposure scenarios are regarded as the most likely scenarios that will continue in the future. Because at the time the Risk Assessment was developed, EPA was not entirely certain that zoning considerations would preclude commercial use of the property, EPA evaluated future use exposure scenarios for workers. Further, EPA's assessment of the off-site child exposure scenario was considered to be a "current" use scenario which would also likely continue in the future. Table 8 presents a listing of the exposure pathways evaluated for the Site.

Mercury is not known nor suspected of causing cancer in animals and/or humans. Noncancer health effects of mercury exposure include tremors in the fingers, eyelids, lips, hands and arms; depression; irritability; exaggerated response to stimuli; excessive shyness; insomnia; emotional instability; and death. Noncarcinogenic risks were assessed using a hazard quotient (HQ) approach, based on a comparison of expected contaminant intakes and safe levels of intake, expressed as Reference Doses (RfDs) or Reference Concentrations (RfCs). The inhalation (RfC) and oral (RfD) toxicity factors for elemental mercury are presented in Table 9. RfCs, which are expressed in units of micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) are converted to units of milligrams per kilogram per day ($\text{mg}/\text{kg}\text{-day}$) by using standard assumptions about normal human inhalation rate and body weight. RfCs are estimates of day exposure levels for humans which are thought to be safe over a lifetime (including sensitive individuals). Estimated intakes of chemicals from environmental media (chronic daily intake or CDI) which are derived from the exposure assessment (e.g., the amount of a chemical inhaled in indoor air) are compared to the RfC to derive the HQ (i.e., the HQ equals the chronic daily intake divided by the RfC). Expressed mathematically, the equation reads:

$$\text{HQ} = \text{CDI}/\text{RfC}$$

An HQ greater than 1.0 indicates that the potential exists for noncarcinogenic health effects to occur as a result of site-related exposures. An HQ of one or less indicates that the exposed population is not likely to develop adverse health effects, including sensitive individuals.

An HQ of 510 was calculated for child residents exposed to mercury vapors at the Site, which suggests a significant potential for future development of adverse noncancer health effects. An HQ of 110 for adult residents and 100 for adult workers exposed to mercury vapors at the Site also suggest significant potential for future development of adverse noncancer health effects. The HQs calculated for all exposure pathways are presented in Table 10A.

The Hazard Quotient for ingestion of mercury-contaminated soil shows a potential for future development of adverse noncancer health effects to children living at the Site (2.1) in the event the asphalt cap degrades, and an unlikely potential for future development of adverse noncancer health effects to adult workers (0.08) at the Site and to children (0.09) who live adjacent to the Site (off-site child residents). Although the potential for adverse effects to future child residents at the Site is marginal, there is some uncertainty in these estimates since many of EPA's soil samples were composites of surficial soils and soils at depth. This may have resulted in an underestimation of the potential for adverse health effects for future child residents. As will be discussed below, additional discrete (no more than 6 inches of soil depth in one sample) soil sampling is warranted.

A preliminary remediation goal (PRG) for mercury vapors in building air was calculated for child residents of the Site to be 0.09 Ig/m³, for adult residents of the Site to be 0.42 Ig/m³, and for adult workers at the Site to be 0.44 Ig/m³, which are levels determined by EPA to be protective of public health. The PRG for mercury in soil at the Grand Street Site was determined to be 23 mg/kg, which was calculated by EPA based on soil ingestion by children. A qualitative assessment indicates that a soil PRG of 23 mg/kg is protective of public health for both ingestion and inhalation exposures (see Chapter 3 of the FFS for a detailed discussion of these values).

The Baseline Human Health Risk Assessment prepared by EPA corroborates with ATSDR's determination that Site conditions pose a long-term health risk. Relocation is warranted to protect these individuals from future exposure.

In summary, actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the selected response action in this ROD, may present an imminent and substantial endangerment to public health, welfare, or the environment.

Uncertainties

The procedures and estimates used to assess risks, as in all such assessments, are subject to a wide variety of uncertainties. In general, the main sources of uncertainty include:

- ! environmental chemistry sampling and analysis
- ! environmental parameter measurement
- ! fate and transport modeling
- ! exposure parameter estimation
- ! toxicological data

Uncertainty in environmental sampling arises in part from the potentially uneven distribution of chemicals in the media sampled. Environmental chemistry-analysis error can stem from several sources, including the errors inherent in the analytical, methods and characteristics of the matrix being sampled.

Uncertainties in the exposure assessment are related to estimates of how often an individual would actually come in contact with the chemicals of concern, the period of time over which such exposure would occur, and in the models used to estimate the concentrations of the chemicals of concern at the point of exposure.

Uncertainties in toxicological data occur in extrapolating both from animals to humans and from high to low doses of exposure, as well as from the difficulties in assessing the toxicity of a mixture of chemicals. These uncertainties are addressed by making conservative assumptions concerning risk and exposure parameters throughout the assessment. As a result, the Risk Assessment provides upper-bound estimates of the risks to populations, and is highly unlikely to underestimate actual risks related to the Site.

Additional site-specific uncertainties include a potential underestimate of risk from soil exposure due to a dilutional compositing effect, where surface and subsurface soils are mixed. Mercury concentrations in samples composited may not be entirely reflective of the soils with contact most likely occurs (e.g., surficial soils). Furthermore, exposure to mercury vapor released from mercury-contaminated soils, albeit it minute, has not been quantitatively evaluated.

REMEDIAL ACTION OBJECTIVES

Remedial Action Objectives (RAOs) are specific goals to protect human health and the environment. These objectives are based on available information and standards such as applicable or relevant and appropriate requirements (ARARs) and the calculated risk-based levels established in the Baseline Human Health Risk Assessment (see Chapter 3 of the FFS).

Based upon available information and ARARs, RAOs for mercury in soils and air are designed, in part, to eliminate the health threat posed by ingestion and inhalation of mercury. The following RAOs were established for the Site:

- ! minimize the immediate and future threat of release to the environment by a fire in the building, or by any other means;
- ! ensure immediate and long-term health protection of future child residents by preventing inhalation of mercury vapors above the risk-based standard of 0.09 Ig/m3 from the Baseline Risk Assessment, in the building;
- ! ensure immediate and long-term health protection of future industrial/commercial workers in the building by preventing inhalation of mercury vapors above the risk-based standard of 0.44 Ig/m3 from the Baseline Risk Assessment, in the building;
- ! ensure immediate and long-term human health protection by preventing ingestion of soils with average mercury concentrations above the residential risk-based standard of 23 mg/kg from the Baseline Risk Assessment; and

An additional objective at the Grand Street Mercury Site is to ensure that remedial actions are undertaken with due regard for the historic and cultural resource protections that apply under federal and State historic preservation laws and regulations.

Land Use Considerations

EPA considers, for all remedial actions it undertakes, the planned ultimate end use of the property being cleaned up. In the case of the Grand Street Mercury Site, EPA has reviewed overall planning and zoning trends in Hoboken, has interviewed the Hoboken Business Administration Office, and has conducted numerous community interviews to determine trends for ultimate end use in Hoboken.

EPA's review revealed that Hoboken has been undergoing significant changes in the prior two decades, changing from a primarily commercial and industrial area, to one of many single-family and multiple-family dwellings and apartment complexes. City government has permitted a number of commercial to residential conversions in the area of the Site. The present zoning for the Site is R-2 Residence District (Stabilization), with a bulk variance which permits the artists to work in the building among other things. In addition, City government has indicated its desire to promote this trend to residential property conversion and development within Hoboken.

In a resolution of May 21, 1997, the Mayor and City Council of Hoboken called on EPA to demolish or remove the building and restore the land at the Site. Additionally, comments from City officials throughout EPA's involvement at the Site support future residential use of the Site.

As a result, EPA believes that the most likely future use for the properties at 720-730 Grand Street is residential. Accordingly, three of the cleanup alternatives developed for the Site are consistent with residential future use. However, EPA also evaluated one alternative which assumes a commercial/industrial future use.

DESCRIPTION OF REMEDIAL ALTERNATIVES

CERCLA requires that each selected site remedy be protective of human health and the environment, be cost effective, comply with other statutory laws, and utilize permanent solutions and alternative treatment technologies and resource recovery alternatives to the maximum extent practicable. In addition, the statute includes a preference for the use of treatment as a principal element for the reduction of toxicity, mobility, or volume of the hazardous substances.

The FFS report evaluated in detail, including the No Action alternative EPA is required to analyze by CERCLA and the NCP, five remedial alternatives to address the following elements of concern at the Site: residents; contaminated buildings; contaminated soils; and ground water.

The "Construction Time" for each alternative reflects only the estimated time required to design (assumed to be 12 months for Alternatives 2, 3, 4, and 5) and construct or implement the remedy and does not include the

time required to negotiate the performance of the remedy with the potentially responsible party(ies), procure contracts for design and construction, or to obtain permanent access to the Site. No Operation and Maintenance costs are calculated for Alternatives 1 and 5, as each of these alternatives assumes no monitoring after the work is completed. Detailed cost analyses for the alternatives can be found in Chapter 6 of the FFS. With the exception of the No Action alternative, each alternative calls for mercury collection and recovery wherever practicable, and for off-site disposal of all other non-recoverable site-generated waste at EPA-approved facilities. Asbestos abatement may be necessary if suspected asbestos-containing materials are found to be friable. All work in building interiors will be conducted in such a manner as to ensure for protection of the health of cleanup workers in the buildings and to protect the local community and environment from mercury releases during the remediation.

Each of the five alternatives is described below.

Alternative 1: No Action

Residents	No Action
Building	No Action
Soil	No Action
Ground Water	No Action

ITEM	COST
Building	\$ 0
Maintenance & Relocation	
Total Cost	\$ 0
Time to Implement	0 Months

CERCLA and the NCP require that the "No Action" alternative be considered as a baseline for comparison with other alternatives. The No Action alternative does not include implementation of active remedial measures for on-site mercury contamination. Temporary relocation of prior residents, site security and building maintenance would cease.

This alternative would result in contaminants remaining on the Site in air and soil at concentrations above health-based levels. Therefore, under CERCLA, the remedial action would have to be reviewed every five years.

Alternative 2: Remediation of Building for Residential Use/Reoccupation by Building Residents/Soil Remediation

Residents	Temporary Relocation of Residents
Building	Remediation for Residential Use for Reoccupation by Former Residents
Soil	Sampling, Excavation, and Off-Site Disposal
Ground Water	Sampling and Analysis

ITEM	COST
Building Maintenance & Relocation	\$2,300,000
Building Remediation	\$4,368,000
Soil/Ground Water	\$ 138,000
Interior Reconstruction	\$2,975,000
O&M (discounted over 10 years)	+ \$ 41,000
Total Present Worth Cost	= \$9,822,000
Time to Implement	46 Months

This alternative would include the continuation of the temporary relocation program for the prior building residents and remediation of the building for reoccupation by the prior residents. Remediation of the

building would include: conducting an asbestos survey; removing all reusable fixtures; gutting all improvements; vacuuming bulk mercury (e.g., pools of mercury and other sediments found in the flooring) while methodically removing all flooring layers; washing interior surfaces with detergents and then with sulfur solutions which react with the mercury to produce a less toxic form; heating the building interior air to promote evaporation (volatilization) of mercury adsorbed to surfaces; filtering interior air to remove mercury vapors; etching contaminated masonry surfaces; and reconstructing the building's interior to their present conditions. On-site sewers, floor drains, sumps, and sump pits would be cleaned prior to their removal (if necessary), and wastes generated would be collected and containerized on-site. All waste/debris generated would be characterized and disposed of off-site at EPA-approved facilities. Mercury and other scrap would be recovered and recycled wherever practical.

Clearance monitoring of the interior air would be performed monthly for one year after remediation to ensure mercury levels remain below the remedial action objective of 0.09 Ig/m3 of mercury in air in the building. Interior air in the buildings would be monitored annually for mercury vapors for 10 years following successful completion of remediation to ensure that mercury vapor levels remain below EPA risk-based concentrations. Should mercury vapors exceed EPA levels, EPA would consider the remedy to have failed, and subsequently would have to evacuate the building and consider relocation options for the affected parties.

Additional discrete sampling of off-site soil as well as soil under the asphalt parking lot and under the building foundation would be conducted. Soil with average mercury concentrations (at the same depth interval) above 23 mg/kg under the parking lot would be excavated and disposed of off-site at EPA-approved facilities. The excavated areas would be backfilled with clean soil. Groundwater samples would be collected and analyzed to determine the extent to which mercury contamination in soil at the Site has impacted groundwater quality. Identification of groundwater and/or off-site soil contamination may warrant further study by EPA.

If sampling under the foundation indicates that mercury contamination remains under the building in soil or ground water, institutional controls would be put in place on the property to prevent breaching of the foundation and contact with the contamination. The estimated time to implement the remedy includes: 12 months for design of the remedy; 16 months for building remediation, soil sampling and remediation, and groundwater sampling; 6 months for interior reconstruction of the building; and, 12 months of clearance monitoring. If mercury remains under the foundation at concentrations above health-based levels, under CERCLA, the remedial action would have to be reviewed every five years.

Alternative 3: Remediation of Building for Residential Use/Permanent Relocation of Building Residents/Soil Remediation

Residents	Permanent Relocation of Residents
Building	Remediation for Residential Use
Soil	Sampling, Excavation, and Off-Site Disposal
Ground Water	Sampling and Analysis

ITEM	COST
Building Maintenance & Relocation	\$ 10,853,000
Building Remediation	4,488,000
Soil/Ground Water	138,000
O&M (discounted over 10 years)	+ 41,000
Real Estate Value	- 2,423,000
Total Present Worth Cost	= \$ 13,097,000
Time to Implement	40 Months

This alternative would include relocation of the prior building residents into permanent housing. Temporary relocation benefits would continue until permanent relocation is achieved. Permanent relocation would consist of the provision of relocation benefits to owners and residents of the Site, including: compensation for the property to be acquired; moving and related expenses; replacement housing assistance; and relocation advisory services.

The remediation and clearance monitoring of the building for residential use by new residents would be performed as described in Alternative 2, except the building would only be reconstructed to bare interior walls and finished floors. On-site sewers, floor drains, sumps, and sump pits would be cleaned prior to their removal (if necessary), and wastes generated would be collected and containerized on-site. All waste/debris generated would be characterized and disposed of off-site at EPA-approved facilities. Mercury and other scrap would be recovered and recycled wherever practical. Interior air in the buildings would be monitored annually for mercury vapors for 10 years following successful completion of remediation to ensure that mercury vapor levels remain below EPA risk-based concentrations. Should mercury vapors exceed EPA levels, EPA would consider the remedy to have failed, and subsequently would have to evacuate the building and consider relocation options for the affected parties.

Additional discrete sampling of off-site soil as well as of soil under the asphalt parking lot and under the building foundation would be conducted. Soil with average mercury concentrations (at the same depth interval) above 23 mg/kg under the parking lot would be excavated and disposed of off-site at EPA-approved facilities. The excavated areas would be backfilled with clean soil. Groundwater samples would be collected and analyzed to determine the extent to which mercury contamination in soil at the Site has impacted groundwater quality. Identification of groundwater and/or off-site soil contamination may warrant further study by EPA. If sampling under the foundation indicates that mercury contamination remains under the building, institutional controls would be put in place on the property to prevent breaching of the foundation and contact with the contamination.

If mercury remains under the foundation at concentrations above health-based levels, under CERCLA, the remedial action would have to be reviewed every five years. The estimated time to implement the remedy includes: 12 months for design of the remedy; 16 months for building remediation, soil sampling and remediation, and groundwater sampling; and, 12 months of clearance monitoring. If EPA conducts the property acquisition and permanent relocation, after successful implementation of the remedy, the property would be sold and monies generated by the sale would offset those incurred to undertake the remedy.

Alternative 4: Remediation of Building for Industrial or Commercial Use/Permanent Relocation of Building Residents/Soil Sampling

Residents	Permanent Relocation of Residents
Building	Remediation for Industrial or Commercial Use
Soil	Sampling (off-site and beneath the foundation)
Ground Water	Sampling and Analysis

ITEM	COST
Building Maintenance & Relocation	\$ 10,853,000
Building Remediation	3,742,000
Soil/Ground Water	6,000
O&M (discounted over 10 years)	+ \$ 14,000
Real Estate Value	- \$ 1,808,000
Total Present Worth Cost	= \$ 12,807,000
Time to Implement	38 Months

This alternative would include temporary and permanent relocation of the prior building residents as described above for Alternative 3. While the remediation would include the same steps as outlined in Alternative 2, the remedial action objective would be 0.44 Ig/m3 of mercury in air in the building, which is appropriate for industrial or commercial uses. This remedial action would include removal of the flooring, vacuuming all elemental mercury and dust encountered between each layer, and washing of the masonry and wooden structural supports with sulfur solutions which react with the mercury to produce a less toxic, less volatile form. On-site sewers, floor drains, sumps, and sump pits would be cleaned prior to their removal (if necessary), and wastes generated would be collected and containerized on-site. All waste/debris generated would be characterized and disposed of off-site at EPA-approved facilities. Mercury and other scrap would be recovered and recycled wherever practical. The building would be reconstructed to bare interior walls and finished floors. Interior air in the buildings would be monitored biennially for mercury vapors for 10 years following successful completion of remediation to ensure that mercury vapor levels remain

below EPA risk-based concentrations. Should mercury vapors exceed EPA levels, EPA would consider the remedy to have failed, and subsequently would have to evacuate the building and consider relocation options for the affected parties.

Additional discrete sampling of off-site soil as well as of soil under the building foundation would be conducted. Groundwater samples would be collected and analyzed to determine the extent to which mercury contamination in soil at the Site has impacted groundwater quality. Identification of groundwater and/or off-site soil contamination may warrant further study by EPA. If sampling under the foundation indicates that mercury contamination remains under the building, institutional controls would be put in place on the property to prevent breaching of the foundation. Institutional controls would also be placed on the property to ensure that the existing asphalt cap is not breached due to the underlying mercury contamination.

Because mercury concentrations in the soil in the parking lot will remain in place above health-based levels, and if mercury remains under the foundation at concentrations above health-based levels, under CERCLA, the remedial action will have to be reviewed every five years. The estimated time to implement the remedy includes: 12 months for design of the remedy; 14 months for building remediation, soil sampling and remediation, and groundwater sampling; and, 12 months of clearance monitoring. If EPA conducts the property acquisition and permanent relocation, after successful implementation of the remedy, the property would be sold and monies generated by the sale would offset those incurred to undertake the remedy.

Alternative 5: Demolition of Building/Permanent Relocation of Building Residents/Soil Remediation

Residents	Permanent Relocation of Residents
Building	Demolition of Building
Soil	Sampling, Excavation, and Off-Site Disposal
Ground Water	Sampling and Analysis

ITEM	COST
Building Maintenance & Relocation	\$ 10,853,000
Building Demolition	4,359,000
Soil/Ground Water	+ \$ 219,000
Real Estate Value	- \$ 1,568,000
Total Present Worth Cost	= \$ 13,863,000
Time to Implement	23 Months

This alternative would include temporary and permanent relocation of the prior building residents as described above for Alternative 3. The building and townhouse would be demolished and debris would be disposed of at EPA-approved facilities. Due to the high concentrations of mercury in the flooring, the flooring would be carefully removed and disposed of off-site prior to the demolition, as described in Alternative 2. On-site sewers, floor drains, sumps, and sump pits would be cleaned prior to their removal (if necessary), and wastes generated would be collected and containerized on-site. All waste/debris generated would be characterized and disposed of off-site at EPA-approved facilities. Mercury and other scrap would be recovered and recycled wherever practical. Based upon an evaluation, the foundation of the building would be removed.

Additional discrete sampling of off-site soil as well as of soil under the asphalt parking lot and under the building foundation would be conducted. Soil with average mercury concentrations (at the same depth interval) above 23 mg/kg under the parking lot and foundation would be excavated and disposed of off-site at EPA-approved facilities. The excavated areas would be backfilled with clean soil. Groundwater samples would be collected and analyzed to determine the extent to which mercury contamination in soil at the Site has impacted groundwater quality. Identification of groundwater and/or off-site soil contamination may warrant further study by EPA. The estimated time to implement the remedy includes: 12 months for design of the remedy and 11 months for building demolition, soil sampling and remediation, and groundwater sampling. If EPA conducts the property acquisition and permanent relocation, after successful implementation of the remedy, the property would be sold and monies generated by the sale would offset those incurred to undertake the remedy.

EVALUATION OF ALTERNATIVES

During the detailed evaluation of remedial alternatives, each alternative is assessed against nine evaluation criteria, including, overall 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 through treatment; short-term effectiveness; implementability; cost; and state and community acceptance.

The nine evaluation criteria are described below:

- ! Overall protection of human health and the environment addresses whether or not a remedy provides adequate protection and describes how risks posed through each pathway are eliminated, reduced, or controlled through treatment, engineering controls, or institutional controls. This is the primary requirement that all CERCLA remedial actions must meet.
- ! 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 requirements of other federal and state environmental statutes and requirements or provide grounds for invoking a waiver. This also is a statutory requirement under CERCLA for all remedial actions.
- ! 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.
- ! Reduction of toxicity, mobility, or volume through treatment is the anticipated performance of the treatment technologies a remedy may employ.
- ! Short-term effectiveness addresses the period of time needed to achieve protection from any adverse impacts on human health and the environment that may be posed during the construction and implementation period until cleanup goals are achieved.
- ! Implementability is the technical and administrative feasibility of a remedy, including the availability of materials and services needed to implement a particular option.
- ! Cost includes estimated capital and operation and maintenance costs, and net present worth costs.
- ! State acceptance indicates whether, based on its review of the RI/FS reports and Proposed Plan, the state concurs, opposes, or has no comment on the preferred alternative.
- ! Community acceptance is assessed in the Record of Decision following a review of the public comments received on the Proposed Plan.

The following section provides a comparative analysis which evaluates the relative performance of all alternatives in relation to each evaluation criterion noted above. This comparative analysis identifies advantages and disadvantages of each alternative so that trade-offs between the alternatives can be determined.

Overall Protection of Human Health and the Environment

An air-dispersion model was used by EPA immediately after determining the extent of mercury contamination at the Site which showed that under a "worst-case" scenario, a fire in the building could result in high levels of mercury being released into the atmosphere. Therefore, in the short-term, in order to minimize the potential risk of a fire at the Site and exposure to airborne mercury, EPA has improved the sprinkler system and connected the building's electronic fire alarm directly to a central fire station. The electronic fire alarm is tested frequently. While these actions minimize the potential release of mercury by minimizing the risk of fire, they do not preclude the possibility of fire and, therefore, are not fully protective of human health and the environment. EPA is also concerned that personal possessions of the dissociated residents might have been contaminated, and that the removal of these items might have contaminated areas off-site.

EPA therefore instituted measures to monitor material removed from the building to ensure that mercury contamination spread is minimized

Mercury contamination at the Site continues to pose a potential risk to the health of human building residents through two primary pathways in addition to the fire scenario: inhalation of mercury in air in the existing building and ingestion of mercury-contaminated soil. EPA requires that each cleanup alternative eliminate, reduce, or control the risks posed by these, two pathways.

Alternative 1, No Action, would not be protective of human health and the environment because the building would remain in its current condition. Risks of exposure to mercury vapors due to fire or inhalation of interior air would remain. Reoccupation of the building would once again threaten the health of building residents by exposure to mercury vapors in air at concentrations above risk-based levels, which is unacceptable. Alternative 1, No Action, has been eliminated from consideration and will not be discussed further because it is not protective of human health and the environment.

While the building is being cleaned up, Alternatives 2, 3, and 4 would eliminate the risk to former residents by dissociating them from the Site (temporarily in the case of Alternative 2 and permanently in the cases of Alternatives 3 and 4), thus eliminating the inhalation pathway. After building remediation is complete, Alternatives 2, 3, and 4, provided they are successfully implemented (see discussion of long-term effectiveness below), would reduce the risks from exposure to mercury in the air in the building. However, there is considerable uncertainty whether these alternatives can meet this criterion over the long term. After soil excavation is complete, Alternatives 2, and 3 would reduce the future risk associated with children potentially ingesting mercury-contaminated soil in the parking lot area. For Alternative 4 the future risk to on-site workers would be restricted by the continuation of the deed restriction, which is currently in place for petroleum hydrocarbon soils. However, this deed restriction would need to be modified for the mercury contamination. Any risks due to contamination remaining under the foundation would be restricted by institutional controls.

Because Alternatives 2, 3, 4, and 5 would each expose workers to mercury vapors, continuous air monitoring would be performed to ensure that all work occurred in a safe environment. Should mercury vapor levels exceed health-based standards, measures would be taken to reduce the levels and/or provide protective equipment to the workers. Additionally, because all waste/debris and contaminated soils generated under Alternatives 2, 3, 4, and 5 would be disposed of at EPA-approved facilities, future contact with that material would be controlled.

Alternative 5 meets this criterion since it would eliminate the risk to former residents by dissociating them from the Site permanently, thus eliminating the inhalation pathway and would eliminate all future risks since demolition would eliminate the air exposure pathway and the risk of fire and release to the surrounding community. After soil excavation is complete, Alternative 5 would substantially reduce the future risk associated with ingesting mercury-contaminated soil at the Site.

Compliance with ARARs

Actions taken at any Superfund site must meet all applicable or relevant and appropriate requirements of federal and state law or provide grounds for invoking a waiver of these requirements. Alternatives 2, 3, 4, and 5 would comply with ARARs. The major ARARs included in Table 11 and are briefly described below.

The Resource Conservation and Recovery Act (RCRA) is a federal law that mandates procedures for treating, transporting, storing, and disposing of hazardous substances. All portions of RCRA which are applicable or relevant and appropriate to the proposed remedy for the Site would be met by the alternatives. Construction debris would be generated at the Site during building remediation or demolition and all or part of that construction debris may be a hazardous waste as defined by RCRA. As a hazardous waste, construction debris may be subject to the Land Disposal Restrictions under RCRA. Wastes generated would be characterized (if applicable) and disposed of in EPA-approved facilities.

The Clean Air Act is a federal law which sets national standards and regulations for controlling air pollution. Removal of interior components of the building may release liquid elemental mercury, which may,

in turn, volatilize and constitute a point-source emission under the Clean Air Act. The Clean Air Act also includes standards for building demolition and renovation, which require the removal of all friable asbestos prior to demolition. All of the alternatives would be designed to comply with the requirements of the Clean Air Act.

The Site history gives an indication that the Site may have some historic significance. In compliance with the National Historic Preservation Act, a Stage IA Cultural Resources Survey would be conducted.

Additionally, though not an ARAR because it is not an environmental law, the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, which provides regulations and guidance for the federal government in conducting relocation activities where property is acquired, would have bearing on Alternatives 3, 4, and 5, which involve permanent relocation. The Act provides for uniform and equitable treatment of persons displaced from their homes by federal programs.

Long-Term Effectiveness and Permanence

This criterion reflects the ability of each alternative to meet remedial action objectives in the future and also reflects the degree of certainty that the alternative will prove successful. The analysis of how each alternative meets this criterion is especially critical for the Grand Street Mercury Site since four of the five alternatives evaluated would result in preservation of the building structure, meaning that future occupants could be exposed to residual contamination.

Alternative 5, since it includes demolition and off-site disposal of the building and removal of contaminated soil, provides the highest degree of certainty that the remediation will be successful. The risks to future residents or workers being exposed to any residual mercury contamination in the building and soil would be substantially reduced since all mercury contamination above health-based levels would be removed.

Alternatives 2 and 3 would provide a much lower degree of certainty that the alternative will prove successful after implementation as it is unknown whether residual mercury contamination in the building structure could result in levels above the cleanup objective of 0.09 Ig/m³. This means that Alternative 2 could result in former residents remaining in temporary relocation for up to four years with no assurance that the building would be inhabitable at the end of that time. Further, mercury contamination, though presumed to be primarily concentrated in flooring materials, has been detected in all areas and building components of the Site, including flooring, brick, wooden support materials, roofing materials, interior soil/sediments and in exterior on- and off-site soils. Since mercury has adhered to minute pore spaces throughout the building structure, there would always be the potential for exposure. Therefore, even if the cleanup objective of 0.09 Ig/m³ were met at the end of the building remediation phase, it would be impossible to ensure without long-term monitoring that there would be no future unacceptable risk associated with residual contamination in the building structure. Additionally, such monitoring would not be practical in a residential building.

Alternative 4 would provide a higher degree of certainty that the alternative will prove successful after implementation since the industrial/commercial cleanup standard is 0.44 Ig/m³. As with Alternatives 2 and 3, it would be impossible to ensure without monitoring that there would be no future unacceptable risk associated with residual contamination in the building structure.

For all of the alternatives, mercury would be recovered and recycled to the extent practicable from all waste streams thereby minimizing the amount of waste and contamination landfilled, and all remaining waste would be characterized and shipped off-site using appropriately licensed transporters for treatment or disposal at an appropriately permitted landfill(s).

Reduction of Toxicity, Mobility or Volume through Treatment

With the exception of Alternative 1, all of the alternatives would meet this criterion to varying degrees. The remediation alternatives (Alternatives 2, 3, and 4) would be most effective at capturing the mercury contamination in the building. This would be done by: vacuuming bulk mercury (e.g., pools of mercury and other sediments found in the flooring) while methodically removing all flooring layers; and, filtering

interior air to remove mercury vapors. Mercury would be recovered and recycled wherever practical.

The demolition alternative (Alternative 5) would include less treatment than Alternatives 2, 3, and 4 because it would not include heating the building and filtering interior air but would capture and recover bulk mercury in the building, thereby minimizing the toxicity, mobility, and volume of mercury contamination at the Site.

All of the alternatives would include recovery of mercury, treatment of applicable waste streams, and disposal of wastes at appropriately permitted off-site facilities to ensure overall reduction of toxicity.

Short-Term Effectiveness

With the exception of Alternative 1, all of the alternatives provide a high degree of short-term effectiveness for the prior residents of the Site since each alternative includes temporary/permanent relocation to immediately dissociate residents from contamination at the Site. The time to demolish the building once design is complete and access is obtained under Alternative 5 is estimated to be 11 months. The time to remediate the building once design is complete and access is obtained for Alternatives 2, 3, and 4 is estimated to be 14 to 16 months, though each of these alternatives would also require at least 12 months of clearance monitoring so that the time to actual reuse of the property is significantly greater than the time it would take to demolish the building.

However, Alternative 5 would likely present a much greater potential short-term impact to the surrounding community than Alternatives 2, 3, and 4. The primary potential health and cross-media impacts associated with Alternative 5 are increased mercury vapor, dust, and noise generation during building demolition. These will be minimized through the use of measures which would be undertaken to ensure that all activities are performed in such a way that vapors, dust, debris, and other materials are not released to the surrounding community. For instance, careful attention will be paid to ensure that workers are fully protected from mercury exposure during the remedial or demolition effort, and that the building is secured and work space maintained under negative pressure to ensure minimization of off-site releases.

EPA recognizes that a significant increase in noise levels due to remediation, demolition, and/or transportation activities may occur under Alternatives 2, 3, 4 and 5. EPA will take precautionary measures to minimize noise levels due to construction activities to the extent practicable, and will design transportation flow patterns to minimize traffic impacts on residential areas. EPA will work with and provide advance notice of remedial activities to the local community.

Implementability

Implementability addresses an analysis of the technical and administrative feasibility of a remedy and the availability of services and materials needed to implement a particular alternative. Alternative 5 affords the highest degree of implementability in that it is technically feasible and would require a minimal amount of administrative coordination to complete. Demolition and excavation services are widely available although considerations for worker safety and maintenance of work space under negative pressure would likely narrow the list of potential contractors. Administratively, Alternative 5 would involve consideration of the National Historic Preservation Act which may require some recordation of the building prior to demolition.

Since Alternative 5 would include demolition of the townhouse, careful attention would have to be paid to ensuring the structural integrity of the adjacent property at 718 Grand Street, as the townhouse is physically adjoined to the adjacent property.

Alternatives 2, 3 and 4 each raise implementability concerns due to uncertainties associated with technical feasibility as well as securing contractors capable of implementing the required remedial technologies. Based on EPA's review of the literature, remediation to the remedial action objectives specified in this document has not been recorded in the past. Further, in the case of Alternatives 2 and 3, the remedial action objective of 0.09 Ig/m³ is very close to the detection limit (0.05 Ig/m³) for the EPA-approved analytical method, potentially adding some uncertainty to the interpretation of analytical results.

Additionally, the prior residents have expressed to EPA that they may be unwilling to move back into the building, even after remediation is successfully completed. Finally, Alternatives 2, 3, and 4 would require close coordination with several entities, including ATSDR, the Hoboken Health Department, the Hudson Regional Health Commission, and the New Jersey Department of Health, in order to get their concurrence on reuse of the building after the conclusion of the remedial effort.

The implementability of Alternative 4 is also problematic in that the City of Hoboken has presently zoned the Site as R-2 Residence District (Stabilization), multifamily residential, with a bulk variance which permit artists to work in the building among other things. In addition, City government has indicated its desire to promote residential property conversion and development within Hoboken, and has voiced objections to a return of the property to commercial/industrial zoning.

Cost

The cost estimates associated with the alternatives are summarized in Table 3. Alternative 2 is the lowest-cost, protective alternative with a present worth cost of \$9.8 million. The next three alternatives are more expensive with present worth costs of \$13.1 million for Alternative 3, \$12.8 million for Alternative 4, and \$13.9 million for Alternative 5. Permanent relocation costs, near \$10 million, account for the majority of the costs for Alternatives 3, 4, and 5.

State Acceptance

EPA has developed this remedial action approach in consultation with NJDEP, which concurs with the selected remedy presented in this Record of Decision. NJDEP concurrence correspondence may be found at Attachment 2.

Community Acceptance

Community acceptance of the preferred remedy was evaluated after the public comment period. Local officials, members of the surrounding community, and the former residents expressed support for the preferred remedy. A more detailed discussion of community comments is presented in the Responsiveness Summary at Attachment 3.

SELECTED REMEDY

After a thorough review and evaluation of the alternatives and public comments, EPA and NJDEP have determined that Alternative 5 achieves the best balance of tradeoffs with respect to the nine criteria. The major components of the selected remedy include: Permanent Relocation of the Building Residents; Demolition of the Building; Soil Sampling, Excavation, and Off-Site Disposal; and Groundwater Sampling and Analysis.

Specifically, the selected remedy will involve permanent relocation of the prior building residents. Temporary relocation benefits will continue until permanent relocation is achieved. Permanent relocation will consist of the provision of relocation benefits to owners and residents of the Site, including: compensation for the property to be acquired; moving and related expenses; replacement housing assistance; and relocation advisory services.

The building and townhouse will be demolished and debris will be disposed of off-site at EPA-approved facilities. Due to the high concentration of mercury in the flooring, the flooring will be methodically removed, as described in Alternative 2, and segregated. On-site sewers, floor drains, sumps, and sump pits will be assessed and cleaned as necessary to remove bulk mercury contamination prior to their removal, and wastes generated will be collected and containerized on-site. All waste/debris generated will be characterized and disposed of off-site at EPA-approved facilities. Mercury and other scrap will be recovered and recycled wherever practical. Based upon an evaluation, the foundation will be removed.

Additional discrete sampling of soil under the asphalt parking lot and under the building foundation will be conducted. Soil with average mercury concentrations (at the same depth interval) above 23 mg/kg under the parking lot and foundation will be excavated and disposed of off-site at EPA-approved facilities. The excavated areas will be backfilled with clean soil to the present level of the parking lot and adjacent

sidewalks. If EPA conducts the property acquisition and permanent relocation, after successful implementation of the remedy, the property will be sold and monies generated by the sale will offset those incurred to undertake the remedy. It is estimated that six soil samples will be collected from under the parking lot and foundation which will be analyzed for all Superfund Target Compounds (organics) and Superfund Target Analytes (metals) and for Total Petroleum Hydrocarbons.

A minimum of two groundwater samples will be collected and analyzed to determine the extent to which mercury contamination in soil at the Site has impacted groundwater quality. Identification of groundwater and/or off-site soil contamination may warrant further study by EPA. A well search may also be conducted to determine groundwater quality in the surrounding area with respect to mercury.

The selected remedy will be protective of human health and the environment because mercury contamination in the buildings will be permanently eliminated by a demolition effort. Demolition will eliminate any uncertainties posed by the remediation alternatives regarding exposure to residual contamination in pore spaces of the building structure.

The selected remedy will achieve ARARs at a comparable cost to the other options involving permanent relocation. The selected remedy will enable EPA to move the former building residents into permanent housing in the shortest time possible. In addition, the selected remedy will allow for future residential use of the property, consistent with current and projected future land use patterns in Hoboken. Therefore, the selected remedy will provide the best balance of trade-offs among alternatives with respect to the evaluation criteria. EPA believes that the selected remedy is protective of human health and the environment, complies with federal and state requirements that are legally applicable or relevant and appropriate to the remedial action, is cost-effective, and utilizes permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent possible.

STATUTORY DETERMINATIONS

The selected remedy is protective of human health and the environment, complies with federal and State requirements that are legally applicable or relevant and appropriate to the remedial action, and is cost-effective. The remedy utilizes permanent solutions and alternative treatment or resource recovery technologies to the maximum extent practicable and satisfies the statutory preference for remedies that employ treatment that reduces toxicity, mobility, or volume as a principal element.

A brief, site-specific description of how the selected remedy complies with the statutory requirements is presented below.

Overall Protection of Human Health and the Environment

The selected remedy addresses the remedial action objectives by reducing the risks of future human exposure to mercury contamination at the Site. The selected remedy will be highly effective at eliminating the risks posed to individuals previously occupying the Site while in temporary relocation. Occupants will continue to be protected from the risk of exposure to mercury vapors while in temporary relocation, which will continue until permanent relocation is completed. Risks to persons at the Site and the local community from exposure to mercury contamination in the buildings and release of mercury vapors due to fire will be effectively eliminated by a demolition effort.

Site soils will be sampled and analyzed to determine the range and extent of contamination under the parking lot and the buildings' foundations. Mercury-contaminated site soils above residential risk-based concentrations will be excavated to ensure human health protection. Soils on properties adjacent to the Site will be monitored for mercury to assess potential site-attributable impacts. Groundwater samples will be collected and analyzed to determine potential impacts of the Site to groundwater quality, especially with respect to mercury contamination. In the event that off-site soil and/or groundwater investigations reveal contamination attributable to the Site, EPA will evaluate the need for further study and/or remedial activities.

Compliance with Applicable or Relevant and Appropriate Requirements

The selected remedy will comply with all federal and State requirements that are applicable or relevant and appropriate (ARARs) to its implementation. A comprehensive ARAR discussion is included in Chapter 4 of the FFS.

Chemical-Specific ARARs

Compliance with chemical-specific ARARs will be achieved by conducting all remedial action activities in accordance with the regulations specified below.

Resource Conservation and Recovery Act (RCRA) Requirements

Certain RCRA regulations at Title 40 Code of Federal Regulations (40 CFR) Sections 260 through 268 will be applicable to the Grand Street Site if demolition debris or excavated soil are determined to be characteristic RCRA hazardous wastes. EPA review of the history of the Site has resulted in a determination that all building-related wastes generated during remediation activities must be tested in accordance with the regulations at 40 CFR § 261.24, which set specific maximum leachable concentrations for 39 constituents, including mercury, as measured using the Toxicity Characteristic Leaching Procedure (U.S. EPA Test Method SW1311, TCLP). These regulations specify a TCLP maximum leachable concentration for mercury of 0.2 mg/l, above which the waste would be deemed RCRA hazardous waste. Soil or debris from remediation or demolition activities that contains mercury in excess of the TCLP limit for mercury (0.2 mg/l) would be considered RCRA hazardous wastes and would be subjected to RCRA generator requirements at 40 CFR § 262, and the Land Disposal Restrictions (LDR) at 40 CFR § 268. Liquid mercury collected and reclaimed is exempt from regulation under RCRA as specified at 40 CFR § 261.2(a)(i).

Federal Drinking Water Standards

Under the Federal Safe Drinking Water Act (SDWA), EPA established regulations to protect the public from contaminants in drinking water, which are listed at 40 C.F.R. Part 141. The elemental mercury in the buildings and mercury contaminated soils could potentially impact local groundwater and surface water. Although there are no current receptors locally and all properties in the area are served by city water, the aquifer is presently designated as a potential source of drinking water. Therefore, these Federal SDWA regulations are considered relevant and appropriate requirements for the Grand Street Site.

New Jersey Drinking Water Regulations (N.J.A.C. 7:10)

Maximum Contaminant Levels (MCLs) for drinking water have been established under the New Jersey Safe Drinking Water Act (NJSA 558:12A-1). The New Jersey MCLs are generally equal to, or more stringent than, SDWA MCLs. Therefore, these State SDWA regulations are considered relevant and appropriate requirements for the Grand Street Site.

Location-Specific ARARs

Compliance with location-specific ARARs will be achieved by conducting all remedial action activities in accordance with the regulations specified below.

Historic and Archaeologic Preservation

The National Historic Preservation Act (16 U.S.C. 470 et seq.) is applicable to those properties included in, or eligible for, the National Register of Historic Places. The buildings at 720 and 722-732 Grand Street were constructed in or around 1910 and therefore may be eligible for inclusion on the National Register of Historic Places. The buildings are not currently registered on either the state or federal level. Because of the possibility of Site eligibility, EPA will conduct a Stage 1A Cultural Resources Survey during Remedial Design.

Protection of Flood Plains

EPA Executive Order 11988, 40 CFR Part 6 Subpart A, and the New Jersey Flood Hazard Control Act (N.J.A.C.

7:13) set standards on the allowable activities for floodways to protect the environment and human health. Such standards will be followed as ARARs for any remediation conducted in a flood plain, or any activity involving alterations of or encroachment upon the waterway. The buildings at 720 and 722-732 Grand Street are located in a flood plain of the Hudson River, so these regulations are ARARs for the Grand Street Site.

Action-Specific ARARs

Compliance with action-specific ARARs will be achieved by conducting all remedial action activities in accordance with the regulations specified below.

RCRA Land Disposal Restrictions

Land disposal restrictions (LDRs), codified at 40 CFR Part 268, prohibit certain wastes from being placed or disposed on the land unless they meet specified Best Demonstrated Available Technology (BDAT) treatment standards. Construction debris will be subject to these restrictions if TCLP maximum leachable mercury concentrations are above 0.2 mg/l. Such waste may require treatment to ensure compliance with LDRs. Once treated, wastes can be disposed of at a RCRA Subtitle D (solid waste) landfill.

RCRA - Off-Site Transportation of Hazardous Waste

Hazardous wastes that are transported off-site must meet transportation regulations set forth in 49 CFR Parts 100, 107, 171-178, the Hazardous Materials Transportation Act (49 U.S.C. 1801-1813), RCRA, and 40 CFR Parts 262 and 263.

RCRA Generator Requirements for Manifesting and Off-Site Waste Transport

RCRA regulations (40 CFR Part 262) require that the generator, for each shipment of waste off-site, prepare a Uniform Hazardous Waste Manifest to accompany appropriately labeled and marked containers of hazardous waste, which must accompany the shipment of waste through transport to the location at which the waste is ultimately treated or disposed. These requirements are applicable to any remedial action involving off-site transport of RCRA hazardous waste. RCRA regulations applicable to facilities which receive and treat, store or dispose of RCRA hazardous waste are presented at 40 CFR Parts 264 and 265.

New Jersey Solid and Hazardous Waste Management Regulations

NJDEP regulations for solid and hazardous waste management (N.J.A.C. 7:26) are similar to federal solid and hazardous waste management regulations, as NJDEP has been delegated the authority to operate a solid and hazardous waste management program by EPA. If the remedial action involves management of hazardous wastes at the Site in the State of New Jersey, it will also require compliance with, at a minimum, the substantive portions of these regulations.

The Clean Air Act (CAA)

The National Emission Standards for Hazardous Air Pollutants (NESHAPs) 40 CFR Part 61 Subpart M, include standards for asbestos abatement and building demolition and renovation which will be applicable to remedial activity at the Grand Street Site.

New Jersey Requirements for Asbestos Remediation

NJDEP requirements for site remediation (N.J.A.C. 7:26E-3.5) of building interiors require that asbestos surveys be conducted to assess the presence and extent of asbestos containing material (ACM). These requirements are applicable to remedial activities performed within the buildings at the Grand Street Site. Additionally, New Jersey Department of Health (NJDOH) requirements (N.J.A.C. 8:60) deal with asbestos licenses and permits. EPA will need only to secure a permit equivalent for remedial activity at the Site.

New Jersey Air Emission Requirements for Mercury Remediation

Remediation or demolition of the buildings will require ventilation and the control of mercury vapors by a pollution control system. The NJDEP Bureau of Air Quality Engineering will require permit equivalents for air emissions during the remediation or demolition activities.

To-Be-Considered Material (TBCs)

The following requirements will be considered by EPA during design and implementation of the Remedy, and will be complied with to the extent practicable.

NJDEP Technical Requirements for Site Remediation

These requirements, codified at N.J.A.C. 7:26E-1 et. al., specify technical standards to be followed at all sites undergoing remediation which will be considered prior to remedial activities at the Site.

Hudson County Regional Health Commission Air Pollution Control Code

The Hudson Regional Health Commission (HRHC) Air Pollution Control Code (Section 6.3) regulates fugitive emissions from construction sites and demolition activities and will be considered for remedial actions at the Site.

New Jersey Guidance Document for the Remediation of Contaminated Soils

NJDEP has developed soil cleanup criteria for the cleanup of mercury at hazardous waste sites which are 14 mg/kg for residential direct contact and 270 mg/kg for non-residential direct contact. This document will be considered for all soil remediation activities conducted at the Site.

New Jersey Lead Hazard Evaluation and Abatement Code

The New Jersey Lead Hazard Evaluation and Abatement Code (N.J.A.C. 5:17) which took effect on January 1, 1996, is a requirement which will be considered prior to remedial activities at the Site.

Local Regulations

The City of Hoboken, New Jersey, and Hudson County, New Jersey, may have regulations for the abatement of lead-based paint hazards and for the demolition (or renovation) of buildings with asbestos containing materials.

NIOSH and ACGIH Guidelines

The NIOSH recommended exposure limit (REL) for mercury vapor is 0.05 mg/m³ on a Time Weighted Average (TWA) occupational exposure level for a 10-hour workday and a 40-hour work week. The ACGIH Threshold Limit Value (TLV) is 0.025 mg/m³ on a TWA occupational exposure level for an 8-hour work day and a 40-hour work week.

The New Jersey Department of Health guidance for mercury entitled, "Controlling Metallic Exposure in The Workplace" recommends that in the workplace, the area of a mercury spill should be cleaned so that the level of mercury present in the air is well below the 8-hour exposure limit of 0.025 milligram per cubic meter (mg/m³) recommended by ACGIH.

Other Pertinent Requirements

The following requirements, while not environmental laws, will be complied with because they are related to the selected remedy.

Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970

The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 provides regulations and guidance for agency conductance of relocation activities. These standards apply only to federal or

federally-assisted relocation programs. Requirements of the Act are provided at 42 U.S.C. 4601 et seq., and its implementing regulations at 40 CFR 4.1 et seq. This act provides for uniform and equitable treatment of persons displaced from their homes, businesses, or farms by Federal and federally-assisted programs, and to establish uniform and equitable land acquisition policies for Federal and federally-assisted programs.

Public Buildings, Property, and Works

Section 255 of Title 40 ("Public Buildings, Property, and Works") provides that public money may not be expended for the purchase of land unless the Attorney General gives prior written approval of the sufficiency of the title to the land for the purpose for which the property is being acquired. This requirement is only applicable if EPA must acquire real property to conduct the permanent relocation.

Public Contracts

Section 14 of Title 41 ("Public Contracts") provides that "[n]o land shall be purchased on account of the United States, except under a law authorizing such purchase." Section 104(j) of CERCLA authorizes the President to acquire real property when the President determines that the property is needed to conduct a remedial action. This requirement is only applicable if EPA must acquire real property to conduct the permanent relocation.

Occupational Safety and Health Act (OSHA)

Occupational Safety and Health Standards for Hazardous Response and General Construction Activities (29 CFR Parts 1904, 1910, 1926) are intended to protect workers from harm related to occupational exposure to chemical contaminants (mercury), physical hazards, heat or cold stresses, noise, etc. The asbestos standard under the Occupational Safety and Health Act (OSHA) is contained in 29 CFR Section 1926.58. The standard for Lead Exposure in Construction (contained in 29 CFR 1926.62) will be applicable for any construction activities at the Site for surfaces containing lead paint. Although referenced in this discussion, OSHA is considered by EPA to be a "non-environmental law" whose standards and requirements apply of their own force, not as a result of the CERCLA ARAR system (55 FR 8680; March 8, 1990). For this reason, remediation activities (including removal of building materials and/or building demolition) at the Grand Street Site will be subject to the requirements of OSHA.

New Jersey Uniform Construction Code

The New Jersey Uniform Construction Code (NJUCC) sets standards for all new construction and renovations and is cited at N.J.A.C. 5:23. Although this is not an environmental law, these standards are applicable to renovation or new construction activities at the Site.

City of Hoboken Building Code

Under municipal code 33-5, the Hoboken Health Department must inspect all buildings prior to any demolition or renovation work to determine if a rodent infestation exists. After Health Department approval, the Hoboken Building Department is then notified and is responsible ensuring that all renovations comply with the NJUCC (N.J.A.C. 5:23). The Building Department is responsible for approving the appropriate permits for any renovation or demolition.

Cost-Effectiveness

The cost effectiveness of a remedy is determined by weighing the cost against the ability to achieve ARARs and remedial action objectives. While all of the remedial alternatives evaluated by EPA, with the exception of Alternative 1 - No Action, offer overall protection to human health and the environment and achieve ARARs, they do so to varying degrees in terms of cost-effectiveness. The differences, including balances and trade-offs, are discussed below:

Alternative 2 is the least expensive of the four protective alternatives at \$9,821,000. While theoretically possible to implement, this remedial alternative does not provide assurances that it will be effective over

the long term. Complications with achieving extremely low remedial action goals might necessitate revisiting the remedy and selection of a different remedy for the Site (including additional relocation), at increased cost. Additionally, complications with achieving remedial action goals could delay remedy completion, which would increase costs for remediation and temporary relocation activities.

Alternative 3 has a present worth cost of \$13,096,000. This alternative presents many of the same concerns as Alternative 2. For instance, complications with achieving extremely low remedial action goals might necessitate revisiting the remedy and selection of a different remedy for the Site (including additional relocation), at increased cost.

Alternative 4 has a present worth cost of \$12,807,000. This alternative presents all of the same concerns as Alternative 2, through to a lesser degree, as the remedial action goals are higher, and therefore more easily achievable. Irrespective of cost, however are land use considerations, which preclude industrial/commercial remediation of the buildings in light of present zoning and population trends in the City of Hoboken.

Alternative 5 has the highest present worth cost of the four alternatives at \$13,861,000. Although highest in cost, it is not significantly higher than Alternatives 3 or 4. However, this alternative presents none of the uncertainties inherent in Alternatives 2, 3 or 4, and unequivocally ensures that remedial action goals will be achieved.

EPA has therefore determined the selected remedy to be cost-effective because it provides the greatest overall long-term and short-term effectiveness in proportion to its present worth cost. A breakdown of costs for the selected remedy is provided at Table 12.

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

Amongst the criteria which EPA must assess in the selection of CERCLA remedies, EPA believes the selected remedy to provide the best balance of tradeoffs. Because of land use considerations, EPA believes that remediation of the building to industrial standards (Alternative 4), while potentially technically feasible, cannot be implemented at the Site. Residential remediation (Alternatives 2 and 3) and reuse of the buildings may be technically possible but would require long-term monitoring to ensure that protectiveness is maintained for the future residents. While such monitoring is also technically feasible, it would not prevent a potential worst-case scenario in which families re-occupy the building, only to be exposed to mercury at some point in the future. Input received during the public comment period indicates that the community would not support reuse of the buildings at the Site. Thus, remediation and residential reoccupation of the buildings (Alternatives 2 and 3) are not likely implementable because they are potentially ineffective over the long-term and would not be acceptable to the community. Industrial/commercial remediation of the buildings (Alternative 4) is also likely not implementable due to concerns at it may be potentially ineffective (though to a lesser extent than Alternatives 2 and 3), but possesses unique implementability concerns in that it does not conform to likely future use of the Site. Therefore, demolition of the buildings (Alternative 5) is the only protective and practicable remedy for the Site. The selected remedy utilizes permanent solutions and treatment technologies to the maximum extent practicable.

Preference for Treatment as a Principal Element

This remedy satisfies the statutory preference for remedies that employ treatment that reduces toxicity, mobility, or volume as a principal element since the principal threat at the Site, liquid elemental mercury, will be recovered during building demolition.

DOCUMENTATION OF SIGNIFICANT CHANGES

There are no significant changes from the preferred remedy presented in the Proposed Plan.

However, based on specific comments received during the public comment period, EPA has modified Alternative 4 by deleting sampling and remediation of soil under the asphalt parking lot from this Alternatives. EPA agrees with the commenter that such sampling and remediation would not be necessary under Alternative 4 since this alternative assumes that the future use of the Site will be industrial. In this case, the current deed restriction would need to be modified to reflect the mercury contamination at the Site so that it would be unlikely that the asphalt cap would be disturbed. The cost estimate for Alternative 4 was decreased by \$ 132,000, the estimated cost for sampling and remediation of the soils under the parking lot. This change in Alternative 4 did not change EPA's selected remedy for the Site.

ATTACHMENT 1

Figures and Tables

Table 1A
Interior Air Monitoring and Air Sampling for Mercury Vapor

Sampling Location	29 January 1996		30 January 1996		31 January 1996	
	Hopcalite	Jerome	Hopcalite	Jerome	Hopcalite	Jerome
2A Bedroom	46.5	35	11.1	13	9.44	4
2A LvngRm/Kitchen	38.5	39	10.8	22	10.4	24
2B Bedroom	78.1	72	67.7	50	60.3	33
2B Living Room	83.1	82	66.8	53	55.9	47
2C Bedroom	3.66	3	6.37	3	2.42	7
2C Living Room	2.19	3	3.53	8	1.72	3
2D Living Room	3.64	3	4.58	4	3.97	2
2D Bedroom	2.61	3	4.45	4	3.07	4
3A Bedroom	19.2	13	6.73	4	7.66	5
3A Living Room	16.2	15	6.46	2	8.13	6
3B Living Room	15.7	10	15.9	11	11.1	11
3B Bedroom	12.8	13	18.3	11	9.20	10
3C Bedroom	4.5	15	4.87	3	4.3	4
3C Living Room	3.89	6	6.14	3	3.92	4
3D Kitchen	1.68	3	3.86	3	3.33	5
3D Bedroom	1.89	3	3.53	4	-	-
4A Child's Bedroom	20.8	28	13.5	16	17.5	18
4A Living Room	22.4	28	14.6	11	20	20
4B Living Room	19	25	19.9	12	17.6	15
4B Master Bedroom	23.7	14	25.1	15	16.5	16
4C Child's Bedroom	11.9	6	12.5	11	12.2	11
4C Master Bedroom	13.9	22	11.5	12	11.3	11
5A Living Room	36.2	30	43.3	33	42.5	24
5A Bedroom	39.9	10	44.7	24	40.8	21
5B Living Room	40.7	25	41.4	34	34.4	35
5B Master Bedroom	34.7	25	45.8	35	36.8	25
5C Living Room	21.4	31	29.7	27	32.5	38
5C Bedroom	23.8	32	35.6	27	30.6	35
5D Laundry Room	27.8	10-17	38.9	24	23.6	20
5D Main Area	41.3	10-17	29.7	14	22.1	20
Townhouse 1st fl	.59	3	1.25	3	-	-
Townhouse 2nd fl	1.3	3	1.17	3	0.50	<3
Townhouse 3rd fl	1.31	3	1.96	3	1.03	<3
Townhouse 4th fl	1.02	3	1.33	3	1.19	<3
Common Area 2nd fl	4.08	-	7.67	12	7.53	8
Common Area 3rd fl	2.56	7	7.11	9	8.79	3
Common Area 4th fl	3.37	9	8.09	8	13.4	7
Common Area 5th fl	3.37	10	7.34	13	11.6	7

all data in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) mercury vapor in air
(-) denotes no sample collected or analyzed

Table 1B
Interior Air Monitoring and Air Sampling for Mercury Vapor

Sampling Location	6 February 1996		7 February 1996		8 Feb 1996	
	Hopcalite	Jerome	Hopcalite	Jerome	Hopcalite	Jerome
Basement North	0.17	<3	0.19	4	0.24	<3
Basement So. (A)	8.79	6	19.3	9	8.81	n/a
Basement So. (B)	13.8	10	32.2	15	16.0	n/a
2A Basement	1.91	3	2.11	<3	2.30	6
4D Living room	16.0	12	17.7	18	21.7	17
4D Bedroom	16.1	14	20.3	21	19.1	20

all data in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) mercury vapor in air
(n/a) denotes no data available

Table 2
Interior On-Site Soil/Sediment Sampling for Mercury

Sample ID	Hg Conc	Sample ID	Hg Conc	
BSMTH-1	1600	BSMT-4	1220	
BSMTH-2	2320	BSMT-5	36.4	
BSMT-1	2540	BSMT-6	38.1	
BSMT-2	354	BSMT-7	596	J
BSMT-3	157	BSMT-8	259	

all data in milligrams per kilogram (mg/kg) mercury
J = mercury concentration estimated

Table 3
Discrete On-Site Soil Sampling for Mercury

Sample	Depth	Hg	Sample	Depth	Hg
U-1	0-4	5.0	X-3	4-8	0.77
U-1	4-8	3.5	X-4B	0-4	12
U-2	0-4	63	X-4B	4-8	0.8
U-2	4-6	5.7	Y-1	0-4	80
U-3	0-4	43	Y-1	4-8	2.2
U-3	4-6	5.1	Y-2	0-4	54
U-4	0-4	290	Y-2	4-8	2.4
U-4	4-5	64	Y-3	0-3	54
X-1	0-4	16	Y-3B	0-2.5	13
X-1	4-8	0.99	Y-4	0-4	2.4
X-3	0-4	6.4	Y-4	4-8	2.4

all data in milligrams per kilogram (mg/kg) mercury

Table 4
Off-Site Soil Sampling for Mercury

Sample	Date	Depth	Hg	Sample	Date	Depth	Hg
AS-1	April 4, 1996	0-3"	14	C-2	February 28, 1997	0-3"	24.8
AS-2	April 4, 1996	0-3"	28	D-4	February 28, 1997	0-3"	6.8
AS-3	April 4, 1996	6-12"	13	E-2	February 28, 1997	0-3"	22.3
AS-4	April 4, 1996	6-12"	11	E-3	February 28, 1997	0-3"	9.7
AS-5	April 4, 1996	12-24"	28	E-0	February 28, 1997	0-3"	11.6
AS-6	April 4, 1996	12-24"	25	F-1	February 28, 1997	0-3"	13.4
AS-7	April 4, 1996	0-6"	39	F-5	February 28, 1997	0-3"	12.1
AS-8	April 4, 1996	18"	5.5	H-5	February 28, 1997	0-3"	12.2
A-2	February 28, 1997	0-3"	14.2	H-1	February 28, 1997	0-3"	7.1
B-1	February 28, 1997	0-3"	15.5	Bsmt-1	February 28, 1997	0-3"	.00U
B-3	February 28, 1997	0-3"	15	Bsmt-2	February 28, 1997	0-3"	0.61
B-4	February 28, 1997	0-3"	30.4				

all data in milligrams per kilogram (mg/kg) mercury

U = mercury not detected at or above value indicated

Table 5
 December 12, 1996, Laboratory Confirmation of Samples Collected During
 X-Ray Fluorescence Investigation for Mercury in Wood

Sample	Hg	Sample	Hg	Sample	Hg
5D-01	1500	5D-05D2	4100	5C-01D	J 210
5D-02	6300	5D-06	890	5C-02	J 280
5D-03	910	5D-07	U 102	4A-100	J 190
5D-04	1600	5D-08	1700	4A-101	J 110
5D-04D	860	5D-09	J 300	4A-102	J 790
5D-05	5700	5D-10	590		
5D-05D	4300	5C-01	350		

J = mercury concentration estimated
 U = mercury not detected at or above value indicated
 all data in milligrams per kilogram (mg/kg) mercury

Table 6
 Data Summary for Total Mercury in Brick

Sample ID	Hg Conc (mg/kg)	Sample ID	Hg Conc (mg/kg)
4A-4H	39.8	4H-4H	2900
4A-5H	155	4H-6H	9110
4A-9H	797	4H-7H	455
4A-10H	729	5B-5H	424
4C-1H	590	5B-5D	507
4C-3H	186	3B	8900
4H-2H	1900	3C-KIT	869

Table 7A
 Data Summary for Mercury Detected in Air and Soil
 Grand Street Site

Exposure Scenario/ Receptors	Mode of Concern	Number of Samples a	Range of Detected Concentrations b	Mean Concentration c	95% UCL of the Mean
ES-1 - Child and Adult Residents ES-2 - Adult Worker	Air Inside the Building	1714	2.50E-05 - 9.99E-01	3.84E-02	4.53E-02
ES-3 - Child Resident ES-4 - Adult Worker	On-Site Soil Under the Parking Lot of 722 Grand Street	35	2.40E+00 - 2.90E+02	3.41E+01	4.99E+01
ES-5 - Child Resident	Off-Site Soil From the Backyard of 723 Adams Street	19	5.50E+00 - 3.90E+01	1.69E+01	2.19E+01

Units: Air (mg/m³), Soil (mg/kg)
 UCL = Upper Confidence Limit

a Number of samples evaluated. For soil, duplicates at a location were averaged and considered as one sample.

b For soil, range of detected concentrations was based on the raw data prior to averaging the duplicates at a location.

c Arithmetic mean was based on averaging values after averaging duplicates at a location.

Table 7B

Data Summary for Mercury Detected in Soil from the Basement of 722 Grand Street

Number of Samples a	Range of Detected Concentrations b (mg/kg)	Mean Concentration c (mg/kg)	95% UCL of the Mean (mg/kg)	Exposure Point Concentration d (mg/kg)
9	3.64E+01 - 2.54E+03	9.47E+02	2.00E+04	2.54E+03

UCL = Upper Confidence Limit

a Number of detected samples evaluated. Duplicates at a location were averaged and considered as one sample.

b Range of detected concentrations was based on the raw data prior to averaging the duplicates at a location.

c Arithmetic mean was based on averaging values after averaging duplicates at a location.

d 93% UCL exceeded the maximum detected concentration, therefore the maximum detected concentration was selected.

Table 8

Potential Exposure Pathways/Routes
Grand Street Site

Exposure Pathway	Scenario	Receptor	Exposure Route
ES-1 Air Inside the Building	Future Use	RME - Child and adult residents CTE - 5 to 13 Year old resident	- Inhalation of air
ES-2 Air Inside the Building	Future Use	RME - Adult worker CTE - Adult worker	- Inhalation of air
ES-3 On-Site Soil Under the Parking Lot of 722 Grand Street	Future Use	RME - Child resident CTE - Child resident	- Ingestion of soil
ES-4 On-Site Soil Under the Parking Lot of 722 Grand Street	Future Use	RME - Adult worker CTE - Adult worker	- Ingestion of soil
ES-5 Off-Site Soil from the Backyard of 725 Adams Street	Current Use	RME - Child resident CTE - Child resident	- Ingestion of soil

RME = Reasonable Maximum Exposure (measure of high-end exposure).

CTE = Central Tendency Exposure (measure of average exposure).

Table 9

Chronic Reference Doses and Toxicity Endpoints for Mercury
Grand Street Site

Chronic Oral Reference Dose (mg/kg-day)	Toxicity Endpoint	Reference a	Chronic Inhalation Reference Dose (mg/kg-day)	Toxicity Endpoint	Reference a
3.0E-04 b	Autoimmune glomerular nephritis	IRIS	8.6E-05 c	Neurotoxicity	IRIS

a IRIS Integrated Risk Information System (EPA, 1997).

b Value is for divalent mercury.

c Value is for elemental mercury.

Table 10A

Summary of Hazard Quotients for Mercury
 RME Scenario
 Grand Street Site

Exposure Scenario Receptor	Inhalation of Air	Ingestion of Soil
ES-1		
Child Resident	5.1E+02	NA
Adult Resident	1.1E+02	NA
ES-2		
Adult Worker	1.0E+02	NA
ES-3		
Child Resident	NA	2.1E+00
ES-4		
Adult Worker	NA	8.1E-02
ES-5		
Child Resident	NA	9.3E-01

NA = Not applicable.

Table 10B

Summary of Hazard Quotients for Mercury
CTE Scenario
Grand Street Site

Exposure Scenario Receptor	Inhalation of Air	Ingestion of Soil
ES-1 5-13 Year-old Resident	1.4E+02	NA
ES-2 Adult Worker	6.0E+01	NA
ES-3 Child Resident	NA	1.06E+00
ES-4 Adult Worker	NA	7.12E-02
ES-5 Child Resident	NA	4.67E-01

NA = Not applicable.

Table 11
 Applicable, Relevant and Appropriate, and To-Be-Considered Requirements

REQUIREMENT	Applicable	Relevant or Appropriate	To be Considered	Not Applicable
Chemical Specific:				
òResource Conservation and Recovery Act	X			
Definition of Hazardous Waste				
òFederal Drinking Water Standards		X		
òNew Jersey Drinking Water Standards		X		
Location Specific:				
òHistoric and Archaeologic Preservation	X			
òProtection of Flood Plains	X			
òProtection of Wetlands				X
òThreatened or Endangered Species				X
òFish and Wildlife Coordination				X
òNew Jersey Coastal Zone Mgmt. Act				X
Action Specific:				
òResource Conservation and Recovery Act	X			
Land Disposal Restrictions	X			
Transportation of Hazardous Waste	X			
Generator Requirements	X			
Storage and Disposal Requirement	X			
òClean Air Act	X			
òNJDEP Solid and Hazardous Waste Regulations	X			
òPublicly Owned Treatment Works				X
òThe Clean Air Act				
òNJDEP Asbestos Remediation Regulations	X			
òNJDEP Air Emission Regulations for Mercury	X			
òNJDEP Technical Requirements for Site Remediation	X			
Other Pertinent Requirements:				
òUniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 1				
òPublic Buildings, Property, and Works 1				
òPublic Contracts 1				
òOccupational Safety and Health Act				
òNew Jersey Uniform Construction Code				
òHudson Regional Health Commission Air Pollution Control Code				
òCity of Hoboken Building Code				
òLocal Lead-based Paint Abatement Requirements				
òNational Institute for Occupational Safety and Health Guidelines				
òAmerican Council of Government Industrial Hygienists Guidelines				

1 this Requirement is only applicable if a relocation is performed by the U.S. Government, and would not apply to other parties (such as PRPs) in the event those parties conduct relocation-related Site activities.

Table 12
Detailed Cost Analysis of Remedial Alternative Five

Item	Unit Cost \$	Time to Complete	Capital Cost Estimate	Present Worth Cost
Building Maintenance and Security	\$10,000 1/mo	12 months	\$120,000	\$120,000
Temporary Relocation	40,000 1/mo	12 months	480,000	480,000
Permanent Relocation	9,915,600 2	n/a	9,915,600	9,915,600
Occupant Moving Expenses	22,500/unit	n/a	337,500	337,500
Subtotal for Building Security and Maintenance and for Relocation Activities			10,853,000	10,853,000
Building Demolition	n/a	11 months	4,359,075 3	4,359,075
Subtotal for Building Demolition			4,359,000	4,359,000
Soil Contaminant Sampling/Remediation	n/a	1 month	213,400	213,400
Groundwater Contaminant Monitoring and Analysis	n/a	1 day	3,840	3,840
Subtotal for Soil and Groundwater			217,000 4	217,000
Real Estate Value at Project Completion	1,567,500 5	n/a	(1,567,500)	(1,567,500)
Subtotal for Real Property Compensation			(1,568,000)	(1,568,000)
TOTAL Costs Estimated for Remedial Alternative Five		23 months 6	\$13,861,000	\$13,861,000

1 Cost estimate based on average present EPA expenditure levels, and include 12 month design period.

2 Cost estimates for Permanent Relocation consists of EPA purchase of living spaces and common areas in the buildings and townhouse, and purchase of the adjacent parking area, and were based on April 1996, EPA appraisals not reflective of appraisals to be conducted concurrent to remedial design.

3 Cost and Time Estimates for Building Demolition are based on the March 11, 1997, Technical Engineering Evaluation for Remediation at the Grand Street Site. Due to additional steps added to the project by EPA (see Section 5.5, above), the estimated length of time to complete the Demolition Action has been increased by 2 months, and costs have been increased by 5%.

4 Cost and Time estimates assumptions for Soil and Groundwater activities are provided at Appendix I.

5 Cost estimate assumptions for Real Estate Values are provided at Appendix I.

6 Overall time estimate based on: 12 months remedy design; and 11 months remedy implementation.

ATTACHMENT 2

NJDEP Letter of Concurrence

September 24, 1997
Ms. Jeanne M. Fox
Regional Administrator
USEPA - Regional II
290 Broadway - Floor 19
New York, NY 10007-1866

Subject: Grand Street Mercury Superfund Site
Record of Decision (ROD)

Dear Ms. Fox:

The Department of Environmental Protection has evaluated and concurs with the following specific components of the selected remedy for the Grand Street Mercury Superfund Site as stated below:

This is the first and only planned operable unit for the Grand Street Mercury Site. It addresses the threats posed by contaminated buildings and soil at the Site and provides for permanent relocation of the former residents of the Site.

The major components of the selected remedy that NJDEP concurs with includes the following:

- ! Permanent relocation of the former residents of the Site in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970;
- ! Continuation of temporary relocation of the former residents until permanent relocation has been implemented;
- ! Historic preservation mitigation measures for the buildings at the Site, as appropriate;
- ! Gross mercury decontamination of the buildings at the Site including recovery of available mercury, whenever possible;
- ! Abatement of friable asbestos in all buildings at the Site;
- ! Removal and recovery of reusable fixtures and recyclable scrap metal and other building components;
- ! Demolition of the two buildings at the Site using measures to minimize releases of mercury into air;
- ! Removal and off-site disposal of all demolition debris;
- ! Sampling of soils at the Site;
- ! Excavation and off-site disposal of all contaminated soils;
- ! Sampling of soils at off-site adjacent locations;
- ! Sampling of groundwater at the site; and
- ! Assessment of off-site soil and groundwater data to evaluate the need for future remedial action.

NJDEP concurs that the selected remedy is protective of human health and the environment, complies with requirements that are legally applicable or relevant and appropriate to the remedial action, and is cost effective. Please note that DEP considers NJAC 7:26E-1 to be applicable to this site.

The State of New Jersey appreciates the opportunity to participate in the decision making process and looks forward to future cooperation with the USEPA.

ATTACHMENT 3

Responsiveness Summary

RESPONSIVENESS SUMMARY

FOR THE

RECORD OF DECISION

FOR THE

GRAND STREET MERCURY SUPERFUND SITE

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1.0 INTRODUCTION

As part of its public participation responsibilities, the U.S. Environmental Protection Agency (EPA) held a public comment period from July 9 through September 8, 1997, for interested parties to comment on EPA's Proposed Plan for the Grand Street Mercury Site ("the Site") in Hoboken, New Jersey. The Proposed Plan described the alternatives that EPA considered for relocating the prior residents of the building and for remediating mercury contamination in the building and in the soil at the Site.

EPA held a public meeting at Hoboken High School on July 16, 1997. During the public meeting, representatives from EPA discussed the preferred remedy, answered questions, and received oral and written comments on the alternative recommended in the Proposed Plan and other remedial alternatives under consideration.

In addition to comments received during the public meeting, EPA received written comments throughout the public comment period. EPA's responses to significant comments, both oral and written, received during the public meeting and public comment period, are summarized in this Responsiveness Summary. All comments summarized in this document were factored into EPA's final determination of a remedy for cleaning up the Site. EPA's selected remedy for the Site is described in the Decision Summary of the Record of Decision.

The Responsiveness Summary is organized into the following sections.

2.0 Summary of Selected Remedy. This section outlines EPA's selected remedy for the Site.

3.0 Background On Community Involvement And Concerns. This section provides a brief history of community interest and concerns regarding the Site.

4.0 Summary Of Major Questions And Comments Received From The Local Community And EPAs Responses To These Comments. This section summarizes both oral and written comments submitted to EPA by the local community during the public comment period and provides EPA's responses to these comments. "Local community" means those individuals who have identified themselves as living in the vicinity of the Site and are potentially threatened from a health or environmental standpoint.

5.0 Comprehensive Summary Of Significant Technical Comments And EPA's Responses To These Comments. This section summarizes other written comments submitted to EPA during the public comment period and provides EPA's responses to these comments. It is comprised of specific technical questions and, where necessary, elaborates with technical detail on answers covered in Section 4.0.

APPENDICES

There are five appendices attached to this document. They are as follows:

APPENDIX A: Proposed Plan

APPENDIX B: Public Notices that were printed in the Jersey Journal and Hoboken Reporter newspapers to announce the public meetings and extension of the public comment period.

APPENDIX C: Copies of sign-in cards from the public meeting.

APPENDIX D: Transcript of the July 16, 1997 public meeting. EPA's responses to comments submitted during the public meeting are included in Section 4.0 and 5.0.

APPENDIX E: Written comments received by EPA during the public comment period and summarized in Sections 4.0

and 5.0 of the Responsiveness Summary. EPA's responses to the written comments are also included in Sections 4.0 and 5.0.

2.0 SUMMARY OF SELECTED REMEDY

The major components of the selected remedy include: permanent relocation of the former residents of the Site; continuation of temporary relocation of the former residents until permanent relocation has been implemented; historic preservation mitigation measures for the buildings at the Site, as appropriate; gross mercury decontamination of the buildings at the Site including recovery of available mercury, whenever possible; abatement of friable asbestos in all buildings at the Site; removal and recovery of reusable fixtures and recyclable scrap metal and other building components; demolition of the two buildings at the Site using measures to minimize releases of mercury into the environment; removal and off-site disposal of all demolition debris; sampling of soils at the Site; excavation and off-site disposal of contaminated soils; sampling of soils at off-site adjacent locations; sampling of groundwater at the Site; and, assessment of off-site soil and groundwater data to evaluate the need for future remedial action.

3.0 BACKGROUND ON COMMUNITY INVOLVEMENT AND CONCERN

The discovery of mercury in a residential building, coupled with the evacuation and temporary relocation of its residents in January 1996, fueled media attention and the concern of residents and local officials. In response, EPA conducted various ongoing activities to keep the residents and local officials updated about technical and enforcement activities. These activities included: ongoing support of the temporary relocation program; information letters to residents to inform them about sampling results and other technical and relocation issues; small group briefings with the residents and local officials; and site tours for members of the local, regional, state, and federal governments and the media.

Media coverage of the Grand Street Mercury Site was heavy around the time the residents were being relocated. This included nightly news reports on the New York metropolitan television and radio stations during several weeks of intense activity at the site. In addition, major articles were written in most of the regional daily and weekly newspapers. Since then, the Hoboken Reporter and Jersey Journal have written follow-up stories about the site. Media coverage intensified again when the Proposed Plan for addressing mercury at the site was released to the public in July 1997.

In February and March 1997, EPA conducted community interviews with former building residents, neighbors, and local officials to identify their concerns, information needs, and how they would like to be involved in decisions made about the Site. In July 1997, EPA issued a final Community Relations Plan for the Site.

On July 9, 1997, EPA opened a 30 day public comment period for the Proposed Plan. The comment period, which was scheduled to end on August 7, was extended an additional 30 days to September 8, at the request of two potentially responsible parties. Public notices were placed in the Jersey Journal and Hoboken Reporter newspapers to publicize the comment period, public meeting, and the extension of the comment period. Copies of the notices are attached as Appendix B.

On July 16, 1997, EPA held a public meeting in Hoboken High School. Approximately 100 people attended. Copies of the sign-in cards from the public meeting are attached as Appendix C. In general, most of the prior building residents, community members, and officials expressed support for EPA's Proposed Plan, while the potentially responsible parties opposed it. A transcript of the public meeting is attached as Appendix D. Written comments received by EPA during the public comment period are included in Appendix E.

4.0 SUMMARY OF MAJOR QUESTIONS AND COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD AND EPA'S RESPONSES TO THESE COMMENTS

Oral and written comments raised by the local community during the public comment period and EPA's responses to them are summarized below. The original written comments are attached as Appendix E. The comments are organized into the following general categories:

4.1 EPA's Proposed Plan

4.2 The Site's Impact on the Prior Building Residents

4.3 Liability

4.4 Environmental Testing at the Site

4.5 Other

4.1 EPA's Proposed Plan

4.1.1 Comment: A number of elected officials as well a number of the former residents, representatives from the Environment Committee of Hoboken, and a number of community members expressed support for EPA's Proposed Plan.

EPA Response: These comments are significant since they were voiced by so many commenters. No response necessary.

4.1.2 Comment: Elected officials and community members urged EPA to move forward with the proposed remedy quickly and effectively, and to keep the needs of the prior building residents first and foremost.

EPA Response: EPA's actions, throughout its involvement at the Site over the last year and a half, clearly demonstrate the Agency's commitment to address this Site. In less than two years, EPA has expediently collected data, prepared a risk assessment and focussed feasibility study, and has issued a Proposed Plan for remediation of the Site. EPA acknowledges the impacts that recent events have had on the former residents of the Site. EPA has expedited the remedy selection process at the Site primarily because of the problems associated with lengthy temporary relocation, including the stress suffered by the building residents. EPA emphasizes that the first step in the remedial process will be permanent relocation of the former residents.

4.1.3 Comment: A community member expressed support for relocating the prior residents and reusing the building. He asked if the building's mercury levels were currently too high for industrial use.

EPA Response: EPA monitoring of the buildings (included in the Administrative Record for the Site) has determined that mercury vapor concentrations within the buildings have consistently exceeded EPA's risk-based cleanup goal for industrial/commercial use. Therefore, EPA does not believe that the buildings are presently suitable for industrial/commercial use.

4.1.4 Comment: A community member expressed concern that if there is a fire in the building, mercury would be released into the air and affect nearby residents. For that reason, he does not believe that the building can be remediated for future use.

EPA Response: An air-dispersion model was used by EPA immediately after determining the extent of mercury contamination at the Site which showed that under a "worst-case" scenario, a fire in the building could result in high levels of mercury being released into the atmosphere.

Therefore, in the short-term, in order to minimize the potential risk of a fire at the Site and exposure to airborne mercury, EPA has improved the sprinkler system and connected the building's electronic fire alarm directly to a central fire station. The electronic fire alarm is tested frequently. The Hoboken Fire Department has conducted several inspections of the building as part of its regular contingency planning procedures. In addition, the Fire Department has informed EPA that it has developed a response plan to be used in the event of a fire in the building. While these actions minimize the risk of fire, they do not preclude the possibility of fire. Since remediation of the building for future use may result in residual mercury contamination in the building, future risk of fire and release to the surrounding community would not

be eliminated. EPA's selected alternative-demolition and off-site disposal - would eliminate this risk.

4.1.5 Comment: A community member commented that he has not heard from any experts that have the qualifications to determine whether or not the Proposed Plan is supportable by scientific and other technical expertise. He stated that somebody should have been given the opportunity to get an independent consultant to review the plan.

EPA Response: EPA encourages public comment on each remedy selected for Superfund sites. During community interviews for the Community Relations Plan, EPA informed the prior building residents, local officials, several community members, and members of the Environment Committee of Hoboken about the availability of a grant through the Technical Assistance Grant (TAG) program. The TAG program provides funds for qualified citizens' groups affected by a Superfund site to hire independent technical advisors to help them understand and comment on site-related information, and thus participate in cleanup decisions. To date, there have been no TAG applications related the Site. However, a community organization could still apply for the grant and use the funding to hire independent technical advisors during the next phases of work at the Site. In addition, EPA notes that the Administrative Record contains a technical evaluation and risk assessment which were prepared by consultants with expertise in several fields including site cleanup, engineering, and public health. EPA also notes that the former residents of the Site are participants in the Technical Outreach Services for Communities program (TOSC) which provides technical assistance, education and training for people affected by hazardous wastes sites and which has enabled them to consult with experts at several academic institutions regarding the Site.

4.1.6 Comment: A community member suggested that if the potentially responsible party were willing to pay half the cost of remediation, and EPA paid for the demolition component, then the project could move forward more quickly. EPA could go back later and recover the money from the potentially responsible party.

EPA Response: As an initial matter, EPA must note that CERCLA and the NCP do not direct EPA to consider the liability of any person in selecting a remedy. Therefore, liability issues are irrelevant in the ROD process. However, EPA does wish to point out the enforcement options EPA has under CERCLA in response to the comment. Whenever possible, EPA requires potentially responsible parties (PRPs), through administrative and/or civil judicial actions, to clean up hazardous waste sites. Although EPA is willing to negotiate with PRPs to undertake remedial action, EPA also has the legal authority to order PRPs to undertake specified cleanup actions. Should the parties refuse to comply with such an Order, EPA may seek to have the Order enforced in federal district court or EPA may conduct the work itself, and later take legal action against the PRPs to recover cleanup costs incurred by EPA. All work performed by PRPs must be conducted in accordance with EPA-approved work plans and must meet the same standards required for actions financed through Superfund.

4.1.7 Comment: The New Jersey Green Party candidate for Governor urged EPA to make sure the remediation plans are protective of the surrounding community and will not expose them to dust, vapors, fugitive emissions, or other harm. She requested that EPA err on the side of safety and caution in protecting the surrounding community.

EPA Response: EPA agrees with the commenter on the importance of safety and intends to take measures to ensure that any increased mercury vapor, dust, and noise generation that may occur during building demolition, does not endanger the surrounding community. For instance, careful attention will be paid to ensure that workers are fully protected from mercury exposure during the remedial or demolition effort and are decontaminated prior to leaving the Site, and that the building is secured and work space maintained under negative pressure to minimize off-site releases. In addition, air quality will be monitored both on- and off-site during remediation activities. If monitoring reveals air releases in excess of EPA standards, work will be halted and corrective actions will be taken before resuming work. EPA will work with community officials during the development of the demolition plans to ensure proper precautions are taken to protect the community during demolition.

4.1.8 Comment: A prior resident objected to the building being remediated for industrial use because of the potential for residual contamination to damage the health of people who may work in the building in the future.

EPA Response: EPA's response to this comment is fully addressed in EPA's response to comment 5.1. EPA agrees that cleanup of the building, either to industrial or residential standards, would likely result in some residual contamination remaining in the building. EPA evaluated an alternative which assumed that the building would be used for industrial/commercial purposes in the future. EPA is uncertain whether available technologies could permanently remediate the building to levels protective of future industrial workers. Additionally, EPA believes that this alternative is not implementable because of the current and future trends in land use in Hoboken which favor residential, not industrial use of the Site.

4.2 The Site's Impact on the Prior Building Residents

4.2.1 Comment: Several elected officials stated that the Proposed Plan takes an important step in allowing the residents to move forward with their lives. Many commenters noted that the former residents have been living with the physical effects of exposure to mercury, severe emotional distress, and financial constraints and that they have suffered a great deal. These concerns were echoed by the residents themselves, many of whom expressed feelings of emotional distress, loss, and numbness over the uncertainty of their situation and financial resources. One prior resident stated that she and her husband delayed their pregnancy for six months because elevated mercury concentrations were found in her urine. They did have a child and would like to have another, but they are reluctant to have another because they believe it would be too difficult while they are living in a temporary situation. Several other prior residents described the terror at learning they had several times the safe, legal concentration of mercury in their bodies. Because the effects of mercury exposure have yet to be determined, they too have postponed indefinitely their plans to start a families.

EPA Response: EPA acknowledges the impacts that recent events have had on the former residents of the Site. EPA has expedited the remedy selection process at the Site primarily because of the problems associated with lengthy temporary relocation, including the stress suffered by the building residents. EPA emphasizes that the first step in the remedial process will be permanent relocation of the former residents.

4.2.2. Comment: An attorney representing one of the former residents stated that his client made a substantial investment in this property to make it something he would be proud of and to live in for many years. Now, his client has no intention of ever setting foot in the building at the Site again under any circumstances.

A number of residents described their shared dream and achievement of taking an empty building on a half-empty street and developing it into affordable living units that included the studio work space they needed to practice their art. One resident described the residents' plans to use common space on the first floor for a community gallery, space for concerts, performances, and art studios to hold classes for the community. Another described how real estate picked up on that street once the residents received final site plan approval from the City of Hoboken.

Against this backdrop, the residents described how the dreams became a nightmare. The stress of their displacement, as well as the exposure to mercury, has brought on illness and suffering and fear for their health and well-being. Ailments reported by the residents included chest pains, depression, elevated blood pressure, heart arrhythmia, kidney problems, nightmares, respiratory problems, short-term memory loss, sleep and vision disorders, and tremors. They urged EPA to proceed with the Proposed Plan as quickly as possible.

An attorney representing an additional former resident expressed support for EPA's Proposed Remedy with regard to demolition of the building and financial restoration for the former residents so they can move on with their lives. The residents urged EPA to permanently relocate them as quickly as possible so they can move forward with their lives.

EPA Response: See EPA's response to Comment 4.2.1.

4.2.3 Comment: Several commenters stated that it is essential that the prior building residents secure a fair settlement and remuneration for their property. A community member suggested that the residents receive health coverage in perpetuity as well as compensation for their monetary losses.

EPA Response: EPA's selected remedy includes permanent relocation of the former residents. Permanent relocation will be conducted in accordance with applicable federal guidelines and will consist of the provision of relocation benefits to owners and occupants of the Site, including: compensation for the property to be acquired; moving and related expenses; replacement housing assistance; and relocation advisory services. Health coverage is not an item which EPA is authorized to provide under the CERCLA removal or remedial program.

4.2.4 Comment: Several former residents described how they were exceptionally cautious; insisting, prior to purchasing the property, on documentation assuring the safety of the building for residential use. A resident stated that they never would have considered buying a "toxin soaked" building to live in if they had known. The residents stated that they relied on the assurances of the state government, their lawyers, and environmental experts that the building was clean and safe. Now, their sense of safety is gone and replaced with an underlying distrust and constant stress. One resident stated that what is most upsetting is that the residents, who are the victims, are being perceived in some quarters as criminals, responsible for the problem and for bearing the costs of the cleanup.

EPA Response: EPA acknowledges the impacts that recent events have had on the former residents of the Site. Under CERCLA and the NCP, EPA does not consider the liability of any person in selecting a remedy. Therefore, liability issues are irrelevant in the ROD process.

4.3 Liability

4.3.1 Comment: The parent of a resident asked about the residents' financial liability for their mortgages on the units in the building if the building is demolished.

EPA Response: The residents will receive just compensation for their property as part of permanent relocation. The residents can use the funds they receive in any way they choose, although in EPA's experience, permanently relocated persons usually first apply the monies they receive to the mortgage they hold on the property EPA is acquiring. Any liability for mortgages held by the residents is governed by the mortgage document(s) entered into by the residents and the lender.

4.3.2 Comment: A former resident stated that since she was unable to close on her unit (Unit 5D) because of the mercury problem, she may not be eligible for assistance from the permanent relocation program. She asked EPA and the former residents to embrace her family and let them participate in the permanent relocation package.

EPA Response: Permanent relocation will be undertaken in accordance with the provisions of the Uniform Relocation and Real Property Acquisitions Policy Act of 1970 and its applicable regulations. EPA will evaluate the commenter's status as landowner at the Site, and will provide benefits as appropriate.

4.3.3 Comment: A community member stated that the artists and their families have suffered the most, but, as the buyers, they had the ultimate responsibility to know what they were buying. In addition, their attorneys failed to protect them and are equally liable. The government is also liable for not flagging the situation in time, as well as the seller for not revealing the building's history.

EPA Response: As stated above, under CERCLA and the NCP, EPA does not consider the liability of any person in selecting a remedy. Therefore, liability issues are irrelevant in the ROD process.

4.3.4 Comment: A community member stated that since General Electric contributed to contamination in the building, it should pay for the proposed remedy.

EPA Response: See EPA's response to comment 4.1.6, above.

4.3.5 Comment: A community member recommended that EPA's Record of Decision include a discussion of how EPA is targeting individual PRPs. If that information is not included in the Record of Decision, he would appreciate additional information on that area.

EPA Response: The Record of Decision contains the names of individuals or companies that to date have been issued Orders to perform work under CERCLA. Information regarding individual PRP liability is generally not included in the Administrative Record for selection of a response action except to the extent such information is considered or relied on in selecting the response action. Information which is general and applies to all EPA response actions is available at all EPA regional libraries and on the Internet at <http://www.epa.gov>.

4.4 Environmental Testing at the Site

4.4.1 Comment: A community member asked why EPA did not do the necessary tests up front to determine whether there is an impact to groundwater. In addition, he asked if there were in fact petroleum hydrocarbons at the Site, and how EPA ruled out carcinogens as a possible source of injury to the residents. He asked whether EPA had looked at all other possible contamination at the Site that could have affected the residents. He asked whether EPA had characterized the Site completely, both horizontally and vertically, for all contamination other than mercury that could possibly be at the Site.

EPA Response: EPA's first concern on this and all Superfund sites is to remove or remedy any immediate risks from the Site. In this case, EPA's priorities are to relocate the dissociated residents, and to prevent risks to the local community from mercury contamination within the buildings. Data from environmental testing at the Site, the Risk Assessment, and the Focused Feasibility Study provided EPA with sufficient information to make a decision on a site remedy without further delays associated with additional studies.

There are no risks to the community from potential contamination in groundwater because groundwater is not used as a source of potable water in Hoboken. However, in the interest of thoroughness and because the groundwater is protected by the State of New Jersey as a potential drinking water source, EPA plans to characterize the groundwater during the remedial action and, if warranted, will undertake further study or action.

Also, under New Jersey's Environmental Cleanup Responsibility Act (ECRA) program, the soil beneath the parking lot was characterized for base neutral aromatic pollutants and petroleum hydrocarbons. Because elevated concentrations of these contaminants were later detected in the parking lot, the NJDEP ECRA program directed the property owner to install an asphalt cap over the entire parking lot, and to record a Declaration of Environmental Restriction and Grant of Easement (DERGE) with the County Clerk's office. This DERGE calls for maintenance of the cap, and disallows penetration of the cap without prior approval from NJDEP. EPA therefore believes that the contamination identified in soils at the site is sufficiently contained to prevent contact with the contamination in the short-term.

In addition, EPA has characterized for mercury the soil beneath the parking lot and at an off-site residence. As part of its selected remedy for the Site, EPA will characterize the soil for all Superfund target analytes and target compounds, and will excavate and dispose of all soil above the remedial action goals calculated in EPA's risk assessment.

4.4.2 Comment: A community member expressed concern about the volume of mercury found in the building and asked how so much mercury could have come to be there.

EPA Response: Mercury associated with the manufacture of mercury vapor lamps, other lamps and switches at the Site is believed to be the primary source for the mercury currently in the building. In 13 of the 16 units in which a small area of flooring (one square meter) was removed, puddles or droplets of mercury were found. Results of EPA's sampling show that air in the building as well as outside soil, sediments in the building sumps, and interior bricks are contaminated with mercury. For that reason, during the performance of the selected remedy, the flooring will be methodically removed, removing all liquid mercury and dust encountered between layers. Additionally, all wastes generated will be fully characterized and disposed of at an EPA-approved off-site facility(ies).

4.5 Other General Comments

4.5.1 Comment: A community member asked what is known about the well-being of earlier occupants and workers who spent time in the building over the years.

EPA Response: EPA has no information on the health of people associated with the building prior to 1994. It has been reported to EPA that the elevated mercury levels previously observed in the urine of 21 dissociated building residents and workers involved in the building renovation have returned to within the normal range. EPA has no documentation supporting this report. Personal and community health assessments are not conducted by EPA, but rather by the Agency for Toxic Substances and Disease Registry (ATSDR), upon request.

4.5.2 Comment: A number of the prior residents thanked EPA for the information, assistance, and support during their relocation ordeal. A resident stated that without EPA's funding to help them through, the families would not have been able to cope because they drained all their resources putting their units together. Others noted EPA's careful, scientific investigation of the building. A representative from the Environment Committee of Hoboken commended EPA for its professionalism in seeking out the input of their organization early in the process, and for notifying its members about the public meeting.

EPA Response: EPA acknowledges the impacts that recent events have had on the former residents of the Site. EPA encourages and appreciates community involvement in the Superfund process.

4.5.3 Comment: Several commenters, expressed support for listing the Site on the Superfund program's National Priorities List as quickly as possible, for it will enable the residents to focus on permanent relocation.

EPA Response: The Grand Street Mercury Site was added to the Superfund National Priorities List (NPL) on September 25, 1997.

5.0 COMPREHENSIVE SUMMARY OF MAJOR TECHNICAL COMMENTS AND EPA'S RESPONSES TO THESE COMMENTS

5.1. Response to Comments raised by General Electric Company The General Electric Company (GE) provided a significant number of comments, both at the July 16, 1997 Public Meeting and in its September 8, 1997 submittal to EPA, which pertain to the Baseline Human Health Risk Assessment (Risk Assessment), Focused Feasibility Study (FFS), and the Proposed Plan. GE has also provided an executive summary and a background section prior to its detailed written comments. Therefore, EPA is responding to GE's executive summary and background section (pages 1-10 of the September 8, 1997 submission) as well as the more detailed comments on pages 11-47 of GE's submission. Because the comments made in GE's executive summary are repeated in more detail in its specific comments, EPA's has prepared a combined response to GE's executive summary and its specific comments. 1

1 GE has stated in the introduction to its comments that "GE reserves the right to provide additional comments and to supplement the administrative record in the future." Note that EPA is not required to consider comments submitted to the Agency after the close of the public comment period. Section 300.430(f)(3) of the NCP states that EPA must "[provide a reasonable opportunity, not less than 30 calendar days, for submission of written and oral comments on the proposed plan...[U]pon timely request, [EPA] will extend the public comment period by a minimum of 30 additional days. In this instance, EPA originally set the public comment period for 30 calendar days--until August 7, 1997. EPA later extended the public comment period at GE's request to September 8, 1997. Accordingly, the public comment period is now closed and, with the issuance of this Record of Decision, the Administrative Record for this action is also closed. Any future comments submitted by GE will not be part of the Administrative Record unless EPA chooses to supplement the Record per Section 300.825 of the NCP.

Response to GE's Executive Summary

Because the comments made in GE's executive summary are repeated in more detail in its specific comments, EPA's has prepared a combined response to GE's executive summary and its specific comments. Accordingly, EPA's detailed response to each assertion made in GE's executive summary is included in EPA's responses to pages 11-47 of GE's comments below.

Response to GE's Background Section

EPA has not prepared a point-by-point response to the background section of GE's comments. However, EPA notes that certain statements in GE's background section are wrong or incomplete. Therefore, EPA is correcting certain facts and presenting additional facts which are critical to a full understanding of the backdrop against which the EPA's response actions at the Site have been taken. For ease of reference, EPA is presenting these facts, as appropriate, under the same subheadings as GE uses in its background section.

Responses to GE Comments related to "The Industrial History of the Site"

EPA has determined that there were essentially three entities which manufactured products containing mercury at the Site: Cooper Hewitt Electric Company 1; GE; and, Cooper-Hewitt Electric Company 2. Cooper Hewitt 1 operated from 1910 to approximately 1919. GE operated between approximately 1919 and 1948. Cooper-Hewitt 2 operated between 1948 and approximately 1965. GSAP acquired the Site in 1993, 28 years after manufacturing activities involving mercury had ceased at the Site.

Responses to GE Comments related to "The Unlawful Sale and Conversion of the [Site] to Residential Condominiums"

GE has included a discussion of the liability of the Grand Street Artists Partnership ("GSAP") and the individual unit owners at the Site. ² This is not germane since remedy selection under CERCLA is based on the nine criteria outlined in Section 300.430 of the NCP, and these nine criteria do not include an analysis of any person's CERCLA liability.

EPA has no reason to believe that the GSAP, its partners, or any of the current residents brought mercury to the Site. EPA has no reason to believe that the GSAP, its partners, or any of the current residents knew there was mercury contamination at the time the GSAP purchased the Site in 1993.

GE incorrectly states that David Pascale "did not disclose [to the NJDEP] the planned conversion of the [Site] for residential use." Information obtained by EPA indicates that the GSAP purchased the building only after having obtained clearance from the New Jersey Department of Environmental Protection ("NJDEP"), which had been told by the GSAP's environmental consultant that the building would be used for residential purposes. GE fails to mention the numerous attempts at mercury remediation made by the GSAP, its partners, and the current residents.

Responses to GE Comments related to "The Temporary Relocation"

² EPA notes that CERCLA liability is one of the subjects of *Grand Street Artists et al. v. General Electric Company, et. al.*, Civil Action Docket No. 96-3774 (HAA) and *Anthony Mastromauro v. General Electric Company, et al.*, Civil Action No. 97-1123 (HAA).

GE fails to mention the actual mercury levels documented in the former residents. On December 27, 1995, the HHD and the Hudson Regional Health Commission collected urine samples from 31 people associated with the Site (29 residents and 2 workers who had made repairs in the building). Results indicated total mercury levels ranging from 3 to 102 micrograms per liter. Twenty of the samples contained levels equal to or greater than 20 micrograms per liter, the upper limit of background mercury concentrations in adults. The urine mercury concentrations of three children were found to be over three times higher than the upper limit for unexposed adults. Indeed, five of the six children tested had mercury levels greater than 20 micrograms per liter. Within days of the HHD request, based in part on the preceding findings, the federal Agency for Toxic Substances and Disease Registry (ATSDR) announced that, "the concentrations of mercury detected in the residents may be associated with subtle neurological changes," and concluded that the residents should be relocated from the Site.

GE also fails to mention the severity of the mercury contamination at the Site:

- ! Mercury vapor readings taken by EPA in the breathing zone in the building have ranged from below detection to over 300 micrograms per cubic meter (Ig/m^3). Elevated levels of mercury vapor have been detected in all of the units in the main building. The ATSDR chronic Minimal Risk Level is 0.3 Ig/m^3 . Subsequently, EPA performed a risk assessment and calculated a risk-based remediation goal for residential use of the building of 0.09 Ig/m^3 and a risk-based remediation goal for industrial use of the building of 0.44 Ig/m^3 .
- ! Mercury was detected in personal belongings which residents were attempting to take from the building after they were ordered to vacate the building by the HHD.
- ! Elevated levels of mercury were detected in the soils located beneath the parking lot at the Site and also in the soils located at an adjacent property. The levels detected in the soil located beneath the parking lot at the Site ranged from 0.77 to 290 milligrams per kilogram (mg/kg). The levels detected in the soils located at the adjacent property ranged from 5.5 to 39 mg/kg .
- ! Visual inspection of the area beneath the floorboards in 13 of the 16 units examined revealed the presence of liquid mercury.
- ! Sampling of bricks in the building revealed elevated levels of mercury in 129 of 186 (69.4%) bricks tested. The levels ranged from below detection to 13,078 mg/kg .
- ! EPA has determined through extensive monitoring that air, wood, soil, sediment, brick, and roofing material have been contaminated with elemental mercury.
- ! Mercury is a hazardous substance with unique qualities. Because of its high density, it tends to settle in cracks and crevices of interior spaces. It vaporizes at what is essentially room temperature and re-condenses to the liquid phase at cooler temperatures, adhering to surfaces. Its vapors are invisible and heavy, tending to settle in the breathing zone of children. The targets of exposure to mercury are believed to be the central nervous system and kidneys. Some of the effects of exposure to elemental mercury include tremors, depression, irritability, insomnia, emotional instability, and, at high doses, death.

GE asserts that EPA has managed the relocation "without utilizing basic (and legally required) cost and fiscal management controls, such as confirming the unit owners' compliance with their mortgage obligations, and has also provided temporary relocation to one couple who never even moved into their assigned unit or even purchased it." EPA disagrees with GE's characterization of its actions in implementing the temporary relocation program. EPA has consistently utilized appropriate cost and fiscal management controls in its

administration of the temporary relocation program as required by the Uniform Relocation and Real Properties Acquisition Policies Act of 1970 (URA) as amended, 42 U.S.C. § 4601 et seq. (the "URA"). EPA has conducted repeated inquiries to determine whether each individual unit owner is in compliance with his/her mortgage obligations, and has consistently found each to be in compliance. EPA has evidence that, though one couple did not obtain a final certificate of occupancy or title to their unit, they had virtually completed renovations and had partially moved in to the building prior to identification of widespread mercury contamination.

GE states that "EPA has steadfastly refused to name the [GSAP] or any of the Site owners as PRPs." Under CERCLA and the NCP, EPA does not consider the liability of any person in selecting a remedy. Therefore, liability issues are irrelevant in the ROD process.

5.1.1. Comments Pertaining to EPA's Risk Assessment and Remedy Selection

5.1.1.1. Comment (page 11): GE stated that "EPA concludes that there is no viable available technology that can remediate the building to the exposure standards that the Agency has selected, and therefore the ... building must be destroyed." GE goes on to state that EPA's Risk Assessment was performed "for the sole purpose of supporting EPA's pre-ordained remedial preference, demolition of the [buildings at the Site]."

EPA Response: This comment inaccurately represents EPA's conclusions regarding remedy development and selection. EPA strictly adhered to the NCP in arriving at its selection of a remedy for the Site. EPA did not have a pre-ordained remedy in mind for the Site, and EPA did not simply conclude in its Focused Feasibility Study (FFS) or Proposed Plan that the buildings at the Site could not be remediated as indicated by the above comments. Further, EPA did not select the remedial action goals (referred to by GE as "exposure standards"), but calculated them in a detailed Risk Assessment. Because this comment does not accurately reflect EPA's decisionmaking process, EPA wishes to explain in detail that process, and therefore EPA's conclusions for remedy selection at the Grand Street Site, in its response to this comment.

In accordance with NCP Section 300.430(b), EPA first conducted a Technical Engineering Evaluation to identify and evaluate numerous available technologies and process options for remediating the liquid and gaseous phases of elemental mercury contamination present at the Site. EPA's Technical Evaluation also assessed the likelihood of successful remediation of the buildings for residential reuse, and estimated costs for such remediation, and costs for demolition in the event remediation was either infeasible or unsuccessful. The Technical Evaluation assessed the effectiveness of eight technologies and process options, and concluded that the success of a remedial attempt would be unknown and could only be ascertained after the attempt was made and long-term monitoring had occurred. The Technical Evaluation further cautioned that "unless the building is demolished, ... there will always be the potential for exposure." Technical Evaluation at page vii.

Second, as further specified by the NCP Section 300.430(d), EPA conducted a site-specific risk assessment and, in doing so, EPA did not select exposure standards for the building, but calculated risk-based exposure concentrations using standard EPA procedures and input parameters to arrive at risk-based remedial action goals. These risk-based remedial action goals constitute "exposure standards" specific to the Site. In the Risk Assessment, EPA evaluated risks of exposure to mercury vapors and mercury-contaminated soil from both residential and industrial/commercial worker perspectives, and generated remedial action goals protective of human health and the environment. (Detailed discussion of the Risk Assessment and the development of these remedial action goals can be found in EPA responses to comments 5.1.1.5. to 5.1.1.11., 5.1.1.15., and 5.1.1.17. to 5.1.1.19., below).

As further specified by CERCLA Section 121 and Section 300.430(e) and (f) of the NCP, EPA then evaluated the available technologies and process options, existing monitoring data for the Site, and the conclusions of the Risk Assessment, in a FFS. In the FFS, EPA evaluated five remedial alternatives for the Site 3. EPA is mandated to assess each remedial alternative it evaluates against nine criteria, which are divided into three sections: Threshold Criteria which a remedial alternative must meet in order to be considered for further evaluation, including Overall protection of human health and the environment and Compliance with Applicable or Relevant and Appropriate Requirements (ARARs); Balancing Criteria, any one of which may weigh in favor of or against the selection of a remedial alternative, and include Long-term effectiveness and permanence, Reduction of toxicity, mobility or volume through treatment Short-term effectiveness, Implementability, and

Cost; and Modifying Criteria, which provide for public and local government input to the remedy selection process, including State acceptance and Community acceptance.

3 The five remedial alternatives evaluated by EPA include:

1 - No Action (NCP-mandated to establish comparative baseline)

2 - Residential Building and Soil Remediation; Building Reoccupation by prior Residents; Soil and Ground Water Studies

3 - Residential Building and Soil Remediation; Permanent Relocation; Building Reoccupation; Soil and Ground Water Studies

4 - Industrial/Commercial Building and Soil Remediation; Permanent Relocation; Soil and Ground Water Studies

5 - Building Demolition; Soil Remediation; Permanent Relocation; Soil and Ground Water Studies

In the FFS, EPA did not conclude that available technologies, alone or in combination, could not remediate the building to the risk-based remedial action goals, as is stated by GE. In fact, EPA clearly states in the FFS that in any remediation scenario (as is reflected in the Technical Evaluation as well), success could not be ascertained until after a remediation attempt was made. Due to the extent to which mercury has permeated all components that were sampled in the buildings, EPA believes that some residual mercury would remain after any attempt at remediation. EPA therefore concluded that an extensive post-remediation monitoring program would be necessary to ensure that this residual mercury did not once again migrate into the air in the building and threaten the health of residential or industrial/commercial building occupants.

In Alternative 4, EPA concluded the degree of estimated success to be higher than in a residential scenario (as in Alternatives 2 and 3), due to higher, more readily attained remedial action goals. However, for all three Alternatives, it would be impossible to ensure without long-term monitoring that there would be no future risk associated with residual contamination in the building structure. More importantly, the implementability of Alternative 4 is problematic for the land use considerations discussed below.

In addition to these issues, in its selection of remedies at CERCLA NPL sites, pursuant to OSWER Directive Number 9355.7-04 ("Land Use Guidance"), EPA must consider the reasonably anticipated future land use of the Site. According to this guidance, in developing assumptions regarding the reasonably anticipated future land use at the Grand Street Site, EPA must look to current land use, current zoning and anticipated future zoning plans as expressed by elected officials and the affected community, and current institutional controls at the Site, among other considerations. Specifically, the major points of the Directive which are applicable to the Grand Street Site mandate:

- ! discussions with local land use planning authorities, appropriate officials, and the public to assist EPA in understanding the reasonably anticipated future uses of the land on which the Site is located;
- ! that the Remedial Action Objectives developed for the Site reflect this anticipated land use;
- ! that the Risk Assessment and the Feasibility Study be focussed on developing remedial alternatives which should lead to selection of alternatives consistent with this anticipated future land use; and,
- ! that land use in the area following completion of the remedy is considered as part of the remedy selection process.

At the Grand Street Site, EPA has evaluated current land use and determined it to be multi-family residential at the Site, and primarily residential lightly mixed with industrial and commercial properties in surrounding areas. The current zoning for the Site is R-2 Residence District (Stabilization). This zoning is likely to be maintained in Hoboken in the future. In its full context, the Hoboken Code is actually even broader in its aim to protect, conserve, convert and develop residential areas in Hoboken. Specifically, Section 196-15(A) of the Hoboken Code states:

Purpose. The purpose of this [R-2] district is to encourage neighborhood stability through conversion and rehabilitation of residential structures; to facilitate conversion of nonresidential to residential space; and to otherwise reinforce the residential characteristics of this district by restricting uses and structures not compatible with district objectives.

This conclusion is in accordance with repeated communication EPA has received from the City of Hoboken on this subject. In each instance, the City has indicated that it is not amenable to re-zoning the Site from its present R-2 District designation. EPA has also been repeatedly informed by the City and the local community that Hoboken is presently undergoing an observable and significant change from past industrial and commercial operations to residences.

In recent years, Hoboken's residential real estate is increasingly prized for residential, not industrial purposes. In 1979, there were approximately 1,709 residential parcels in Hoboken. By 1997, that number more

than tripled to approximately 5,963 parcels. In contrast, industrial development has virtually halted as evidenced by the fact there have been only two new industrial properties constructed since 1979.

In a resolution of May 22, 1997, the City Council and Mayor of Hoboken acknowledge the building to be a "residential building housing 17 families" as of December 1995, and call on EPA to "expediently resolve the issue of permanent relocation of tenants and call for the demolition or removal of 722 Grand Street and the environmental restoration of its land," both of which statements are consistent with future residential land use in the City of Hoboken. This trend to residential land use in Hoboken is also observed by GE's own independent appraisers, who acknowledge that:

Portions of Hoboken have recently been revitalized and some older buildings in the area have been renovated/converted to residential use. The demand for residential property in the area is substantially due to its proximity to New York City. ... According to local brokers, there is a strong to moderate demand for new residential construction in the area [and] minimal vacant land is available for such construction.

This issue of future land use was discussed with GE officials at meetings with EPA on March 10 and March 18, 1997. GE has been fully aware of the City of Hoboken Planning for the area throughout the process, and went so far at these meetings as to discuss their past and planned attempts to meet with the City of Hoboken officials to gain reconsideration. EPA can only assume that these meetings either never occurred or were unsuccessful.

These factors, collectively weighed, formed the basis for design of EPA's Risk Assessment and FFS. As described above in detail, in the interest of thoroughness, EPA considered in the Risk Assessment scenarios for worker exposure and thoroughly evaluated a remedial alternative which restores the building to industrial/commercial use. It is not only the Risk Assessment which drove EPA to select building demolition, but the reasonably anticipated residential end use of the property which primarily drives the selection along with other considerations required by CERCLA and the NCP. In its consideration of land use, the preamble to the NCP, which "does not mandate an assumption of future residential land use," also states that "[a]n assumption of future residential land use may not be justifiable if the probability that the site will support residential use is small [emphasis added]." 55 FR 8666, 8710-11 (March 8, 1990). Given all the facts outlined above, specifically that the Site is zoned for residential use, that the Hoboken Zoning Ordinance encourages residential conversion, that the local elected officials indicate they are unlikely to support industrial zoning reclassification or variance and that the Site is currently used for residential purposes, EPA believes that the future, probability that the site will continue to support residential use is large. The Land Use Guidance further defines "reasonable" future industrial land use, specifically, "future industrial land use is likely to be a reasonable assumption where a Site is currently used for industrial purposes, is located in an area where the surroundings are zoned for industrial use, and the comprehensive plan predicts that the site will continue to be used for industrial purposes." EPA has thoroughly evaluated zoning in Hoboken, and has determined that the existing zoning for the site and surrounding area is residential, and will likely remain so in the future.

Accordingly, EPA believes that remediation of the building to industrial standards (Alternative 4), while technically feasible, is inappropriate for and cannot be implemented at the Site. Of those alternatives which assume future residential use of the property (Alternatives 2, 3, and 5), EPA determined that Alternative 5 represents the best balance of trade-offs with respect to the nine criteria as explained below.

EPA determined that residential remediation (Alternatives 2 and 3) and reuse of the buildings may be technically possible but would require long-term monitoring to ensure that protectiveness is maintained for the future residents. While such monitoring is also technically feasible, it would not prevent a potential worst-case scenario in which families re-occupy the building, only to be exposed to mercury at some point in the future. Input received during the public comment period indicates the community would not support reuse of the buildings at the Site. In addition, EPA assessed the possibility of returning the prior residents to the building after remediation, and concluded that the burden of being temporarily relocated for six to seven years combined with the uncertainty of achieving the required low residential cleanup standards would make Alternative 2 unimplementable. Thus, remediation and residential reoccupation of the building (Alternatives 2 and 3) are not implementable, are potentially ineffective over the long-term, and would not be acceptable

to the community. In contrast, Alternative 5 affords the highest degree of implementability and, since it includes demolition and off-site disposal of the building and removal of contaminated soil, provides the highest degree of certainty that the remediation will be successful.

5.1.1.2. Comment (page 11): GE provides a risk assessment overview that states "EPA has conducted a risk assessment that is not based on actual, realistic exposure assumptions and risk but, instead, has predicated its decisions on implausible exposure scenarios chosen, it would appear, for the sole purpose of supporting EPA's pre-ordained remedial preference-demolition of the factory," and that "EPA has selected a remedy that is first and foremost based on the Agency's evaluation of potential risks of mercury exposure.

EPA Response: First, as stated in EPA's response to Comment 5.1.1.1. above, and detailed in response to Comment 5.1.1.4, below, EPA developed appropriate exposure standards. Second, as explained in EPA's response to Comment 5.1.1.1., EPA has not had a pre-ordained remedy for the Site. EPA has properly followed the steps required by CERCLA and the NCP to reach a Proposed Plan. Furthermore, as explained in detail in EPA's response to Comment 5.1.1.1., risk assessment and future residential land use scenarios are driving remedy selection at this Superfund site.

5.1.1.3. Comment (page 11): GE states that, in arriving at its selection and proposal of a remedy for the Site, EPA "rush[ed] to a judgement that has been unduly influenced by community pressure."

EPA Response: EPA's decision to act promptly in arriving at a decision for the Site was based primarily on three concerns. First, EPA was and remains concerned that the levels of mercury in this building pose a significant health threat to inhabitants of the building as well as the surrounding community in the event of a "worst case scenario" fire. Second, EPA is concerned with the impacts that dissociation and temporary relocation have had on the prior Site residents, which will continue until, at a minimum, the temporary relocation ends. Third, based on EPA's experience at other sites, EPA knows that temporary relocation programs are potentially very costly. The longer the time to arrive at a decision, the longer and therefore the more costly the temporary relocation.

Of the 33 comments, received by EPA, 30 expressed support for the proposed remedial alternative. EPA only received two responses entirely opposed to the proposed remedial alternative, and both responses called for remediation of the building for future industrial/commercial end use, no soil remediation, and for EPA not to provide permanent relocation to the dissociated former building residents. EPA also received one response which voiced support for permanent relocation of the dissociated former residents, but called for remediation of the building for future industrial/commercial end use.

5.1.1.4. Comment (page 12): GE stated that "EPA relies on the Risk Assessment as the basis for rejecting other viable alternatives, including remediation of the [buildings] to current industrial standards."

EPA Response: GE is incorrect if it means by this comment that the Risk Assessment formed the only or primary basis for rejecting other alternatives at the Site. It is not only the Risk Assessment which drove EPA to select building demolition, but the reasonably anticipated residential end use of the property which primarily drives the selection along with other considerations required by CERCLA and the NCP. As discussed in EPA's response to comment 5.1.1.1. above, EPA followed the provisions specified by Section 300.430 of the NCP in arriving at its selected alternative. Consideration of the Risk Assessment was only one portion of EPA's overall evaluation of the alternatives which were developed.

5.1.1.5. Comment (pages 12): GE states that "the risk assessment is fundamentally flawed" and that "EPA instead should have looked to existing exposure standards and guidance to derive an appropriate mercury level." GE continues, stating that the risk assessment failed to utilize existing occupational exposure standards "developed by agencies whose mission it is to put forth exposure standards assuring the safety of workers..." and that EPA offered "no sound reason why these preexisting standards are not appropriate for the Site. GE argues that therefore the risk assessment "cannot be used to support EPA's preferred remedial alternative" for the Site.

EPA Response: This comment suggests that EPA should depart from its longstanding environmental risk assessment principles and instead adopt risk assessment methodologies and policies intended for an

industrial/commercial occupational environment. The existing occupational exposure standards referred to by GE on pages 19 to 26 of its comments include standards promulgated by OSHA, NIOSH, ACGIH, the World Health Organization, and 16 countries other than the United States. These standards apply to environments where: mercury is widely used; the knowingly exposed population is cognizant of the hazards of such exposure; the population is trained in the use of personal protective devices to protect itself in the event of exceedances of the standards; the population is trained to control such exceedances; the population has access to biological/medical monitoring programs. Such populations are therefore afforded a lesser level of protection under these standards as compared to analogous environmental standards. These occupational standards are not appropriate for environmental risk assessment, and are therefore not appropriate where the type of future industrial/commercial operations, and attendant protective contingency measures, would be unknown.

The prominent features that distinguish occupational from environmental standards are the populations at risk and the level of protectiveness afforded to those populations. The population in an occupational setting is somewhat self-selected in that they likely have no predisposing conditions that would result in heightened sensitivity to the agent of concern. This phenomena is commonly referred to as the "healthy worker effect." Regarding level of protectiveness, there are two considerations. First, workers covered under OSHA standards are afforded various ancillary protective measures which typically include Right-to-Know regulations, access to and training in the use of personal protective devices, and biological/medical monitoring programs. The second issue relates to the margin of safety employed in the development of occupational/environmental standards. Specifically, Section G (b) (5) of OSHA (1970) states: "The secretary, in promulgating standards dealing with toxic materials or harmful physical agents under this subsection, shall set the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence, that no employee will suffer material impairment of health or functional capacity even if such employee has regular exposure to the hazard (emphasis added)." Environmental standards have a different purpose.

Clearly, there are different yardsticks for establishing acceptable exposure limits under occupational and environmental conditions. In performing the risk assessment under CERCLA for the Grand Street site, an industrial/commercial future land-use was considered plausible and therefore included. However, since it would be beyond the scope of the Superfund program to dictate the specific commercial usage of the Site (with the attendant occupational society provisions), an occupational cleanup goal was derived that was consistent with risk assessment methodologies for protecting the general public (under modified worker exposure assumptions), including sensitive sub-populations, rather than one intended for a self-selected population that tacitly accepts the hazards associated with a particular occupation. The risk assessment methodology employed for the Grand Street followed strictly adhered to NCP Section 300.430(d), and applicable EPA risk assessment guidance documents (Risk Assessment Guidance for Superfund, 1989, EPA/540/1-89/002 and Draft Exposure Factors Handbook, EPA/600/P-95/00BA, 1995) which direct that the risk assessment be an analysis of potential adverse health effects (current or future) caused by hazardous substances released from the site in the absence of any actions or controls to mitigate these releases. To conduct the risk assessment and generate a site-specific industrial/commercial risk-based cleanup goal assuming (as OSHA does) that all appropriate occupational safety provisions would be in place, would be contrary to the aforementioned statutory requirements and regulatory guidance.

5.1.1.6. Comment (pages 14-15): GE states that "EPA's risk assessment and selected remedial alternative are fundamentally flawed and overly conservative." GE further states that EPA's proposed industrial/commercial cleanup goal "is based on bad science," contending that the EPA "employed an unusual and unnecessarily convoluted process that started with exposure levels for the entire population, including sensitive subgroups, and reverse-engineered that standard to derive an impractical workplace exposure number." According to GE, "this is an unconventional approach that was compounded by errors and implausible assumptions, all of which led to an unrealistic and unnecessarily strict standard."

EPA Response: These statements are incorrect. The risk assessment was neither unusual nor unnecessarily convoluted. The process followed all the standard applicable EPA guidance for conducting risk assessments under CERCLA. GE offers no specific instances where procedures were utilized that did not conform with applicable EPA guidance. The issue of performing a toxicity assessment that overtly considers sensitive populations has been addressed by EPA above in its response to comment 5.1.1.5. To reiterate: the risk assessment was performed to assess hazards in a generic workplace that would be populated by members of the public at large, rather than inappropriately assuming a self-selected worker population specifically tailored

to a facility utilizing mercury as a regular part of its processing. The "reverse engineering" of the derived standard is common practice and its methods are described in detail in "Risk Assessment Guidance for Superfund, Part B: Development of Risk-Based Remediation Goals." EPA would like to clarify that it is not a "standard" that is reverse engineered; rather, it is an acceptable risk level that is back-calculated to generate a risk-based preliminary remediation goal. Contrary to its statement, GE offers no evidence of errors made in the risk assessment.

Regarding its assertion that EPA used "implausible assumptions," GE refers specifically to the lack of documentation supporting EPA's use of an inhalation rate of 20 m³ per workday in the risk assessment, which differs from the 10 m³ per workday value employed by OSHA and ACGIH. Regarding the documentation issue, the risk assessment (Page 3-14) cites two references (Human Health Evaluation Manual, Supplemental Guidance: "Standard Default Exposure Factors, " 1991; and Draft Exposure Factors Handbook, 1995) as the basis for residential and occupational inhalation rates. The Standard Default Exposure Factors guidance (OSWER Directive 9285.6-03, March 25, 1991) which was developed by an inter-agency group of risk assessment experts, recommends an inhalation rate of 20 m³ per workday as a reasonable maximum estimate (as per Risk Assessment Guidance for Superfund, 1989) given consideration to various (i.e., light, moderate and heavy) weighted work activities. The use of a reasonable maximum estimate for workday inhalation rate accounts for the difference between the value of 20 m³ used in the risk assessment and the value of 10 m³ employed by OSHA and ACGIH. It should also be noted that the risk assessment included a "central tendency" workday inhalation rate of 13.3 m³, which is only slightly greater than the value recommended by GE.

5.1.1.7. Comment (page 15): GE states that "EPA's proposed remedy is ... suspect because [EPA] fails to even consider future end use of the [Site] for industrial purposes, a purpose for which the [Site] remains well-suited today," and "EPA assumes, rather, "than demonstrates, that remediation to industrial standards is infeasible."

EPA Response: As stated previously in EPA response to comment 5.1.1.1., EPA did consider and evaluate a remedial alternative under which the Site would be remediated to industrial/commercial end use. As also discussed above, future industrial/commercial use of the Site is unlikely considering the present and future R-2 Residence District (Stabilization) zoning at and around the Site, and the fact that the City of Hoboken is not amenable to changing that zoning for industrial/commercial use. EPA has concluded that the reasonable anticipated future use of the Grand Street Site is residential. This conclusion is based on several factors. First and foremost is a review of current land use trends in Hoboken. In recent years, Hoboken's residential real estate market has thrived. See the land use discussion in EPA's response to

Comment 5.1.1.1.

Another important consideration is the input of the local community. City officials and community members have repeatedly made the case to EPA that Hoboken is undergoing a significant transformation, with properties converting from industrial and commercial operations to residences. In a May 22, 1997 resolution, the City Council and the Mayor of Hoboken recognized that, as of December, 1995, the Grand Street building was a "residential building housing 17 families." The resolution asked EPA to "expediently resolve the issue of permanent relocation of tenants and call for the demolition or removal of 722 Grand Street and the environmental restoration of its land."

Finally, the zoning of the Grand Street Site supports residential use. The current zoning for the Site is "R-2 Residence District (Stabilization)." A March 2, 1993 Resolution from the Planning Board of the City of Hoboken states that "one of the purposes of the R-2 District under Section 196-15 of the Zoning Ordinance is to facilitate conversion of non-residential to residential space." This conclusion is consistent with repeated communications EPA has received from the City of Hoboken, in which the City has indicated that it is not amenable to re-zoning the Site from its present R-2 District designation.

5.1.1.8. Comment (page 18, and page 16, footnote 7): GE states that "the RfC is a general population exposure standard that should not be used as the basis for setting an occupational exposure level." GE also states that "EPA's starting point, the RfC for mercury, is itself based on the assumption that exposure to mercury at an air concentration of 25 µg/m³ is associated with adverse health effects. In fact, 25 µg/m³ is itself a protective occupational exposure level for mercury." GE quotes OSWER Directive 9285.7-16 as

obligating EPA to provide a written explanation for the value ultimately selected, when that toxicological value is questioned in a comment to a proposed plan.

EPA Response: EPA's response to this comment is explained in detail in EPA's response to comments 5.1.1.4. and 5.1.1.5. above. EPA also explains its selection of the toxicity factor (i.e., RFC) for elemental mercury vapor for the purposes of the site-specific risk assessment in the risk assessment itself, which is part of the administrative record for the Site. Additionally, as documented in Attachment 1, EPA is justified in selecting the Integrated Risk Information System (IRIS) verified RFC for mercury vapor of 0.3 Ig/m^3 , instead of selecting the value of 25 Ig/m^3 developed by ACGIH, which is proposed by GE as the applicable toxicity value for the Site. Interestingly, GE concedes an observation made by ACGIH that suggested adverse effects at occupational exposure levels below the previous TLV of 50 Ig/m^3 . In fact, most of these human occupational inhalation studies (see appendix) referenced by ACGIH, form the basis of EPA's estimated Lowest-Observed-Adverse-Effects Level (LOAEL) of 25 Ig/m^3 . Obviously, ACGIH stopped there and based on its review of the scientific literature concluded that "to protect the CNS and kidneys, a TLV-TWA of 25 Ig/m^3 is recommended. In keeping with EPA's regulatory principal of providing an adequate margin of safety in assessing toxicity, when RFC's are derived from studies reporting LOAELs rather than No-Observed-Adverse-Effect-Levels (NOAELs), a safety factor of ten is employed. An additional safety factor of three was employed to account for the incomplete database, particularly developmental and reproductive studies. A detailed description of this calculation can be found at Attachment 1.

5.1.1.9. Comment (page 20): GE States that the OSHA "PEL of 100 Ig/m^3 remains in effect as the only enforceable mercury exposure standard for industrial settings in this country." Further, GE claims that "EPA recognizes the OSHA PEL as an ARAR for the Factory."

EPA Response: GE fails to properly designate this OSHA PEL value as a "Ceiling" (i.e., not to be exceeded) rather than a time-weighted average. It is possible for the "ceiling" exposure limit for a particular chemical to be many times higher than its respective time-weighted average exposure limit. For instance, the PEL (time-weighted average) for organo-mercury compounds is 10 Ig/m^3 while the corresponding "ceiling" value is 40 Ig/m^3 .

With regard to OSHA PELs as ARARS for the Site, as indicated in page 48 of the FFS, OSHA is considered by U.S. EPA to be a "non-environmental law," which is not an ARAR.

5.1.1.10. Comment (page 21): GE cites ACGIH as stating that there is "a threshold for preclinical changes of CNS and kidney effects at 50 ug Hg/g creatinine." GE then indicates that "this concentration corresponds roughly to a concentration of 100 Ig Hg/liter of urine."

EPA Response: GE's conversion of Ig Hg/g creatinine to Ig Hg/liter of urine appears a bit overstated. GE assumes that 50 Ig Hg/g creatinine in urine corresponds roughly to a concentration of 100 Ig Hg/liter of urine. The Merck Manual cites urinary creatinine elimination in a normal (70 kg) adult as $1.05 - 1.75$ grams per day. The same reference cites urinary volume in a normal adult as $.7 - 2$ liters per day. Based on these ranges, the relationship between a microgram of Hg/g creatinine and a microgram of Hg/liter urine can vary significantly. For example, 50 Ig Hg/g creatinine in urine corresponds to a range of 25 to 125 Ig Hg/liter of urine. While GE's estimate falls within this range, it has provided a skewed rather than central estimate of daily urinary mercury elimination. Therefore, this threshold of preclinical changes may be occurring at levels up to four times lower than GE indicates.

5.1.1.11. Comment (page 23): GE repeatedly makes reference to the fact that ACGIH and OSHA standards for airborne mercury exposure carry a "skin" notation. GE states "[b]ecause there would be no opportunity for dermal contact with mercury at the factory if it was appropriately remediated, this would yield an additional margin of safety compared to a workplace where the air level met the ACGIH TLV but additional skin contact leading to a higher systemic dose) was possible."

EPA Response: The possibility for percutaneous absorption of mercury occurring is not just from direct contact with liquid elemental mercury. Because GE has indicated elsewhere in its comments that "appropriate remediation" of the building would include achieving compliance with existing mercury vapor exposure standards as high as 25 Ig/m^3 (ACGIH) or 100 Ig/m^3 (OSHA), workers could continue to be exposed to mercury

vapors in an industrial/commercial use scenario. GE has provided an incomplete representation of the ACGIH (or OSHA/NIOSH) "skin" notation. ACGIH states that the "skin" notation refers to the potential contribution to the overall exposure by the cutaneous route including mucous membranes and eye, either by airborne or direct contact with the substance. In fact, the percutaneous absorption of elemental mercury vapor has been experimentally determined. Hursh et al. (1989), as reviewed in "Dermal Exposure Assessment: Principles and Application" (EPA/600/8-91/011B, January 1992), exposed the forearms of five human volunteers to mercury vapor. The rate of uptake by the skin was estimated to be 2.6% of the rate of uptake by the respiratory tract.

5.1.1.12. Comment (page 28): GE states that, "regarding [the] technical infeasibility [of remediating the Site for industrial/commercial use GE] has considerable experience and success in remediating former industrial facilities to current industrial standards..."

EPA Response: As previously stated above in EPA's response to comment 5.1.1.1., EPA does not dispute it is potentially feasible to rernediate the buildings at the Site for industrial/commercial use. Additionally, although GE may indeed have considerable experience in this area, the reasonably anticipated future residential use of the Site precludes remediation of the Site for industrial/commercial use.

GE states in its comments that the Cuyahoga plant is similar in structure to the Grand Street Site, being constructed of brick exterior, concrete foundation and wooden interior structural components. GE claims to have had success in remediating this building to below the ACGIH standard of 25I_g/m³, primarily via encapsulation. On February 6, 1997, EPA visited GE's Cuyahoga, OH, facility to discuss GE's remediation of this very facility, among others. At the time of the EPA visit, GE could not provide records documenting its claim that the building satisfied ACGIH standards, nor did it utilize any mercury vapor monitoring device to document that mercury vapors levels were below the 3I_g/m³ level, that GE indicated they were. No data have been provided to EPA in support of these comments, nor has such data ever been provided to EPA, demonstrating that GE was capable of successfully remediating the building to satisfy any level of worker safety. In any event, these claims of remedial expertise and capability remain overshadowed by the zoning issues which must be considered in the CERCLA remedy selection process.

5.1.1.13. Comment (page 31): GE states that, in light of GE's ability to achieve industrial/commercial remediation goals, "remediation to industrial/commercial standards is the most cost-effective option that assures protection of human health and the environment, and this ... should ... be selected by EPA as the appropriate remedy for the [buildings at the Site]."

EPA Response: See EPA's response to comment 5.1.1.1 for a discussion of land use and why current and future land use considerations make an alternative which assumes industrial use of the Site unimplementable. A discussion of cost-effectiveness in the remedy selection process is presented below.

Cost-effectiveness is determined by evaluating long-term effectiveness and permanence, reduction of toxicity, mobility, or volume through treatment, and short-term effectiveness in order to determine overall effectiveness. Overall effectiveness is then compared to cost to ensure that the remedy is cost-effective. A remedy is considered cost-effective if its cost are proportional to its overall effectiveness. While all of the remedial alternatives evaluated by EPA, with the exception of Alternative 1 - No Action, offer overall protection to human health and the environment and achieve ARARs, they do so to varying degrees in terms of cost-effectiveness. The differences, including balances and trade-offs, are discussed below:

Alternative 2 is the least expensive of the four protective alternatives at \$9,821,000. While theoretically possible to implement, this remedial alternative does not provide assurances that it will be effective over the long term. Complications with achieving extremely low remedial action goals might necessitate revisiting the remedy and selection of a different remedy for the Site (including additional relocation), at increased cost. Additionally, complications with achieving remedial action goals could delay remedy completion, which would increase costs for remediation and temporary relocation activities.

Alternative 3 has a present worth cost of \$13,096,000. This alternative presents many of the same concerns as Alternative 2. For instance, complications with achieving extremely low remedial action goals might necessitate revisiting the remedy and selection of a different remedy for the Site (including additional

relocation), at increased cost.

Alternative 4 has a present worth cost of \$12,807,000. This alternative presents all of the same concerns as Alternative 2 and 3, though to a lesser degree since the remedial action goals are less stringent and therefore more likely to be achieved. Irrespective of cost, however are land use considerations, which preclude industrial/commercial remediation of the buildings in light of present zoning and population trends in the City of Hoboken.

Alternative 5 has the highest present worth cost of the four alternatives at \$13,861,000. Although highest in cost, it is not significantly higher than Alternatives 3 or 4. However, this alternative presents none of the uncertainties inherent in Alternatives 2, 3 or 4, and ensures that remedial action goals will be achieved.

EPA has therefore determined the selected remedy to be cost-effective because it provides the greatest overall long-term and short-term effectiveness in proportion to its present worth cost.

5.1.1.14. Comment (page 33): GE states that "at the end of renovation to commercial/industrial standards, there will be left standing a usable structure. This is consistent with EPA's current Brownfields initiatives to return Superfund sites to productive industrial use."

EPA Response: EPA strongly disagrees with this comment, as GE has misinterpreted EPA's Brownfields program. EPA's Brownfields Economic Redevelopment Initiative is designed to empower States, communities, and other stakeholders in economic redevelopment to work together in a timely manner to assess, safely clean up, and sustainably reuse Brownfields. EPA defines Brownfields as abandoned, idle, or under-used industrial and commercial facilities that have actual or perceived contamination and an active potential for redevelopment or reuse. In accordance with this Initiative, EPA has undertaken numerous efforts including:

- ! providing grants for Brownfields pilot projects;
- ! building partnerships and outreach among federal agencies, states, municipalities and communities; and
- ! fostering local job development and training initiatives.

Although, as GE acknowledges, EPA's Brownfields Initiative excludes Superfund National Priorities List sites, EPA is committed to promote efforts to returning all sites, both NPL and non-NPL to beneficial, productive uses, wherever practicable. The beneficial, productive use of a Site, both under the Brownfields concept or the Superfund program is not, as GE states, expressly industrial or commercial. Rather, it can also be residential or recreational depending on those factors relating to land use as describe in EPA's OSWER Directive No. 9355.7-04 - "Land Use in the CERCLA Remedy Selection Process" which is applicable for both NPL cleanups and for the Brownfields program.

5.1.1.15. Comment (page 34): GE states that EPA inappropriately assumed that "the Factory is appropriate for residential use and has conducted a risk assessment to fit that assumption." GE further states that EPA was unjustified in following that approach "because it was only through an unlawful process that this longstanding industrial property was converted for residential use in the first place."

EPA Response: First, it must be noted that the Site is no longer a factory. Second, EPA considered and evaluated industrial/commercial future uses of the property - EPA did not just look at future residential uses of the property. Third, as explained in response to comment 5.1.1.1, above, the Risk Assessment process did not proceed with a pre-ordained remedy in mind. Fourth, GE indicates that the conversion of the building to residential use was unlawful because ECRA was not complied with. While it is true that the Negative Declaration issued by the NJDEP was later rescinded, the rescission letter does not specifically state that ECRA was not complied with. In fact, that is the subject of the lawsuit now pending between GE and various others, and a determination has not yet been made by the courts. It would be premature for EPA to make the assumption that the conversion was unlawful. Further, even if the conversion was unlawful, that does not affect the future land use of the Site, which is what EPA must consider in formulating its remedy. Finally,

the legality or illegality of the property transfer has no bearing on the implementation of the remedy.

5.1.1.16. Comment (page 34, footnote 12): GE claims that EPA "has devised an unreasonably low cleanup goal of 0.09 /m³ for children for the purposes of the risk assessment which is inconsistent with previous residential cleanup levels advocated by the Agency," and that EPA "fails to explain its rationale for rejecting its earlier cleanup goal of 0.31 Ig/m³ as selected in the Technical Engineering Evaluation for Mercury remediation at the Grand Street Site, and the Agency's own Risk Based Concentration Table..."

EPA Response: The residential cleanup goal of 0.31 Ig/m³ that was included in the Technical Engineering Evaluation for Mercury Remediation at the Grand Street Site (Prepared by Levine-Fricke-Recon) utilized the EPA Region III risk-based concentration (RBC) table. The Technical Engineering Evaluation document was prepared before the risk assessment was finalized in order to expedite the remedial process at the Site.

It should be noted that EPA Region III clearly states in the introduction to its risk-based table that the RBC table does not constitute regulation or guidance, and should not be viewed as a substitute for a site-specific risk assessment. The introduction to the RBC table further states "the table should generally not be used to set clean-up or no-action levels at CERCLA sites." Accordingly, reliance on EPA Region III's risk-based concentrations as a site-specific clean-up goal is inappropriate during final remedy selection.

It is also worth noting that there is a difference in the approach that the risk assessment employs and the assumptions used in the EPA Region III RBC table. EPA Region III RBC table calculates an age-adjusted inhalation factor for residential exposure (total duration of 30 years) by combining the childhood (duration of 6 years) and adulthood exposure (duration of 24 years). Therefore, the cleanup goal of 0.31 Ig/m³ obtained from the EPA Region III table applies to residential exposure (child and adult exposure combined) for a total duration of 30 years. The EPA Region III table does not calculate individual RBCs for children and adults separately. The risk assessment for the Grand Street Site calculated cleanup goals separately for child and adult residents (based on 6 and 30 years of exposure duration) which realistically reflects the most recently exposed populations at the site. The risk assessment was justified in doing that under the residential scenario considering that protecting the health of children is a top priority for EPA. Therefore, while the Region III table is useful as a screening tool, it is not to be used in place of a site-specific risk assessment.

EPA Administrator Carol Browner has made it a priority to consider children's health risks for all of the risk assessments, risk characterizations, and environmental and public health standards that we set for the nation. This position is elaborated in a memo from Administrator Browner (10/20/95) titled "New Policy on Evaluating Health Risks to Children." The memo states "It is the policy of the U.S. EPA to consider the risks to infants and children consistently and explicitly as part of risk assessments generated during its decision making process, including the setting of standards to protect public health and the environment." In explaining the need to perform separate risk assessments for children, the memo states "there are often age related differences in types and levels of exposure....children also breathe more rapidly than adults and can inhale more of an air pollutant per pound of body weight than adults."

5.1.1.17. Comment (page 35): GE states that "[a]lthough the City of Hoboken did grant a Site plan approval for use of the [Site] as residential property - in effect, a variance from the preexisting [sic] industrial use zoning - that approval was predicated on the incorrect premise that the property was in compliance with all applicable environmental laws. Failure to satisfy a pre-condition to Site plan approval such as compliance with state environmental laws warrants a nullification of the Site plan approval," which GE claims (on page 37) "causes the property to revert to its pre-existing industrial use."

EPA Response: To adequately respond to this comment, Corporation Counsel for the City of Hoboken was contacted to discuss the claim raised by GE. He indicated that revocation of the negative declaration approval would not have the effect of reverting the zoning portion of the Site plan, and that the zoning for the property would remain R-2, Residence District (Stabilization). Based upon correspondence received from the Corporation Counsel, EPA's understanding of the zoning matters at the Site is as follows. Prior to 1979, the area around the Site was zoned M-1, Manufacturing. In 1979 the Hoboken Zoning Ordinance was classified R-2, which encouraged residential conversion of non-residential properties. Although the R-2 classification would have allowed the Site property owner to continue with the manufacture of tools and dies under a

variance to the R-2 zoning (or other approval) because the manufacturing operations predated the zoning classification, the property owner never applied for such a variance or other approval. In 1993, when the property was sold, because no variance or other approval had been applied for or obtained, the zoning variance remained R-2 when the property was sold for residential development. The new property owners applied for and obtained a "bulk" variance from the R-2 classification in order to construct artist studios alongside the residences at the property. A "bulk" variance was given (as opposed to a "use" variance) for the Site because the use of the Site as residences and artist studios was in conformance with the R-2 District. Even if it could be shown that a precondition to site plan approval (such as compliance with State environmental laws) had not been fulfilled, there is nevertheless no "automatic" nullification of the site plan. However, even if arguing the site plan was ultimately nullified, the zoning would, if anything, revert to R-2 (without the "bulk" variance for artist studios), not to the R-2 variance (which never existed) for industrial use as indicated by GE.

5.1.1.18. Comment (page 37): GE states that "EPA inappropriately relied on residential exposure assumptions in the first instance, rejecting more realistic and more relevant worker exposure scenarios. Even if it were appropriate to rely on residential exposure assumptions, here too EPA has erred by overestimating soil ingestion risks." GE cites a single study (Stanek, 1992) to argue a mean soil ingestion rate in children of 50 mg/day.

EPA Response: EPA has not overestimated soil ingestion risks. EPA has assumed that in time the parking lot might degrade and contaminated soils might be exposed. Consistent with the appropriate Superfund guidance (Standard Default Exposure Factors, 1991), a childhood soil ingestion rate of 200 mg was employed as an estimate of the reasonable maximum exposure. EPA's "Guidance Manual for the Integrated Exposure Uptake Biokinetic Model for Lead in Children," (EPA/540/R-93/081PB93/93510, February 1994) cites four tracer studies (Davis, 1991; Calabrese, 1989; Binder, 1986; and Clausen, 1987) that all report composited mean soil ingestion rates of greater than 100 mg/day. It should be noted that the Grand Street risk assessment included a "central tendency" soil ingestion rate for children of 100 mg/day.

5.1.1.19. Comment (page 38): GE states that "In the risk assessment EPA assumes, for instance, that 100% of the elemental mercury ingested would be absorbed through the gastrointestinal tract." GE asserts that a 20% bioavailability factor should be employed, thus reducing the risk estimate "by a factor of five."

EPA Response: GE is incorrect regarding the oral bioavailability of mercury in the case of soil ingestion at the Site. Adjusting the bioavailability term to account for the difference in absorption between the dosing vehicle employed in the critical study (upon which the toxicity value is based) and the medium being assessed (in this case, soil) is scientifically sound and appropriate when there are sufficient data to support this adjustment. The adjustment that GE claims should be made would only be appropriate if it was known with some degree of scientific certainty that the absorption of mercury in the critical study, which forms the basis of the RfD, was 100%. However, a review of the IRIS database indicates that the RfD was based on a weight-of-evidence of three separate studies. On one of these, the mercury was administered subcutaneously; the other two employed oral regimens (one administered in feed, the other in solution by gavage). While it would be reasonable to assume that the subcutaneous dosing route represents near complete (i.e., 100%) absorption, the IRIS file contains a footnote indicating poor (i.e., 7%) absorption from the studies employing the oral route of administration. Given the variability in absorption in the three studies that form the basis of the RfD, in this case, it would be inappropriate to adjust the bioavailability factor of soil-borne mercury.

In a footnote to this comment, GE states that EPA faced similar criticism for incorrect assumptions that lead is readily bioavailable, such that "the Agency has, under criticism, belatedly revised its lead exposure assumptions." This statement is vague, and, as best can be determined due to its vagueness, incorrect. EPA utilizes a default estimate of 30% bioavailability for soil-borne lead absorption in children, and in keeping with the aforementioned principals would adjust the term on a site-specific basis based on scientifically sound studies.

5.1.1.20. Comment (page 39): GE states "studies of adults indicate that mean soil ingestion rates are considerably lower than the EPA default values and are on the order of 10 mg/day." The citation for this statement is Calabrese, 1996.

EPA Response: EPA questions the appropriateness of this statement. First, it states that it has been "accepted" for publication, yet has not actually been published, making review difficult. Second, the working title of this paper is "Soil ingestion rates for children residing on Superfund sites (emphasis added)," not adults. The soil ingestion rate of 50 mg/day, utilized by EPA in the worker soil exposure scenario in the Risk Assessment, cited in Superfund's "Standard Default Exposure Factors, 1991" has, as its basis, a study conducted by Calabrese, 1990. The Calabrese, 1990 study specifically addresses soil ingestion rates in adults.

5.1.2. Comments Pertaining to EPA's Estimated Remedial Costs

5.1.2.1. Comment (page 39): GE states, as pertains to proposed permanent relocation, that "EPA's costs for its preferred remedial alternative are inflated and unsupported in the administrative record" given EPA's assertion that EPA-conducted property appraisals are privileged. GE additionally states that "[a]ccordingly, EPA has failed to comply with the administrative record requirements of CERCLA and the NCP and has frustrated the ability of [GE] and other interested parties to comment meaningfully in these cost estimates." Based on independent appraisals of the property conducted at the direction of GE, GE suggests a property acquisition value of "approximately \$6.2 million to \$6.5 million."

EPA Response: EPA agrees that CERCLA requires EPA to provide a meaningful opportunity to comment and provide information regarding the Proposed Plan. 42 U.S.C. Section 9613(k)(2)(B)(ii), 40 C.F.R. Section 300.430(f)(2). However, the NCP also states that "[p]rivileged documents shall not be included in the record file..." 40 C.F.R. Section 300.810(c). The NCP directs that these documents shall be placed in the confidential portion of the administrative record, and that is what occurred here. 40 C.F.R. Section 300.810(d).

EPA provided summaries of the appraisal estimates in the publicly available portion of the administrative record, to which GE and other interested parties have full access. These appraisal summaries contain estimated values for each of the units, which are the primary bases for the cost estimate for property acquisition and therefore permanent relocation. When coupled with the explanations for cost development in the FFS, EPA did provide access to much of the information GE claims it required to conduct a "meaningful" review.

GE also conducted independent appraisals of the property at 722-732 Grand Street, which EPA has reviewed. These appraisals appear to be inconsistent with fair market property values. Though EPA will not exhaustively discuss the appraisals in this document, EPA will take the opportunity to point out several inconsistencies with the appraisals in assessing the actual value of the property. GE's appraisers never entered the buildings and are not personally aware of the extent of renovation or size of the individual units; all information provided to the appraisers regarding the general condition, level of finish and quantity and quality of the fixtures was provided by representatives of GE. As stated in the appraisal itself, this appraisal process represented a departure from Rule 1 of the Uniform Standards of Professional Appraisal Practices. The appraisers also neglected to calculate the value of the common areas of the property, including the foundation and interior support walls, shared plumbing and electrical fixtures, and the land on which the buildings reside, which value constitutes a significant portion of the cost estimate. Further, the appraisers do not calculate the value of the townhouse at 720 Grand Street, though GE does provide an assumed value for the townhouse in the body of its comments. By taking the upper bound limits of the appraisals (since the appraisers never entered the property), and the townhouse estimate collectively, and using the value from EPA's FFS for the value of the common areas of the buildings, EPA believes GE's estimated cost for property acquisition to be approximately \$7.9 million. This value, though it significantly underestimates property acquisition costs, is well within EPA's cost estimation requirements for remedial alternative development as specified in EPA's "Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA (EPA540/G-89/004). When added to the cost of other remedial components, the differences are even less significant.

5.1.2.2. Comment (page 40): GE states "EPA's estimate of the value of the [condominium] units is more than two times the value of the units as evaluated by the owners themselves in 1995," as reflected in a 1995 insurance policy in the amount of \$3,990,000.

EPA Response: EPA does not agree with GE's claim that insurance values are appropriate indices of fair market real estate values. Furthermore, EPA wishes to point out that insurance coverage in the amount of \$3,990,000 was obtained for the building itself, and is not reflective of any insurance policies that may have been held concurrently by the owners of the individual condominium units, or of the value of the associated land. Additionally, the amount of insurance carried by the owners is irrelevant as to the determination of fair market value. The URA requires that EPA provide a displaced person with just compensation for his/her property, which must not be less than EPA's approved appraisal of fair market value of the property to be acquired.

5.1.2.3. Comment (page 41): GE states, in reference to EPA's denial of EPA-conducted appraisals as enforcement sensitive and/or interagency memoranda when requested by GE under the Freedom of Information Act (FOIA), that EPA has hidden "behind the cloak of these [FOIA] exemptions to exclude material information from the administrative record."

EPA Response: EPA maintains that it has the right to withhold enforcement sensitive information pursuant to Sections 5 and 7 of the FOIA. 5 U.S.C. Sections 552(b)(5), 7(A), 7(C). EPA further states that the documents which were withheld in response to GE's FOIA request are the subject of a FOIA appeal, which is currently pending before EPA Headquarters. GE can expect a response to its FOIA appeal from EPA Headquarters. Finally, as is clearly demonstrated above, in EPA response to comment 5.1.2.1., EPA has maintained these documents in the confidential portion of the administrative record, and has also provided substantive summaries of the documents GE requested in the public repository for the Site in Hoboken.

5.1.2.4. Comment (page 42): GE states that "EPA's [permanent relocation] cost estimate grossly overstates the actual out-of-pocket expenses of the owners.

EPA Response: EPA did not consider out-of-pocket expenses in the context of permanent relocation. Permanent relocation will be undertaken in accordance with the provisions of the Uniform Relocation and Real Properties Acquisition Policies Act of 1970 (URA) as amended, 42 U.S.C. § 4601 et seq., and Department of Transportation (DOT) regulations at 49 C.F.R. Section 49. The URA requires that EPA provide a displaced person with just compensation for his/her property, which must not be less than EPA's approved appraisal of fair market value of the property to be acquired. 42 U.S.C. Section 4651.

The only context in which EPA looked to the out-of-pocket expenses of the owners of the Grand Street property is to estimate the cost to reconstruct unit interiors in alternative two. These estimates are well documented in the FFS.

5.1.2.5. Comment (page 43): GE states that "EPA has apparently not reduced the cost of permanent relocation to take into account the amount of insurance coverage available to the displaced former residents. Any permanent relocation effort undertaken by EPA is governed by the [URA] and the Federal Emergency Management Agency (FEMA) regulations, 44 C.F.R. Part 221."

EPA Response: GE mistakenly represents that EPA permanent relocation actions are governed by FEMA. In fact, the regulatory provisions of the Department of Transportation, which are codified at 49 C.F.R. Part 24 et seq, were adopted by EPA pursuant to the requirements of the URA. These EPA regulations are located at 40 C.F.R. Section 4.1. Additionally, EPA notes that GE's reference to 44 C.F.R. Section 220.4 on page 43 is particularly inappropriate, not only because it cites FEMA regulations, but because it cites regulations for temporary relocations, not permanent relocations, in a section of comments where GE is attempting to use the regulations to illustrate a point regarding permanent relocations.

Furthermore, with regard to the comment pertaining to the FEMA requirement that relocation benefits be reduced by the amount of available insurance, as explained above, the FEMA regulations cited by GE are inapplicable in this instance. However, the DOT regulations which do apply to EPA permanent relocations, contain a similar provision at

Section 24.3; No duplication of payments

No person shall receive any payment under this part if that person receives a payment under Federal, State, or local law which is determined by the Agency to have the same purpose and effect as such

payment under this part.

To date, EPA is unaware of any such payment being made to the residents, by insurance companies or otherwise. Therefore, there is currently no reason to reduce the costs of permanent relocation by any such amount. However, EPA fully intends that the permanent relocation will be conducted consistent with 49 C.F.R. Part 24 et seq., as specifically indicated in both the FFS and the Proposed Plan. Should a reduction be warranted, it will be taken.

5.1.2.6. Comment (page 43): GE states that EPA "assumes, without explanation, that the residual value of the land after demolition will be available to [EPA to) offset response costs."

EPA Response: Under section 104(j) of CERCLA, EPA may acquire property to conduct a remedial action only when the State in which this action is to be taken assures EPA in a contract or cooperative agreement that it will accept transfer of the property following completion of the remedial action. EPA is now in the process of finalizing a draft SSC with the NJDEP. EPA anticipates that under the final terms of the SSC, following property sale, EPA and NJDEP will be reimbursed based upon the allocation of response costs after deduction of reasonable property transaction costs. EPA, therefore, will presumably be reimbursed 90 percent of monies remaining after transaction costs are deducted, with NJDEP receiving the remaining ten percent.

5.1.2.7. Comment (page 43): GE states that, pursuant to CERCLA § 104 (j) and 42 U.S.C. § 9604(j), "when EPA "takes" [sic] property for remedial action, the State, in this case New Jersey, must agree to take title to the property following remediation."

EPA Response: Correctly quoted, the regulation cited above states, "...the State in which the interest to be acquired is located assures [EPA] that the State will accept transfer of the interest following completion of the remedial action". EPA is in the process of negotiating its SSC with NJDEP and it appears that under the terms of the final SSC, NJDEP will accept title to the affected property after the remedial action is completed. Further, EPA anticipates the terms of the SSC to permit EPA to maintain the property for a period of not more than one year following remedy completion, during which period the U. S. Government may attempt to sell the property directly. If the U. S. Government is successful in selling the property, it will reimburse NJDEP based on its ten percent contribution, after reasonable real estate transaction costs, thereby obviating the need for NJDEP to take title to the property. After the one year period, if the property has not been sold, title will transfer to the State.

5.1.2.8. Comment (page 44): GE states that "EPA estimates the costs of soil remediation to be \$138,000 if the [property] is remediated to industrial standards and \$219,000 if the [property] is remediated to residential standards."

EPA Response: The actual values for these cost estimates, detailed in the FFS, are \$131,250 if the buildings are remediated for either residential or industrial/commercial use (Alternatives 2, 3 and 4), and \$213,400 if the buildings on the property are demolished and the property is remediated and restored to residential use (Alternative 5). EPA did include a figure of \$138,000 in the FFS and Proposed Plan, though this figure also included costs estimated for groundwater sampling.

5.1.2.9. Comment (page 44): GE states that "EPA has relied on insupportable soil ingestion exposure assumptions that result in the Agency's arbitrary and capricious selection of soil remediation for the site."

EPA Response: EPA has addressed the issues relating to soil ingestion exposure assumptions in

EPA responses to comments 5.1.1.18. and 5.1.1.20.

5.1.2.10. Comment (page 44-45): GE states that "if appropriate worker exposure scenarios are used, soil remediation of the Site is unnecessary, and...the costs associated with that [soil] remediation should be deleted" from the cost estimate for alternative four.

EPA Response: EPA agrees. EPA acknowledges that (successful) remediation of the buildings for industrial/commercial occupation would require environmental restrictions on the deed to the property

indicating that the buildings would be unsuitable for residential use. EPA additionally acknowledges that a deed restriction is in place for the asphalt cap covering the subject mercury-contaminated soil, and therefore agrees with the comment, in light of the possibility of institutional controls for mercury which could additionally be placed on the cap. EPA would reduce the cost estimate for Alternative 4 by \$132,000 to \$12,807,000. This change represents a minor fraction of overall remedial costs, and therefore does not change EPA's decision on its preferred alternative. As described in detail above, EPA's selection of its preferred alternative was not driven solely by cost. Rather, it was driven by the analysis required by the NCP, including land use considerations and concerns related to effective remediation to residential or industrial/commercial health standards, which considerations prevail in light of this cost change to remedial alternative four.

5.1.2.11. Comment (page 45): GE states that if EPA "ultimately selects its preferred remedy," EPA "must reevaluate the level of soil remediation required, ..taking into consideration prevailing scientific risk assumptions."

EPA Response: GE makes only two specific comments related to soil ingestion exposure assumptions. These comments, relating to soil ingestion rates and bioavailability of mercury which is ingested, have been addressed in EPA's responses above. Based on these responses, EPA sees no reason to reevaluate its conclusion regarding the need for soil remediation at the Site.

5.1.2.12. Comment (page 45): GE states that EPA is "arbitrary and capricious" and that "EPA has significantly overstated the costs of remediating the building [sic] for residential reoccupancy" where EPA increased the time and cost estimates provided in the March 11, 1997 Technical Engineering Evaluation Report. GE additionally contends that the steps added to the remedial alternative by EPA were "specifically rejected in the Technical Evaluation Report as being inappropriate for the very surfaces for which EPA now suggests they should be used." Further, GE criticized EPA for adding a masonry etching as one of the additional steps, because "nowhere in the Technical Engineering Report does EPA's contractor identify etching the masonry as a viable remediation technology."

EPA Response: As explained in the FFS, EPA was neither arbitrary nor capricious in applying this 33 percent increase. The Technical Engineering Evaluation Report identified numerous available technologies which, in combination, might afford the possibility of achieving the very low residential reoccupation remediation goal of 0.31Ig/m³. After EPA's Risk Assessment identified the level of mercury vapor protective of childhood residential exposure to be 0.09Ig/m³, EPA decided to add certain remediation steps identified within the Technical Engineering Evaluation Report which EPA believes would be necessary to achieve this low mercury vapor concentration. The steps which EPA added in its FFS to address this lower remediation goal include washing contaminated surfaces with detergents and etching masonry surfaces. The Technical Engineering Evaluation Report did not specifically reject these technologies. The Report specifically indicates how the technology would be utilized in the event this technology were employed at the Site. The Report did not include this step in the remediation scenario because at the time the report was developed, this step was not seen as a necessary step in the overall remediation process given the higher remediation goal (0.31Ig/m³) identified in that Report. EPA, in addressing a potential remedial effort with an even lower remediation goal, later discerned that the addition of this step would add an additional level of surety that the remediation goal could be achieved.

With regard to the second step EPA added, etching of masonry surfaces, EPA's Report identified that etching, or scarification, of masonry surfaces removes a fraction of the exposed masonry surface, thereby removing any contamination present in that layer of removed masonry. The Report not only refers to this technology as "an acceptable technology for removal of contamination of both porous and non-porous surfaces, but it actually estimated the cost of its implementation for a subset of the masonry in the buildings. EPA simply assumed that, in the interest of thoroughness given such a low remediation goal, that etching might most appropriately be applied to all masonry surfaces to a greater degree than that estimated in the Technical Engineering Evaluation Report, and therefore increased the cost estimate accordingly.

5.1.2.13. Comment (page 46): GE states that it "has previously demonstrated that the current owners of the [Site] and GSAP are liable under CERCLA," and that "it is unlawful and improper to use [Superfund] monies to pay relocation benefits to liable parties."

EPA Response: EPA has not named the residents or the GSAP as PRPs. However, even if the residents and the GSAP are found to be liable parties under CERCLA, EPA is unaware of any legal bar preventing EPA from providing them with relocation benefits. GE does not provide sufficient legal support for its statement that it is "unlawful" for EPA to use Fund monies to pay relocation benefits to liable parties."

5.1.3. Commenter's Conclusions

5.1.3.1. Comment (page 47): GE concludes that "EPA is legally required to undertake a risk assessment that is grounded in reality."

EPA Response: EPA's Risk assessment, as stated clearly in EPA's responses above, is based on significantly sound and legally defensible data which is widely available and commonly used in risk assessments throughout EPA and in the public sector.

5.1.3.2. Comment (page 47): GE states that "EPA is legally required to ... afford interested parties the opportunity to participate meaningfully in the remedy selection process."

EPA Response: EPA has followed all of its obligations as specified in Section 300.430 of the NCP. EPA has not only allowed interested parties the opportunity to participate in the remedy selection process, but it has entertained a variety of comments from this commenter prior to the issuance of the Proposed Plan which have influenced EPA's undertaking of activities at the Site, including a visit to GE's Cuyahoga Ohio plant. Further, GE has stated publicly to EPA throughout the course of EPA's involvement at the Site, as it does once again in these comments, that GE is willing to remediate the buildings at the Site for industrial/commercial use, and that demolition of the buildings is unwarranted. EPA informed GE that land use considerations would be important considerations in selecting a remedy at the Site. EPA has not been informed by GE or the City of Hoboken that Hoboken is amenable to permitting industrial/commercial use of the Site. This is ample evidence that EPA did in fact involve GE from early on in EPA's involvement at the Site.

5.1.3.3. Comment (page 47): GE concludes; that "renovating the [property] to commercial/industrial standards is protective, is viable, and is cost-effective."

EPA Response: As discussed above, zoning and future land use are inexorably linked when considering a remedy for the Site. EPA disagrees that remediation to commercial/industrial standards is either a viable or cost-effective alternative.

5.1.4. Comments provided by General Electric at the July 16, 1997, Public Meeting

General Electric provided an extensive oral commentary on its position on numerous issues pertaining to the Site, most which were additionally addressed in GE's September 8, 1997 written comments on EPA's Proposed Plan. Insofar as EPA has addressed duplicative comments above, EPA will not address them again. One additional comment provided by GE at the public meeting is addressed below.

5.1.4.1. Comment: GE claimed that tearing the building down could be a significant disruption to the community. It could require thousands of truck loads of demolition debris driving through the community on a daily basis for weeks on end.

EPA Response: EPA realizes that a significant increase in noise levels and traffic due to demolition and transportation activities will occur during building demolition. EPA identified that understanding in both the FFS and the Proposed Plan. EPA will take precautionary measures to minimize noise levels due to demolition activities to the extent practicable, and will work with the local community to design transportation flow patterns to minimize traffic impacts on residential areas. EPA will work with community officials during the development of the demolition plans to ensure proper precautions are taken to protect the community during demolition. EPA also will provide advance notice of remedial activities to the local community. Although these inconveniences are unfortunate, they are realistic, unavoidable consequences of Superfund remediation, and pale in comparison with the inconveniences threatening the community by the building in its present condition.

5.2. Response to Written Comments raised by Sterns and Weinroth on behalf of John J. Pascale, Sr.

The comments summarized in this section were received from attorneys representing John J. Pascale, Sr ("the Commenter"). The commenter raises several instances where EPA has incorrectly stated the facts in the FFS. While EPA agrees that some of the changes do more accurately represent certain facts, none of these facts in any way influence the remedy selection process. Because EPA will include this comment letter in the Administrative Record, these comments have been adopted in the formal record for the Site and therefore it is not necessary that EPA revise the FFS for the Site. Specific responses to the Commenters' numbered comments are as follows:

1. EPA has obtained conflicting information regarding when Cooper-Hewitt 2 ceased operations at the Site, which is why EPA says "approximately 1965."
2. EPA agrees.
3. EPA agrees.
4. This comment contradicts a response to a CERCLA information request sent to EPA by the commenter.
5. EPA agrees.
6. EPA agrees.
7. Support for the information presented in the "Site History" section of the FFS is in the Administrative Record.
8. EPA does not intend to amend the FFS to include this information since it has no bearing on remedy selection. However it is EPA's understanding that the Hudson Regional Health Commission (HRHC) was made aware of mercury remediation activities after a concerned resident of the building informed HRKHC of the remediation activities.

The Commenter further states that it "agrees with and hereby adopts the General Electric Company's technical evaluation of the Focussed Feasibility Study." EPA responses to the General Electric Company's comments may be found at Section 5.1., above.

Finally, the Commenter raises four questions to which EPA responds below.

5.2.1. Comment: The Commenter asks if EPA has determined "whether any employees of the companies that previously occupied the site have suffered from mercury inhalation," and asks EPA to describe efforts it has undertaken to support such a determination.

EPA Response: This comment appears to ask two questions. First, it appears to ask if former employees ever inhaled mercury. Second it appears to ask if such inhalation may have conferred any adverse health effects upon those employees.

In response to the first question, EPA believes that former employees are likely to have inhaled mercury vapors. EPA has based this determination upon the following facts: mercury vapors are presently widespread throughout the structures; mercury was used from approximately 1910 to approximately 1965 at the Site; and that employees were present in the buildings from 1910 until at least 1988.

In response to the second question, EPA has no information on whether there have been any adverse health effects from inhalation of mercury vapors by prior workers in the building.

5.2.2. Comment: The Commenter asks if EPA believes that the answer to comment 5.2.1 is "relevant in deciding whether the building should be remediated to industrial standards."

EPA Response: EPA presumes that this question requires two answers, as it is related to the apparent two

questions in comment 5.2.1 These questions pertain to risk assesment as it is applied in the CERCLA remedy selection process. With regard to the first (inhalation) question, EPA has considered a worker inhalation risk scenario in its Risk Assessment, and though this scenario does not have any bearing on former employees of prior companies working at the Site, it does consider the effect of those vapors on future industrial/commercial workers exposed to mercury vapors. Specific information regarding the health of these prior employees would not affect selection of the remedy.

With regard to the second question, EPA has never reviewed any studies conducted on former employees who worked at the Site. As fully explained throughout Section 5.1. above (including particularly Section 5.1.1.1.), EPA must consider the nine criteria listed in 40 C.F.R. 300.430 in determining whether the building should be remediated for commercial/industrial use.

5.2.3. Comment: The Commenter asks if EPA has "evaluated the effect of GSAP's renovation efforts on the release of mercury" at the Site, and, if yes, for EPA to explain the results of that evaluation.

EPA Response: EPA has evaluated the effect of GSAP's renovation on the release of mercury at the Site and has concluded the following:

- ! GSAP renovation activities in one fifth-floor unit in 1995 uncovered the mercury contamination problem existing at the Site via removal of flooring;
- ! the work leading to the above discovery may have increased mercury vapor concentrations in and immediately surrounding the unit where the mercury problem was discovered;
- ! EPA has no evidence that the presence of significantly elevated mercury concentrations
- ! throughout the two buildings is attributable to GSAP activity, but EPA does believe that mercury associated with the activities of prior building owners/occupants between 1910 and approximately 1965 is the primary source for the mercury currently in the building;
- ! EPA has no evidence to suggest that the presence of liquid elemental mercury in thirteen of the sixteen planned units in the former manufacturing building is attributable to GSAP activity, but EPA does believe that mercury associated with the activities of prior building owners/occupants between 1910 and approximately 1965 is the primary source for the mercury currently in the building;
- ! wastes generated during attempted remediation of the problem fifth-floor unit are presently containerized and stored on-site;
- ! construction debris generated by GSAP renovations and disposed of off-site may have been contaminated by low levels of mercury; and,
- ! the levels of mercury contained in such construction debris were likely not high enough to warrant EPA regulation.

5.2.4. Comment: The Commenter asks if EPA has "taken any groundwater samples at the Site, and, if yes, to provide the results, or if no, to state when such sampling will be conducted.

EPA Response: EPA has not taken any groundwater samples at the Site. As stated in the FFS and Proposed Plan, EPA will conduct groundwater sampling concurrent with building demolition.

5.3. Response to Written Comments raised by Hellring, Lindeman, Goldstein & Siegal on behalf of David Pascale

The comments summarized in this section were received from attorneys representing David Pascale.

5.3.1. Comment: The proposed remedy has not been adequately studied or shown necessary or cost-effective.

EPA's Focused Feasibility Study screened out proposals which did not completely remove bulk elemental mercury at the Site. The Study should have included those alternatives, because the Study demonstrates that protective remedies which adequately reduce or control mercury do exist.

By screening out all remedies which reduce and control mercury contamination, EPA has chosen from among remedies with relatively high costs. However, achieving substantial removal and encapsulation - techniques the Study acknowledges are effective - can likely be achieved at a fraction of the cost of EPA's proposed remedy. EPA has failed to study other, less costly techniques which appear to be adequately protective of human health and the environment, meet all applicable relevant or appropriate requirements, provide long-term effectiveness, may be less risky than the proposed demolition strategy, can be accomplished more quickly, and will cost much less. Until EPA performs such a study, it should not proceed with the Proposed Plan.

EPA Response: Section 4.3.2 of the FFS (specifically pages 61-63) explains EPA's rationale for screening out those technologies which encapsulate, rather than remove mercury contamination in the buildings. However, EPA did retain technologies which reduce or control or remove mercury contamination in the buildings

5.3.2. Comment: Demolition involves as much danger to the community as other techniques. Demolition assures the release of mercury into the environment. Other techniques (such as washing and vacuuming) followed by encapsulation would not involve the risk of releasing mercury and would preserve a historically significant structure.

EPA Response: EPA recognizes that increased mercury vapor and dust generation may occur during building demolition, and identified that understanding in both the FFS and the Proposed Plan. Measures will be taken to reduce these effects. For instance, careful attention will be paid to ensure that workers are fully protected from mercury exposure during the remedial or demolition effort, that workers are decontaminated before they leave the Site, and that the building is secured and work space maintained under negative pressure to minimize off-site releases. EPA will work with community officials during the development of the demolition plans to ensure proper precautions are taken to protect the community during demolition. The most highly contaminated fraction of the buildings, the flooring, will be removed from the building with the walls, windows, and roof intact, thereby minimizing releases to the community. In addition, air quality will be monitored both on and off the Site during remediation activities. If monitoring reveals air releases in excess of EPA standards, work will be halted and corrective actions will be taken before resuming work.

While it is true that other techniques, such as washing or vacuuming, may result in a lower short-term risk of release during remediation, in the long-term it is much less certain that they will prove successful as it is unknown whether residual mercury contamination in the building structure could result in mercury vapor levels above the cleanup objective of 0.09 Ig/m³. Since mercury has adhered to minute pore spaces throughout the building structure, there would always be the potential for exposure. Further, from a long-term health protective viewpoint, encapsulation is not an effective remediation technology. As explained in the FFS, EPA agrees that initial protection may be great with encapsulation. However, as time wears the encapsulant, and as inhabitants of the building potentially penetrate the encapsulant for various reasons, the degree of protectiveness decreases over time, and could actually result in releases of mercury vapors into the building above health based standards once again.

EPA's selected alternative provides the highest degree of certainty that the remediation will be successful. There will be no possibility of future residents or workers being exposed to any residual mercury contamination in the building and soil since all mercury contamination above health-based levels would be removed.

5.3.3. Comment: The costs of the permanent relocation options are greatly out of proportion to the value of the property, even as improved by the former residents, and so appear to present a windfall to the prior building residents.

Specifically, the prior building residents invested approximately \$175,000 per unit for seven units, or a total of \$2,975,000. They purchased the property for \$1,500,000. Thus, their total fair market value should be approximately \$4,475,000. Even with a 10 percent increase for inflation on improvements, the fair market value would still be less than \$4,900,000.

Thus, EPA's total permanent relocation payment (exclusive of temporary relocation and moving expenses) should be \$4,900,000 or less, not the \$9,915,600 EPA included in the Focused Feasibility Study. EPA bases this estimated payment upon confidential appraisals, which we have not had the opportunity to see.

EPA Response: EPA responded to this comment in section 5.1.2., above. EPA expects that permanent relocation will be carried out consistent with the URA and its implementing regulations, which require that all parties from whom property is acquired must be provided just compensation (which may not be less than the Agency's approved appraisal of the fair market value of the property).

5.3.4. Comment: EPA must exercise care in selecting the appropriate remedy or seeking to impose costs on the allegedly responsible parties. Permanent relocation should not be conducted at a cost disproportionate to the value of the former dwellings. This appears to provide a "bonanza" to many prior building residents, who undertook their own investigations prior to purchase and were by their own admission aware of the presence of mercury as early as two occasions in 1993 and another occasion in 1994 before most of the renovation costs were incurred. They could have avoided their alleged capital costs and the need for relocation by exercising due care.

EPA Response: See EPA response to the comment above.

5.3.5. Comment: David Pascale is not a PRP under the Comprehensive Environmental Response and Liability Act (CERCLA). It has been argued that David Pascale had knowledge that the building had been used for the manufacture of mercury vapor lamps prior to 1955. Even if this allegation were true, it would not provide David Pascale with knowledge of the presence of mercury on or about the premises. In any event, knowledge of prior uses of hazardous materials does not make a person a PRP under the definition of CERCLA.

Further, it has been argued that David Pascale is a PRP because he was "an owner at the time of disposal." That argument fails. Any gradual releases of residual mercury do not constitute disposal. The only active disposal undertaken by David Pascale was the decommissioning of an underground storage tank and disposal of contaminated soil, which were accomplished in accordance with State requirements. Under those circumstances, David Pascale is not "an owner at the time of disposal" under CERCLA.

EPA Response: EPA gave David Pascale notice of potential liability under CERCLA on August 12, 1997. Nevertheless, CERCLA liability is irrelevant in the selection of a remedy under 40 C.F.R. Part 300 et seq.

5.3.6. Comment: Some if not the majority of the partners in the GSAP, as well as the partnership itself, meet the definition of a PRP under CERCLA. However, they have not been named as PRPs by EPA.

EPA Response: As previously stated, the CERCLA liability of persons or entities, including the GSAP or its partners, is irrelevant in the selection of a remedy under 40 C.F.R. Part 300 et seq.

5.3.7. Comment: The Focused Feasibility Study and Proposed Plan erroneously identify Mr. David Pascale's wife, Cheryl Pascale, as a former owner of the Site. Cheryl Pascale never owned the Site. She joined in a deed conveying the property to GSAP, which was done at the request of the partnership's title company in order to extinguish inchoate rights of dower she might have otherwise been able to assert. The back title information reflects that Ms. Pascale was never in the chain of title.

EPA Response: EPA notes that the presence of Cheryl Pascale's name on the deed to the property indicates that she held title to the property and was therefore an owner of that property. EPA has indicated in the ROD that Cheryl Pascale was added to the deed after David Pascale obtained title to the property. Nevertheless, ownership of property is irrelevant in the selection of a remedy under 40 C.F.R. Part 300 et seq.

5.4. Dr. Michael Gochfeld, Occupational Physician and Clinical Professor of Environmental and Community Medicine, Environmental and Occupational Health Sciences Institute at Robert Wood Johnson Medical School

5.4.1. Comment: After the former residents were evacuated from the building in 1996, the Environmental and Occupational Health Sciences Institute (EOHSI) evaluated 27 adults with regard to medical, neurobehavioral,

and psychological consequences of the mercury exposure. This work was supported by ATSDR. EOHSI found evidence of mercury-related neurobehavioral impairment in a number of residents. Those residents with higher mercury levels had reduced muscular coordination in their hands and fingers and showed evidence of tremor.

In addition, the residents exhibited a severe level of psychological distress in relation to their sudden evacuation from the homes which they had invested large sums of money and time. The residents voiced anger, frustration, as well as anxiety about their future. Many of the residents tested had clinically significant psychiatric problems resulting from a combination of the mercury exposure and the need to be evacuated. Had they not been exposed to very high levels of mercury, they would not have experienced these disruptions and would not be suffering their current distress.

Observations of the residents are consistent with the stresses over which people have no control but are particularly damaging. For example, people whose homes are rendered uninhabitable by flood or fire eventually collect insurance and rebuild their homes and lives. The victims of Grand Street have not been able to do so.

The residents have not been able to "get on with their lives." They are trapped by forces over which they have no control and are increasingly vulnerable to psychophysiological damage. Even if the neurological effects of mercury exposure fade, the scarring from having lost control in their lives and being on hold for so long may leave a long-term or permanent mark.

The residents need a rapid and definitive solution, which can be provided with permanent relocation.

EPA Response: EPA's actions, throughout its involvement at the Site over the last year and a half, clearly demonstrate the Agency's commitment to address this Site. In less than two years, EPA has expediently collected data, prepared a risk assessment and focussed feasibility study, and has issued a Proposed Plan for remediation of the Site. EPA acknowledges the impacts that recent events have had on the former residents of the Site. EPA has expedited the remedy selection process at the Site primarily because of the problems associated with lengthy temporary relocation, including the stress suffered by the building residents. EPA emphasizes that the first step in the remedial process will be permanent relocation of the former residents.

5.4.2. Comment: The Commenter provided the following comment pertaining to implementation of remedial alternative two, which called for remediation of the building to residential standards and moving the dissociated residents back into the building.

Superfund remediations rarely proceed quickly or smoothly. Assuming that it were to begin immediately, it would mean that the residents would have been on hold for five years. That is not a realistic expectation. It is not realistic to expect the residents to return to the building which has become a source of great pain and a symbol of what has gone wrong in their lives. Dr. Gochfeld supports EPA's proposal not to remediate the building.

EPA Response: EPA estimates that implementation of remedial alternative two would keep the dissociated residents in temporary relocation for four years, not including time to negotiate implementation of the remedy with Potentially Responsible Parties. In addition to the twenty-one months they have already been temporarily relocated, EPA believes the dissociated residents would thus be in the temporary relocation program for six to seven years (see footnote 7). EPA agrees that six to seven years of temporary relocation would cause significant disruption to the lives of these already distressed people. In addition, EPA has concerns about the costs associated with keeping persons in temporary relocation for extended periods of time. On balance, looking at the nine criteria which EPA must consider in selecting a remedy, EPA agrees that remediation of the building for residential or commercial/industrial use is an inappropriate remedy at the Site.

5.5. Response to Written Comments raised by George N. Pappas on behalf of Eugenio Notaro

5.5.1. Comment: The Commenter stated that Mr. Notaro has not let his children play in his backyard which is adjacent to the Site since 1994 and will continue to prevent them from doing so as a result of the results from EPA testing of soil in Mr. Notaro's yard.

EPA Response: As stated in the FFS (section 2.3.3), EPA sampled soil from Mr. Notaro's yard on two occasions, on April 4, 1996 and February 28, 1997, due to its proximity to the Site and the potential for mercury contamination to have migrated onto this property. Mercury was detected in all samples. EPA used the results to perform a risk assessment to assess risks to children who ingest soil. The risk assessment shows that the risks associated with the mercury found in Mr. Notaro's yard are well within acceptable ranges.

5.5.2. Comment: The Commenter states that Mr. Notaro should be included in EPA's plan to permanently relocate the former residents of the Site.

EPA Response: EPA has not included Mr. Notaro's property as part of the Site because EPA has determined that the soil on Mr. Notaro's property does not pose an unacceptable to anyone (including children) who comes in direct contact with it (with regard to the presence of mercury). As a result, persons at the Notaro property will not be permanently relocated.

ATTACHMENT 1

BASIS FOR EPA'S

INHALATION REFERENCE CONCENTRATION

FOR ELEMENTAL MERCURY VAPOR

INTRODUCTION

The United States Environmental Protection Agency (EPA) has established a Reference Concentration (RfC) of 0.3 Ig/m^3 for inhalation exposure to vapors of elemental (metallic) mercury in air. This RfC is a concentration which is believed to be without an appreciable risk of deleterious effects in members of the general population (including sensitive subgroups), even if exposure were to occur for a lifetime. This RfC was established using standard EPA methods and approaches (EPA/600/8-88/066F, EPA/600/8-90/066F), and has been extensively reviewed by scientists both within and outside the Agency. The basis for this RfC value is documented in EPA's Integrated Risk Information System (IRIS). The purpose of the present report is to provide a summary of the data and the rationale used to derive this RfC value.

KEY INHALATION STUDIES IN HUMANS

There are a number of studies on the adverse effects of inhalation exposure to mercury vapor, both in animals and humans. Studies in humans are considered to be especially relevant in deriving the inhalation RfC, since the difficulties and uncertainties associated with extrapolation of dose and response data across species can be avoided. Presented below are brief descriptions of the specific studies considered to be most relevant and reliable in deriving the RfC for metallic mercury vapor.

Fawer et al. 1983

Fawer et al. (1983) used a sensitive objective electronic measure of intention tremor (tremors that occur at the initiation of voluntary movements) in 26 male workers exposed to low levels of mercury vapor in various occupations. The average duration of exposure was 15.3 years. Controls (n=25) of similar age came from the same factories but were not exposed to mercury in the workplace. Personal air samples (two per subject) were used to measure airborne levels of mercury. The average exposure across the exposed group was 26 Ig/m^3 . It should be noted that it is likely that the levels of mercury in the air varied during the period of exposure and historical data indicate that previous exposures may have been higher. The measures of tremor were significantly increased in the exposed group compared to controls, and correlated with exposure duration rather than chronological age.

Piikivi and Tolonen (1989)

Piikivi and Tolonen (1989) used electroencephalograms (EEGs) to study the effects of long-term exposure to mercury vapor in 41 chloralkali workers. The mean exposure duration in the workers was 15.6 years. Mean blood mercury levels were 12 Ig/L , and mean urinary mercury levels were 20 Ig/L . When compared with matched referent controls, about 15% of the exposed workers tended to have an increased number of EEG abnormalities, including significantly slower and attenuated brain activity patterns. Although no data were available on average air levels of mercury in the workplace, an average exposure level of 25 Ig/m^3 was estimated from the mean blood Hg level using the conversion factor calculated by Roels et al. (1987).

Piikivi and Hanninen (1989)

Piikivi and Hanninen (1989) studied the frequency of subjective symptoms and psychological performance on a psychological test in 60 chloralkali workers. Exposure was for an average of 13.7 years. The exposed workers had mean blood Hg levels of 10 Ig/L and mean urine Hg levels of 17 Ig/L . Compared to matched

referents, a statistically significant increase in subjective measures of memory disturbance and sleep disorders was found in the exposed workers. The exposed workers also reported more anger, fatigue and confusion. No objective disturbances in perceptual motor, memory or learning abilities were found in the exposed workers. The authors extrapolated an exposure level associated with these subjective measures of memory disturbance of 25 Ig/m^3 from blood levels based on the conversion factor calculated by Roels et al. (1987).

Piikivi (1989)

Piikivi (1989) investigated both subjective and objective symptoms of autonomic dysfunction in 41 chloralkali workers exposed to mercury vapor. Exposure was for a mean of 15.6 years. The exposed workers had mean blood levels of 11.6 Ig/L and mean urine levels of 19.3 ug/L . The test battery consisted of measurements of pulse rate, variation in normal and deep breathing in the Valsalva maneuver and in vertical tilt, as well as blood pressure responses during standing and isometric work. The exposed workers complained of more subjective symptoms of autonomic dysfunction than the controls, but the only statistically significant difference was an increased reporting of palpitations in the exposed workers. The quantitative tests revealed a slight decrease in pulse rate variations, indicative of autonomic reflex dysfunction in the exposed workers. The authors extrapolated an exposure level associated with these subjective and objective measures of autonomic dysfunction of 30 Ig/m^3 from blood levels based on the conversion factor calculated by Roels et al. (1987).

Ngim et al. (1992)

Ngim et al. (1992) assessed neurobehavioral performance in a cross-sectional study of 98 dentists. The average duration of practice of the exposed dentists was 5.5 years. Air concentrations were measured with personal sampling badges over typical working hours (8-10 hours), and the average concentration of mercury (adjusted to an 8-hour workday) was 14 Ig/m^3 . Blood samples from the exposed cohort averaged 9.8 ug/L , which corresponds to an estimated average air exposure of about 23 Ig/m^3 calculated using the conversion factor developed by Roels et al. (1987). The performance of the dentists was significantly worse than matched controls on a number of neurobehavioral tests measuring motor speed (finger tapping), visual scanning, visuomotor coordination and concentration, visual memory, and visuomotor coordination speed.

Liang et al, (1993)

Liang et al. (1993) used a computer-administered neurobehavioral evaluation system and a mood inventory profile to investigate effects of mercury exposure in a fluorescent lamp factory. The average exposure duration was 15.8 years, and all members of the cohort were exposed for at least two years. Exposure was monitored with area samplers and ranged from 8 to 85 Ig/m^3 across worksites. Based on these measurements, the average exposure was estimated to be 33 Ig/m^3 . Urinary excretion was also monitored and reported to average 25 Ig/L . Compared to matched controls, the exposed cohort performed significantly worse on tests of finger tapping, mental arithmetic, two-digit searches, switching attention, and visual reaction time. The effect on performance persisted after the confounding factor of chronological age was controlled.

Weight of Evidence Evaluation

Table 1 summarizes these key occupational studies in humans. Taken together, these studies provide evidence that inhalation exposure to average levels of about 25 Ig/m^3 of mercury in the workplace is associated with increased occurrence of preclinical indicators of neurological and neurobehavioral effects. Based on these studies, a TWA workplace exposure level of 25 Ig/m^3 was judged to be the Lowest Observed Adverse Effect Level (LOAEL). Importantly, none of the available studies identify a TWA concentration of mercury that may be considered a No Observed Adverse Effect level (NOAEL).

SUPPORTING STUDIES FOR NEUROLOGICAL EFFECTS

A number of other studies exist which provide supporting evidence that inhalation exposure to mercury vapor can cause neurological effects in humans. This includes Levine et al. 1982, Singer et al. 1987, Miller et al. 1975, Roels et al. 1982, Roels et al. 1985, Roels et al. 1989, Verbeck et al. 1986, Rosenman et al. 1986, Smith et al. 1970, Albers et al. 1988, Forzi et al. 1978, and Langolf et al. 1978. Each of these studies

reported an association between one or more indicators of neurological dysfunction and exposure to mercury in the workplace.

OTHER SYSTEMIC EFFECTS

Inhalation exposure to mercury vapor has been observed to cause adverse effects in a number of target systems, including the kidney, liver, stomach, and lungs, but only at concentrations higher than are associated with effects on the nervous system.

REPRODUCTIVE AND DEVELOPMENTAL EFFECTS

Information is limited on the effect of mercury inhalation on reproductive and developmental endpoints in humans. Some studies have found no effect (Alcser et al. 1989, Lauwerys et al. 1985), while some studies have observed evidence of an increased rate of reproductive problems or failures (Cordier et al. 1991, Sikorski et al. 1987, Mishinova et al. 1980). These data are considered to be too limited to define a reliable NOAEL or LOAEL for reproductive and developmental effects in humans.

POTENTIALLY SENSITIVE SUBGROUPS

Probably the most widely recognized form of hypersensitivity to mercury poisoning, is the uncommon syndrome known as acrodynia, also called erythredema polyneuropathy or pink disease (Warkany and Hubbard, 1953). Infantile acrodynia was first described in 1828, but adult cases have also since been reported. The basis of the disease is unknown but it appears to depend on idiosyncratic factors since individuals who are effected are not necessarily the most highly exposed.

Fetuses are also potentially more susceptible to mercury than adults. For example, exposure to alkyl mercury compounds during pregnancy can produce severe effects in infants while causing only mild effects in the mothers (Harada 1978, Marsh et al. 1987). Neonates may be susceptible to mercury toxicity due to the potential for mercury exposure via mothers' milk (Yoshida et al. 1992), coupled with a high gastrointestinal absorption rate (Kostial et al. 1978).

DERIVATION OF THE RfC

The RfC for inhalation exposure was calculated from the LOAEL for workplace exposure using standard methods. The object of the calculation is to estimate a concentration in air that will be without significant risk of adverse effects to members of the general public, including sensitive subgroups. The calculation was performed as follows:

25 µg/m³ = LOAEL for preclinical neurobehavioral effects in exposed workers. The basis for this value is presented above.

$(10 \text{ m}^3/\text{day}) / (20 \text{ m}^3/\text{day})$ = adjustment to extrapolate from the assumed mean breathing rate in workers investigated in the key studies (10 m³ per 8-hour workday) to the assumed mean breathing rate in the general public (20 m³ per 24 hour day)

$(5 \text{ days}/7 \text{ days})$ = adjustment factor to account for the fact that workers are exposed on average only 5 days per week, while members of the general public may be exposed 7 days per week.

10 = uncertainty factor. This factor was selected to account for use of a LOAEL rather than a NOAEL in the calculation, and to account for the occurrence of potentially sensitive subgroups in the general population (see above).

3 = uncertainty factor. This factor was selected to account for the lack of a strong database on reproductive and developmental endpoints (see above).

CONFIDENCE IN THE RfC

Although the database on the adverse effects of inhalation exposure to elemental mercury is extensive, including a number of chronic studies in humans, the database is subject to a number of limitations which limit confidence in the RfC.

First, the key studies on neurological effects from inhalation exposure in the workplace include quantitative exposure data only for current conditions, and not for past conditions when exposures may have been higher. In addition, exposure estimates derived from blood and/or urine levels may be confounded by possible exposures via dermal and/or oral exposures as well as inhalation. Both of these factors could tend to result in selection of a LOAEL for air that is too low. However, in the absence of data on historic exposure levels and the relative contribution of dermal and oral exposure routes, no quantitative adjustment in the LOAEL is currently possible.

Second, workplace studies are restricted to evaluation of generally-healthy adults, and data on potential effects in sensitive subgroups are very limited. In particular, available data are not sufficient to identify an exposure level that would be without risk to an infant, or to establish unequivocally that exposure levels that are protective of the mother are also protective of the fetus.

It is for these reasons that an overall uncertainty factor of 30 is required in derivation of the RfC, and confidence in the RfC is judged to be medium.

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TABLE 1 SUMMARY OF KEY STUDIES

Study	N	Air Exposure Level (I _g /m ³)	NOAEL (I _g /m ³)	LOAEL (I _g /m ³)	Adverse Effect
Fawer et.al.	26	26(air data)		26	Increased tremor
1983					
Piikivi and Tolonen	41	25(blood data)		25	Increased EEG abnormalities
Piikivi and Hanninen	60	25(blood data)		25	Increased measures of sleep disorder and memory disturbance
1989					
Piikivi	41	30(blood data)		30	Increased autonomic reflex dysfunction
1989					
Ngim et al.	98	14(air data)		14-23	Impaired performance on neurobehavioral tests
1992		23(blood data)			
Liang et al.	88	33(air data)		33	Impaired performance on neurobehavioral tests
1993					

APPENDIX A

PROPOSED PLAN

JULY 1997

Superfund Proposed Plan

condominiums. During renovation, members of the GSAP noticed small amounts of a silvery substance which appeared to be mercury. The GSAP attributed these observations to demolition of air handler units and associated thermostat or switching controls, and to a partially filled, small jar of what appeared to be mercury that was broken and spilled in one of the units. After renovation and construction of residential/work spaces, residents began moving into the building in mid- to late-1994. There were 34 people living in the building as of January 4, 1996.

During renovation of a fifth floor unit in January 1995, puddles of mercury were observed underneath the top layer of flooring. The prospective property owner attempted a cleanup by collecting and consolidating the puddles of mercury into vials and then removing mercury-contaminated flooring. Mercury contamination continue to be problematic in that unit during the cleanup attempt. As a result of the contamination in this unit, the GSAP hired a private contractor in March 1995 to conduct a mercury vapor survey of the building. Elevated concentrations of mercury vapors were detected in parts of the building. The contractor recommended that a mercury cleanup be performed where mercury vapors were detected in the building.

From March through October 1995, the GSAP initiated measures to clean up the mercury contamination found on the fifth floor. In September 1995, some contaminated flooring was removed and placed into a small cargo trailer located in the parking lot. The contents of the cargo trailer were later transferred to a shed constructed in the parking lot at Site.

In September 1995, the Hudson Regional Health Commission inspected the site to observe mercury remediation activities. The Health Commission inspector observed that mercury contamination was present on the fifth floor of the building and that a mercury remediation was underway.

On November 2, 1995, a resident on the fourth floor reported seeing drops of mercury on the oven and kitchen countertops. The next day, GSAP's environmental contractor returned to the building, cleaned the kitchen area, and sealed a crack between the ceiling and a wall. On November 8, a mercury vapor survey was performed in two units at the request of the residents. Mercury vapors were detected in both units and in common areas of the building at levels exceeding EPA residential risk-based standards.

In November and December 1995, five residents provided urine samples to their private physicians for analysis. Results from three of the tests were provided to the Agency for Toxic Substances and Disease Registry (ATSDR), a branch of the Centers for Disease Control responsible for preparing health consultations at hazardous waste sites, for review. Two of these samples, provided by children, showed elevated mercury concentrations.

In November 1995, the Hoboken Health Department was notified by one of the residents that a mercury contamination problem existed and the Health Department's assistance was requested. On December 22, EPA received a request from NJDEP to assist the Hoboken Health Department in assessing the extent of mercury contamination in the building.

On December 27, 1995, EPA and its contractor surveyed 15 units, the attached townhouse, and hallways on each floor. Air concentrations of mercury were measured at several locations in each unit at heights of six inches and five feet above the floor.

In addition to the environmental testing performed on December 27, representatives from the Hudson Regional performed where mercury vapors were detected in the Health Commission and Hoboken Health Department collected urine samples from 31 persons associated with the building. Mercury concentrations detected in residents ranged from 3 to 102 micrograms of mercury per liter of urine (Ig/l), and 20 samples had mercury concentrations equal to or greater than 20 Ig/l. ATSDR stated that adverse health effects may be associated with mercury levels greater than 20 Ig/l. 20 Ig/l is the upper limit of background mercury concentrations in adults.

On January 2, 1996, EPA received a request from NJDEP to conduct an emergency removal action under CERCLA and to continue assisting the Hoboken Health Department in assessing the extent of mercury contamination. On January 3, 1996, ATSDR concluded in a Health Consultation that an imminent health hazard existed at the Site, based upon the elevated concentrations of mercury in the urine samples of residents, the puddles of elemental mercury in the floor, and the elevated concentrations of mercury in the air. ATSDR recommended the residents be dissociated from further exposure to mercury in the building.

On January 4, the Hoboken Health Department, based on advice from the New Jersey Department of Health, ordered the residents to vacate the building by January 9, 1996. Due to a severe snowstorm that week, the deadline of January 9, 1996 was extended by two days. All residents vacated the building by 6:00 p.m. on January 11, On January 4, EPA authorized a Superfund removal action at the Site. The removal action included providing temporary relocation assistance to residents, securing and maintaining the building, performing an extent of contamination investigation, and screening the personal belongings of the residents for mercury.

On January 22, 1996, ATSDR issued a Public Health Advisory that proclaimed mercury contamination in the building posed "an imminent public health hazard" to residents of the Site via inhalation of mercury vapors and by possible ingestion of elemental mercury. In addition, the Public Health Advisory stated -the potential exists for mercury-contaminated possessions to be taken out of the building to continue to expose residents of 722 Grand Street contaminate other areas and expose other members of the public."

On December 23, 1996, EPA proposed to add the Site to its National Priorities List (NPL) based on the findings of ATSDR's Public Health Advisory, EPA's determination that the threat of a release of hazardous substances poses a significant threat to public health; and EPA's belief that its remedial authority is more cost-effective than its removal authority in addressing the long-term threats at the Site. The NPL is EPA's list of the top priority hazardous waste sites in the country eligible for long-term remedial evaluation and response under the Superfund program.

Currently, the former residents of the building remain temporarily relocated. The building is secured by a 24-hour guard and maintained. EPA performs periodic monitoring for mercury at the Site. In the near future, EPA will turn over Site security and maintenance activities to potentially responsible parties who have agreed to conduct this work under an order from EPA. EPA will oversee this work to ensure it is adequately performed.

Results of Previous Investigations

EPA has collected air, soil, and sediment samples and samples of building material from the Site. In addition EPA evaluated the results of two GSAP-initiated air monitoring events. EPA also evaluated the results of urine samples provided by prior residents of the Site. The purpose of obtaining this information was to determine the nature and extent of contamination at the Site and the degree to which prior residents had been exposed to mercury at the Site. The results are summarized below.

Grand Street Mercury Site Hoboken, New Jersey

Indoor Air Sampling

EPA and GSAP have generated a significant body of data from air monitoring and sampling for indoor

concentrations of mercury. GSAP conducted air sampling activities in March and November 1995. EPA conducted air sampling activities in December 1995 and January and February 1996. EPA initiated periodic air monitoring throughout the building in January 1996, which is ongoing. Almost 2,000 air samples have been collected, and approximately 70 percent of those samples identified Mercury vapors throughout the main building and townhouse. Mercury vapor concentrations in air at the breathing zone (6 inches and 5 feet) in the condominium units, the basement, common areas of the main building, and in the townhouse range from "nondetect" (below the lowest level instruments are able to detect) to 300 micrograms of mercury per cubic meters of air (Ig/m^3), well above EPA residential risk-based concentrations (see section on Risk Assessment below). Mercury vapor concentrations immediately above liquid mercury and in holes and cracks in flooring have exceeded instrument detection capability (999 Ig/m^3) on numerous occasions. Mercury vapors were not detected at adjacent off-site locations at any interior sampling points.

Building Resident Urine Sampling

Urine samples were provided by building residents and other individuals related to the Site on two occasions in 1995. During the first event, urine samples were provided by several building residents to their private physicians in November and December 1995 and were analyzed for mercury. Results ranged from 11 to 65 Ig/l , and the two child residents monitored had levels above 20 Ig/l .

During the second event, 31 urine samples from GSAP partners, building residents, and workers, and workers at the Site were collected and analyzed by the Hoboken Health Department and Hudson Regional Health Commission. Results ranged from 3 Ig/l (nonresident GSAP partner) to 102 Ig/l . Of the 31 individuals tested, 20 exhibited mercury concentrations in their urine in excess of 20 Ig/l , including 5 of the 6 children monitored. ATSDR stated that adverse health effects may be associated with mercury levels greater than 20 Ig/l .

Superfund Proposed Plan

On-Site Soil and Sediments Sampling

EPA collected on-site soil samples from the parking lot and sediment samples from the building to determine the nature and extent of mercury contamination in those media. In order to obtain soil samples from the parking lot, EPA created a grid which divided the parking lot into 27 sections (quadrants). Within each quadrant, EPA collected up to eight soil samples and combined those samples with each other to create one composite sample for each quadrant. Additional discrete (individual; not combined with others) soil samples were collected from a variety of depths in three quadrants where higher concentrations of mercury were detected. A total of 30 composite and 22 discrete soil samples were collected. Mercury was detected in every soil sample at concentrations ranging from 0.77 to 290 milligrams of mercury per kilogram of soil (mg/kg). In 12 of the 27 quadrants, mercury composite samples were above EPA's residential risk-based concentration standard of 23 mg/kg , which was calculated in the Baseline Risk Assessment (see below). The highest concentrations of mercury were detected next to the building.

EPA also collected sediment samples from floor drains and sump pits in the basement of the building. The results indicate that mercury, in concentrations ranging from 36 to 2,540 mg/kg , is present in all of the floor drains and sump pits tested.

Off-Site Soil Sampling

EPA collected soil samples from a residential yard and basement adjacent to the Site. These samples were collected because of the property's proximity to the Site and the potential for mercury to have migrated (moved) onto the property. The average concentration detected on the property was below the EPA risk-based standard of 23 mg/kg . In addition, EPA conducted a risk assessment for found at the property do not constitute a risk to human health.

Indoor Sampling of Structural Components

EPA collected data to determine the presence of liquid mercury in the wooden flooring, structural components, and interior brick surfaces at the Site. To determine the presence of liquid mercury in wooden flooring at

the Site, a meter was used to detect mercury concentrations in cracks in the floor. When mercury levels were detected, flooring layers were removed. Liquid mercury, was observed in the flooring in 13 of the 16 units in the main building. EPA collected and analyzed 8 samples of liquid elemental mercury found in building flooring, which was visibly mixed with dirt and debris, and determined it to be up to 51 percent pure. In addition, EPA used X-Ray Fluorescence technology to identify the extent to which mercury may have horizontal and vertical support beams in three condominium units. The results indicate mercury contamination (ranging from 0.790 to 13,078 mg/kg) is prevalent throughout these structural components: EPA also used the X-Ray Fluorescence technology to identify mercury contamination on the exposed brick walls inside the building. EPA collected samples from 14 locations on the fourth and fifth floors. Mercury was detected in all of the samples. Mercury concentrations in the brick walls ranged from 39.8 to 9,110 mg/kg.

Results of the Baseline

Risk Assessment

EPA conducted a Baseline Human Health Risk Assessment to assess potential human health risks associated with mercury contamination at the Site. The following four-step process was used to conduct the Risk Assessment:

1. Hazard Identification - identifies the contaminants of concern at the Site based on their toxicity, frequency of occurrence, and concentration.
2. Exposure Assessment - estimates the reasonable maximum concentration of contaminants to which people, plants and wildlife may be exposed by considering the frequency and duration of these exposures, and the potential pathways (for example, inhalation of chemical vapors).
3. Toxicity Assessment - determines the toxic effects of exposure to the contaminants at the estimated concentrations at the Site.
4. Risk Characterization - provides a quantitative assessment of the overall current and future risk to people, plants and wildlife from Site contaminants, based on the exposure and toxicity information, including a discussion of uncertainties.

Mercury (in elemental form-found as a liquid and as vapors in the air at room temperature) is the contaminant of concern at the Site. Mercury vapors have been observed to increase indoors at the Site as temperature rises. Mercury is not considered by EPA to be a human carcinogen; therefore, only adverse noncancer health effects of exposure to mercury in air and soil were evaluated in this risk assessment. The purpose of the Baseline Human Health Risk Assessment was to determine the risk of exposure to mercury in air for adult and child residents and potential future workers of the Grand Street buildings, as well as the exposure risk to child residents and adult workers to mercury by ingestion of contaminated soil.

Noncancer health effects of mercury exposure include tremors in the fingers, eyelids, lips, hands and arms; depression; irritability, exaggerated response to stimuli; excessive shyness; insomnia; emotional instability; and death.

The noncancer health effects of mercury exposure were assessed by comparing Estimated Daily Intakes to Reference Doses (a dose that produces no negative health effects) to determine Hazard Quotients. A Hazard Quotient of one or less indicates that people are not likely to develop adverse health effect including sensitive individuals. A Hazard Quotient greater than one indicates that adverse health effects are possible. A hazard quotient greater than one may warrant action to protect the exposed population from future exposure.

A Hazard Quotient of 5.10 was calculated for child residents exposed to mercury in air, this suggests a significant potential for future development of adverse non-cancer health effects. The EPA-calculated hazard quotients of 110 and 100 for adult residents and adult workers (respectively) exposed to mercury in air also suggest significant potential for future development of adverse noncancer health effects. The Hazard Quotient for ingestion of mercury-contaminated soil shows a potential for future development of adverse noncancer health effects to children living at the Site (2.1) and an unlikely potential for future

development of adverse noncancer health effects to adult workers (0.08) at the Site and to children (0.09) who live adjacent to the Site (off-site child residents). Although the potential for adverse effects to future child residents at the Site is marginal, there is some uncertainty in the estimates since many of EPA's soil samples were composites of surficial soils and soils at depth. This may have resulted in an underestimation of the potential for adverse health effects for future child residents. As will be discussed below, additional discrete (no more than 6 inches of soil depth in one sample) soil sampling is warranted.

Table I

EPA Human Health Risk Findings for Exposed Populations and Pathways at the Grand Street Mercury Site

HAZARD QUOTIENT

EXPOSURE PATHWAY	Child Resident	Adult Resident	Adult Worker	Off-Site Child Resident
Inhalation of Mercury in Air	510	110	100	Not Assessed
Ingestion of Mercury in Soil	2.1	Not Assessed	0.08	0.09

The preliminary remediation goal (PRG) for mercury Baseline Risk Assessment to be 23 mg/kg, which was calculated based on soil ingestion. A qualitative assessment indicates that a soil PRG of 23 mg/kg is protective of public health for both ingestion and inhalation exposures. The Baseline Human Health Risk Assessment prepared by EPA corroborates with ATSDR's determination that Site conditions pose an imminent and substantial short-term and long-term risk to its residents and that temporary relocation is warranted to protect these individuals from future exposure.

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Remedial Action Objectives

Remedial Action Objectives (RAOs) are specific goals to protect human health and the environment. These objectives are based on available information and standards such as applicable or relevant and appropriate requirements (ARARs) and the risk-based levels established in the Baseline Human Health Risk Assessment.

Based upon available information and ARARs, RAOs for mercury in soils and air are designed, in part to eliminate the health threat posed by ingestion and inhalation of mercury. The following RAOs were established for the Site:

- ! minimize the immediate and future threat of release to the environment by a fire in the building, or by any other means
- ! ensure immediate and long-term health protection of future child residents by preventing inhalation of mercury vapors above the risk-based standard of 0.09 $\mu\text{g}/\text{m}^3$ from the Baseline Risk Assessment, in the building;
- ! ensure immediate and long-term health protection of future industrial/commercial workers in the building by preventing inhalation of mercury vapors above the risk-based standard of 0.44 $\mu\text{g}/\text{m}^3$ from the Baseline Risk Assessment, in the building; ensure immediate and long-term human health protection by preventing ingestion of soils with average mercury concentrations above the risk-based standard of 23 mg/kg from the Baseline Risk Assessment; and
- ! minimize the amount of contaminant at the Site.

Ultimate End Use for the Grand Street Property

EPA considers, for all remedial actions it undertakes, the planned ultimate end use of the property being cleaned up. These considerations are extremely important at the densely populated residential community. In

the case of the Grand Street Mercury Site, EPA has reviewed overall planning and zoning trends in Hoboken, has interviewed the Hoboken Business Administration Office and has trends for ultimate end use in Hoboken.

EPA's review revealed that Hoboken has been undergoing significant changes in the prior two decades, changing from a primarily commercial and industrial area, to one of many single-family and multiple-family dwellings and apartment complexes City government has permitted a number of commercial to residential conversions in the area. The present zoning for the Site is R2, multifamily residential, with certain variances which permit the artists to work in the building. In addition, City government has indicated its desire to promote this trend to residential property conversion and development within Hoboken.

In a resolution of May 21, 1997. the Mayor and City Council of Hoboken called on EPA to demolish or remove the building and restore the land at the Site. As a result, EPA believes that the most likely end use for the properties at 720-730 Grand Street is residential. Accordingly, three of the cleanup alternatives developed for the Site are consistent with residential end use. However, EPA also evaluated one alternative which would return the property to commercial/industrial end use.

Summary of Remedial Alternatives

CERCLA requires that each selected site remedy be protective of human health and the environment, be cost-effective, comply with other statutory laws, and utilize permanent solutions and alternative treatment technologies and resource recovery alternatives to the maximum extent practicable. In addition, the statute includes a preference for the use of treatment as a principal element for the reduction of toxicity, mobility, or volume of hazardous substances.

This Proposed Plan presents five alternatives for addressing the contamination associated with the Site. The alternatives are broken into four separate components: the residents, the building, soil and ground water. The "Construction Time" for each alternative reflects only the time required to design (assumed to be 12 months for Alternatives 2,3,4, and 5) and construct or implement the remedy and does not include the time required to negotiate the performance of the remedy with the potentially responsible party(ies), procure contracts for design and construction, or to obtain permanent access to the Site. No Operation and Maintenance (O&M-see footnote at Table 3) costs are calculated for Alternatives 1 and 5, as each of these alternatives assumes no monitoring after the work is completed. Detailed cost analyses can be found in the FFS. Each of the five alternatives are described below.

Alternative 1: No Action

Residents: No Action
Budding: No Action
Soil: No Action
Ground Water: No Action
Time to Implement: 0 Months

Item	Cost
Building Maintenance & Relocation	\$0
Total Cost	\$0

CERCLA and the NCP require that the "No Action" alt native be considered as a baseline for comparison with other alternatives. The No Action alternative does not include implementation of active remedial measures for on-site mercury contamination. Temporary relocation of prior residents, site security and building maintenance of the Site would cease.

This alternative, if selected, would result in contaminants remaining on the Site in air and soil at concentrations above health-based levels. Therefore, under CERCLA, the Site would have to be reviewed every five years.

Alternative 2: Remediation of Building for Residential Use/Reoccupation by Building Residents/Soil

Remediation

Residents: Temporary Relocation of Residents
Building: Remediation for Residential Use for
Reoccupation by former residents
Soil: Sampling, Excavation, and Off-Site Disposal
Ground Water: Sampling and Analysis
Time to Implement: 46 Months

Item	Cost
Building Maintenance & Relocation	\$2,300,000
Building Remediation	\$4,368,000
Soil/Ground Water	\$ 138,000
Interior Reconstruction	\$2,975,000
O&M (discounted over 10 years)	+\$ 41,000
Total Present Worth Cost	=\$9,822,000

This alternative would include the continuation of the temporary relocation program for the prior building residents and the remediation of the building for reoccupation by the prior residents. Remediation of the building would include: conducting an asbestos survey; removing all reusable fixtures; gutting all improvements; vacuuming bulk mercury (e.g., pools of mercury and other sediments found in the flooring) while methodically removing all flooring layers; washing interior surfaces with detergents and then with sulfur solutions which react with the mercury to produce a less toxic form; heating the building interior air to promote evaporation (volatilization) of mercury adsorbed to surfaces; filtering interior air to remove mercury vapors; etching contaminated masonry surfaces; and reconstructing the building's interior to their present conditions. On-site sewers, floor drains, sumps, and sump pits would be cleaned prior to removal (if necessary). and wastes generated would be collected and containerized on-site. All waste/debris generated would be characterized and disposed of off-site at EPA-approved facilities. Mercury would be recovered and recycled wherever practical.

Clearance monitoring of the interior air would be performed monthly for one year after remediation to ensure mercury levels remain below the remedial action objective of 0.09 $\mu\text{g}/\text{m}^3$ of mercury in air in the building. Interior air in the buildings would be monitored annually for mercury vapors for 10 years following successful completion of remediation to ensure that mercury vapor levels remain below EPA risk-based concentrations. Should mercury vapors exceed EPA levels, EPA would consider the remedy to have failed, would evacuate the building, and would consider relocation options for affected parties. Alternative 2: Remediation of Building Additional discrete sampling of off site soil as well as soil under the asphalt parking lot and under the building foundation would be conducted. Soil with average mercury concentrations (at the same depth interval) above 23 mg/kg under the parking lot would be excavated and disposed of off-site at EPA-approved facilities. Groundwater samples would be collected and analyzed to determine the extent to which mercury contamination in soil at the Site has impacted groundwater quality. Identification of groundwater and/or off-site soil contamination may warrant further study by EPA. The excavated areas would be backfilled with clean soil.

If sampling under the foundation indicates that mercury contamination remains under the building in soil or ground water, institutional controls would be put in place on the property to prevent breaching of the foundation and contact with the contamination. If mercury remains under the foundation at concentrations above health-based levels, under CERCLA, the Site would have to be reviewed every five years.

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Alternative 3: Remediation of Building for
Residential Use/Permanent Relocation of
Building Residents/Soil Remediation

Residents: Permanent Relocation
 Building: Remediation for Residential Use
 Soil: Sampling, Excavation, and Off-Site Disposal
 Ground Water: Sampling and Analysis
 Time to Implement: 40 Months

Item	Cost
Building Maintenance & Relocation	\$ 10,853,000
Building Remediation	\$ 4,488,000
Soil/Ground Water	\$ 138,000
O&M (discounted over 10 years)	+\$ 41,000
Real Estate Value	-\$ 2,423,000
Total Present Worth Costs	=\$ 13,097,000

This alternative would include relocation of the prior building residents into permanent housing. Temporary relocation benefits would continue until permanent relocation is achieved. Permanent relocation would consist of the provision of relocation benefits to owners and occupants of the Site, including: compensation for the property to be acquired; moving and related expenses; replacement housing assistance; and relocation advisory services.

The remediation and clearance monitoring of the building for residential use by new residents would be performed as described in Alternative 2, except the building would only be reconstructed to bare interior walls and finished floors. On-site sewers, floor drains, sumps, and sump pits would be cleaned prior to removal (if necessary), and wastes generated would be collected and containerized on-site. All waste/debris generated would be characterized and disposed of off-site at EPA-approved facilities. Mercury would be recovered and recycled wherever practical. Interior air in the buildings would be monitored annually for mercury vapors for 10 years following successful completion of remediation to ensure that mercury vapor levels remain below EPA risk-based concentrations. Should mercury vapors exceed EPA levels, EPA would consider the remedy to have failed, would evacuate the building, and would consider relocation options for affected parties.

Additional discrete sampling of off site soil as well as of soil under the asphalt parking lot and under the building foundation would be conducted. Soil with average sulfur mercury concentrations (at the same depth interval) above 23 mg/kg under the parking lot would be excavated and Superfund Proposed Plan

Alternative 3: Remediation of Building for water samples would be collected and analyzed to deter-Residential Use/Permanent Relocation of Building Residents/Soil Remediation

Residents: Permanent Relocation
 Building: Remediation for Residential Use
 Soil: Sampling, Excavation, and Off-Site Disposal
 Ground Water: Sampling and Analysis
 Time to Implement: 40 Months

Item	Cost
Building Maintenance & Relocation	\$ 10,853,000
Building Remediation	\$ 4,488,000
Soil/Ground Water	\$ 138,000
O&M (discounted over 10 years)	+\$ 41,000
Real Estate Value	-\$ 2,423,000
Total Present Worth Costs	=\$ 13,097,000

This alternative would include relocation of the prior building residents into permanent housing. Temporary relocation benefits would continue until permanent relocation is achieved. Permanent relocation would consist of the provision of relocation benefits to owners and occupants of the Site, including: compensation for the property to be acquired; moving and related expenses; replacement housing assistance; and relocation advisory services.

The remediation and clearance monitoring of the building for residential use by new residents would be performed as described in Alternative 2, except the building would only be reconstructed to bare interior walls and finished floors. On-site sewers, floor drains, sumps, and sump pits would be cleaned prior to removal (if necessary), and wastes generated would be collected and containerized on-site. All waste/debris generated would be characterized and disposed of off-site at EPA-approved facilities. Mercury would be recovered and recycled wherever practical.

This alternative would include temporary and permanent relocation of the prior building residents as described above for Alternative 3. While the remediation would include the same steps as outlined in Alternative 2, the in air in the building, which is appropriate for industrial commercial uses. This remedial action would include removal of the flooring and washing of the masonry with sulfur solutions which react with the mercury to produce a less toxic form. On-site sewers, floor drains, sumps, and sump pits would be cleaned prior to removal (if necessary), and wastes generated would be collected and containerized on-site. All waste/debris generated would be characterized and disposed of off-site at EPA-approved facilities. Mercury would be recovered and recycled wherever practical. The building would be reconstructed to bare interior walls and finished floors. Interior air in the buildings would be monitored biennially for mercury vapors for 10 years following successful completion of remediation to ensure that mercury vapor levels remain below EPA risk-based concentrations. Should mercury vapors exceed EPA levels, EPA would consider the remedy to have failed, would evacuate the building, and would consider relocation options for affected parties.

Additional discrete sampling of off site soil as well as of soil under the asphalt parking lot and under the building foundation would be conducted. Soil with average mercury concentrations (at the same depth Interval) above 23 mg/kg under the parking lot would be excavated and disposed of off-site at EPA-approved facilities. Groundwater samples would be collected and analyzed to determine the extent to which mercury contamination in soil at the Site has impacted groundwater quality. Identification of groundwater and/or off-site soil contamination may warrant further study by EPA. The excavated areas would be backfilled with clean soil. If sampling under the foundation indicates that mercury contamination remains under the building, institutional controls would be put in place on the property to prevent breaching of the foundation.

If mercury remains under the foundation at concentrations above health-based levels, under CERCLA, the Site would have to be reviewed every five years. If the U.S. Government conducts the property acquisition and permanent relocation, after successful implementation of the remedy, the property would be sold and monies generated by the sale would offset those incurred to undertake the remedy. Groundwater samples would be collected and analyzed to determine the extent to which mercury contamination in soil at the Site has impacted groundwater quality. Identification of groundwater and/or off-site soil contamination may warrant further study by EPA. The excavated areas would be backfilled with clean soil. If sampling under the foundation indicates that mercury contamination remains under the building, institutional controls would be put in place on the property to prevent breaching of the foundation and contact with the contamination.

If mercury remains under the foundation at concentrations above health-based levels, under CERCLA, the Site would have to be reviewed every five years. If the U.S. Government conducts the property acquisition and permanent relocation, after successful implementation of the remedy, the property would be sold and monies generated by the sale would offset those incurred to undertake the remedy.

Alternative 4: Remediation of Building for Industrial or Commercial Use/Permanent Relocation of Building Residents/Soil Remediation

Residents: Permanent Relocation of Residents
Building: Remediation for Industrial or Commercial Use
Soil: Sampling, Excavation, and Off-Site Disposal
Ground Water: Sampling and Analysis
Time to Implement: 38 Months

Item	Cost
Building Maintenance & Relocation	\$ 10,853,000

Building Remediation	\$ 3,742,000
Soil/Ground Water	\$ 138,000
O&M (discounted over 10 years)	+\$ 14,000
Real Estate Value	-S 1,808,000

This alternative would include temporary and permanent above for Alternative 3. While the remediation would include the same steps as outlined in Alternative 2, the removal of the flooring and washing of the masonry with sulfur solutions which react with the mercury to produce remedy, the property would be sold and monies generated by the sale would offset those incurred to undertake the remedy.

Table 2 - Evaluation Criteria

- ! Overall protection of human health and the environment addresses whether or not a remedy provides adequate protection and describes how risks posed through each pathway are eliminated, reduced, or controlled through treatment, engineering controls, or institutional controls.
- ! Compliance with ARARs addresses whether or not a remedy will meet all of the applicable or relevant and appropriate requirements of other federal and state environmental statutes and requirements or provide grounds for invoking a waiver
- ! Long-term effectiveness and permanence refers to the ability of a remedy to maintain protection of human health and the environment once cleanup goals have been met.
- ! Reduction of toxicity, mobility, or volume through treatment addresses the anticipated performance of the treatment technologies a remedy may employ.
- ! Short-term effectiveness; addresses the period of time needed to achieve protection from any adverse impacts on human health and the environment that may occur during the construction and implementation period until cleanup goals are achieved.
- ! Implementability addresses the technical and administrative feasibility of a remedy, including the availability of materials and services needed to implement a particular option.
- ! Cost includes estimated capital and operation and maintenance
- ! Long-term effectiveness and permanence refers to the ability of
- ! State acceptance indicates whether the State, concurs, opposes, or has no comment on the preferred alternative.
- ! Community acceptance will be assessed in the Record of Decision following a review of the public comments received on the technical reports and the Proposed Plan.

Alternative 5: Demotion of Building/Permanent Relocation of Building Residents/Soil Remediation

Residents: Permanent Relocation of Residents
Building: Demolition of Building
Soil: Sampling, Excavation and Off-Site Disposal
Ground Water: Sampling and Analysis
Time to Implement: 23 Months

Item	Cost
Building Maintenance & Relocation	\$ 10,853,000
Building Demolition	\$ 4,359,000
Soil Ground Water	+\$ 219,000
Real Estate Value	-\$ 1,568,000
Total Present Worth Costs	= 3,863,000

This alternative would include temporary and permanent relocation of the prior building residents as described above for Alternative 3. The building and townhouse would be demolished and debris would be disposed of at EPA-approved facilities. Due to the high concentrations of mercury in the flooring, the flooring would be carefully removed and disposed of off-site prior to the demolition, as described in Alternative 2. On-site sewers, floor drains, sumps, and sump pits would be cleaned prior to removal (if necessary), and wastes generated would be collected and contained on-site. All waste/debris generated would be characterized and disposed of off-site at EPA-approved facilities. Mercury would be recovered and recycled wherever practical. Based upon an evaluation, the foundation of the building would be removed.

Additional discrete sampling of off site soil as well as of soil under the asphalt parking lot and under the building foundation would be conducted. Soil with average mercury concentrations (at the same depth interval) above 23 mg/kg under the parking lot and foundation would be excavated and disposed of off-site at EPA-approved facilities to determine the extent to which mercury contamination in soil at the Site has impacted groundwater quality. Identification of groundwater and/or off-site soil contamination may warrant further study by EPA. The excavated areas would be backfilled with clean soil. If the U.S. Government conducts the property acquisition and permanent relocation, after successful implementation of the remedy, the property would be sold and monies generated by the sale would offset those incurred to undertake the remedy.

Evaluation of Alternatives

As stated previously, CERCLA requires that each selected site remedy be protective of human health and the tory laws, and utilize permanent solutions and alternative treatment technologies and resource recovery alternatives to the maximum extent practicable. The statute includes a preference for the use of treatment as a principal element for the reduction of toxicity, mobility, or volume of the hazardous substances.

During the detailed evaluation of alternatives, each alternative is assessed against nine evaluation criteria: overall protection of human health and the environment; compliance with ARARs; long-term effectiveness and permanence; reduction of toxicity, mobility, or volume through treatment; short-term effectiveness; implementability; cost; and state and community acceptance. The evaluation criteria (identified in boldfaced type) are described in Table 2. A comparative analysis of these alternatives based upon the nine evaluation criteria follows.

Overall Protection of Human Health and the Environment

An air-dispersion model was used by EPA immediately after determining the extent of mercury contamination at the Site which showed that under a "worst-case" scenario, a fire in the building could result in high levels of mercury being released into the atmosphere. Therefore, in the short-term, in order to minimize the potential risk of a fire at the Site and exposure to airborne mercury. EPA has improved the sprinkler system and connected the building's electronic fire alarm directly to a central fire station. The electronic fire alarm is tested frequently. While these actions minimize the potential release of mercury by minimizing the risk of fire, they do not preclude the possibility of fire and therefore are not fully protective of human

health and the environment. Mercury contamination at the Site continues to pose a potential risk to the health of human building residents through two primary pathways in addition to the fire scenario: inhalation of mercury in air in the existing building and ingestion of mercury-contaminated soil. EPA requires that each cleanup alternative eliminate, reduce, or control the risks posed by these two pathways.

Alternative, No Action, would not be protective of human health and the environment because the building would remain in its current condition. Risks of exposure to mercury vapors due to fire or inhalation of interior air would remain. Reoccupation of the building would once again threaten the health of building residents by exposure to mercury vapors in air at concentrations above risk-based levels, which is unacceptable. Alternative 1, No Action, has been eliminated from consideration and will not be discussed further because it is not protective of

While the building is being cleaned up, Alternatives 2, 3, and 4 would eliminate the risk to former occupants by dissociating them from the Site (temporarily in the case of Alternative 2 and permanently in the cases of Alternatives 3, and 4 thus eliminating the inhalation pathway. After building remediation is complete, Alternatives 2,3, and 4, provided they are successfully implemented (see discussion of long-term effectiveness below), would reduce the risks from exposure to mercury in the air in the building. However, there is considerable uncertainty whether these Alternatives can meet this criterion over the long term. After soil excavation is complete, Alternatives 2,3, and 4 would eliminate the future risk associated with children potentially ingesting mercury-contaminated soil in the parking lot area. Any risks due to contamination remaining under the foundation would be restricted by institutional controls. Because Alternatives 2,3,4, and 5 would each expose workers to mercury vapors, continuous air monitoring should be performed to ensure that all work occurred in a safe environment. Should mercury vapor levels exceed health-based standards, measures would be taken to reduce the levels and/or provide protective equipment to the workers. Additionally, because all waste/debris and contaminated soils generated under Alternative 2, 3, 4, and 5 would be disposed of at EPA-approved facilities, future contact with that material would be controlled.

Grand Street Mercury Site. Hoboken, New Jersey

Table 3
Cost Comparison of the Remedial Alternatives

ALTERNATIVE	Time to Complete 1	Capital Cost Estimate	Total O&M Cost 2	Present Worth Cost
1: No Action	0 months	50	50	50
2: Remediation of Building for Residential Use/Reoccupation by Building Residents	46 months	59.8 million	\$41,000 3 (over 10 years)	59.8 million
3: Remediation of Building for Residential Use/Permanent Relocation of Building Residents	46 months	\$13.1 million	\$41,000 3 (over 10 years)	\$13.1 million 4
4: Remediation of Building for Industrial or Commercial Use/Permanent Relocation of Building Residents	38 months	\$12.9 million	\$14,000 3 (over 10 years)	\$12.9 million 4
5: Demolition of Building/Permanent Relocation of Building Residents	23 months	\$13.9 million	50	\$13.9 million 4

1 Cost and time estimates for building remediation and demolition are based on the March 11, 1997. Technical Engineering Evaluation for Remediations at the Grand Street Site. Due to additional steps to the project by EPA, the estimated length of time to complete the remedial actions and costs have been increased. Times include a 12-month design period.

2 O&M means "Operations and Maintenance. "Includes costs for sampling after the remedial efforts to ensure success. There would be no O&M costs for Alternatives 1 and 5. O&M costs for Alternatives 2, 3 and 4 have been discounted over a 10-year period following completion of the cleanup.

3 Present Worth-Costs: The amount of money that would have to be invested now at 7 percent interest in order to have appropriate funds available at the actual time the remedial action is implemented. A more detailed breakdown of these costs is provided in the preceding sections describing each Alternative.

4 Costs for permanent relocations consist of purchase of living spaces and common areas in the building and townhouse, and purchase of the adjacent parking area, based on EPA appraisal estimates conducted in 1996, and are not reflective of appraisals to be conducted after the issuance of this report.

Alternative 5 meets this criterion since it would eliminate the risk to former occupants by dissociating them from the Site permanently, thus eliminating the inhalation pathway and would eliminate all future risks since demolition would eliminate the air exposure pathway and the risk of fire and release to the surrounding community. After soil excavation is complete, Alternative 5 would eliminate the future risk associated with ingesting mercury-contaminated soil at the Site.

Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)

Actions taken at any Superfund site must meet all applicable or relevant and appropriate requirements of federal and state law or provide grounds for invoking a waiver of these requirements. Alternatives 2, 3, 4, and 5 would comply with ARARs. Major ARARs are briefly described below.

The Resource Conservation and Recovery Act (RCRA) is a federal law that mandates procedures for treating, transporting, storing, and disposing of hazardous substances. All portions of RCRA which are applicable or relevant and appropriate to the proposed remedy for the Site would be met by the alternatives. Construction debris would be generated at the Site during building remediation or demolition and all or part of that construction debris may be a hazardous waste as defined by RCRA. As a hazardous waste, construction debris may be subject to the Land Disposal Restrictions under RCRA. Wastes generated would be characterized (if applicable) and disposed of in accordance with RCRA and New Jersey's delegated hazardous waste program requirements.

The Clean Air Act is a federal law which sets national standards and regulations for controlling air pollution. Removal of interior components of the building may release liquid elemental mercury, which may, in turn, volatilize and constitute a point-source emission under the Clean Air Act. The Clean Air Act also includes standards for building demolition and renovation, which require the removal of all friable asbestos prior to demolition. All of the alternatives would be designed to comply with the requirements of the Clean Air Act.

The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, which provides regulations and guidance for the government in conducting relocations activities where property is acquired, is not an environmental law but would have bearing on Alternatives 3, 4, and 5 which involve permanent relocation. The Act provides for uniform and equitable treatment of persons displaced from their homes by federal programs. All portions of the Act which are applicable to the proposed remedy for the Site would be met by the alternatives.

The Site history gives an indication that the Site may have some historic significance. In compliance with the National Historic Preservation Act, a Stage IA Cultural Resources Survey would be conducted.

Long-Term Effectiveness and Permanence

This criterion reflects the ability of each alternative to meet remedial action objectives in the future and also reflects the degree of certainty that the alternative will prove successful. The analysis of how each alternative meets this criterion is especially critical for the Grand Street Mercury Site since four of the five alternatives evaluated would result in preservation of the building structure, meaning that future occupants could be exposed to residual contamination.

Alternative 5, since it includes demolition and off-site disposal of the building and removal of contaminated soil, provides the highest degree of certainty that the remediation will be successful. There will be no possibility of future residents or workers being exposed to any residual mercury contamination in the building and soil since all mercury contamination above health-based levels would be removed.

Alternatives 2 and 3 would provide a much lower degree of certainty that the alternative will prove successful after implementation as it is unknown whether residual mercury contamination in the building structure could result in levels above the cleanup objective of 0.09 ug/m³. This means that Alternative 2 could result in former residents remaining in temporary relocation for up to four years with no assurance that the building would be inhabitable at the end of that time. Further, mercury contamination, though presumed to be primarily concentrated in flooring materials, has been detected in all areas and building

components of the Site, including flooring, brick wooden support materials, roofing materials, interior soil/sediments and in exterior on- and off-site soils. Since mercury has adhered to minute pore spaces throughout the building structure, there would always be the potential for exposure. Therefore, even if the cleanup objective of 0.09 ug/m³ were met at the end of the building remediation phase, it would be impossible to ensure without long-term monitoring that there would be no future risk associated with residual contamination in the building structure. Such monitoring would not be practical in residential building.

Alternative 4 would provide a higher degree of certainty that the alternative will prove successful after implementation since the industrial/commercial cleanup standard is 0.44 ug/m³. As with Alternatives 2 and 3, it would be impossible to ensure without monitoring that there would be no future risk associated with residual contamination in the building structure.

For all of the Alternatives, mercury would be recovered and recycled to the extent practicable from all waste streams thereby minimizing the amount of waste and contamination landfilled, and remaining waste would be characterized and shipped off-site using appropriately licensed transported for treatment of disposal at an appropriately permitted landfill(s).

Reduction of Toxicity, Mobility, or Volume Through Treatment

With the exception of Alternative 1, all of the alternatives would meet this criterion. The remediation alternatives (Alternatives 2, 3, and 4) would capture the bulk of mercury contamination in the building and would treat and remove remaining residual mercury in porous surfaces, thereby minimizing the volume and mobility of mercury contamination at the Site. The demolition alternative (Alternative 5) would capture, treat, recover, dispose of, or contain all mercury contamination in the building, thereby minimizing the toxicity, mobility, and volume of mercury contamination at the Site.

All of the alternatives would include recovery of mercury, treatment of applicable waste streams, and disposal of wastes at appropriately permitted off-site facilities to ensure overall reduction of toxicity.

Short-Term Effectiveness

With the exception of Alternative 1, all of the alternatives provide a high degree of short-term effectiveness for the prior occupants of the Site since each alternative includes temporary/permanent relocation to immediately dissociate residents from contamination at the Site. The time to demolish the building once design is complete and access is obtained under Alternative 5 is 11 months. The time to remediate the building once design is complete and access is obtained for Alternatives 2, 3 and 4 is 14 to 16 months, though each would also require at least 12 months of clearance monitoring so that the time to actual reuse of the property is significantly greater than the time it would take to demolish the building.

However, Alternative 5 would likely present a much greater impact to the surrounding community than Alternatives 2, 3 and 4. The primary potential health and cross-media impacts associated with Alternative 5 would be increased mercury vapor, dust, and noise generation during building demolition. These would be minimized through the use of measures which would be undertaken to ensure that all activities are performed in such a way that vapors, dust, debris, and other materials are not released to the surrounding community. For instance, careful attention would be paid to ensure that workers are fully protected from mercury exposure during the remedial or demolition effort, and that the building is secured and work space maintained under negative pressure to ensure minimization of off-site releases.

EPA recognizes that a significant increase in noise levels due to remediation, demolition, and/or transportation activities may occur under alternatives 2, 3, 4 and 5. EPA will take precautionary measures to minimize noise levels due to construction activities to the extent practicable, and will design transportation flow patterns to minimize traffic impacts on residential areas. EPA will provide advance notice of remedial activities to the local community.

Grand Street Mercury Site, Hoboken, New Jersey

Glossary

Applicable or Relevant and Appropriate Requirements (ARARs): Requirements which dictate how a site will be cleaned up. EPA must evaluate existing federal and state regulations which affect the way EPA can undertake activities, such as removal, demolition, transport, disposal, and storage of contaminated materials, at a Superfund site. These requirements can be waived for a particular site by EPA.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): Also known as Superfund, this law authorizes the federal government to respond directly to release of hazardous substances that may endanger public health or the environment. EPA is responsible for managing Superfund.

Focused Feasibility Study (FFS): An abbreviated study that develops and analyzes alternatives for cleaning up a hazardous waste site.

Hazardous Wastes: Wastes exhibiting any of the following characteristics: ignitability, corrosivity, reactivity, or toxicity. EPA and the State of New Jersey have listed as hazardous other wastes that may also exhibit these characteristics, but are so dangerous that they are regulated regardless of their parameters. Although the legal definition EPA or State have identified as posing a threat to human health and the environment if managed improperly. Federal and state regulations set strict controls on the management of hazardous wastes.

Mercury: A silver-white metal that is liquid at ordinary temperatures. Long-term exposure to mercury may cause damage to the central nervous system and the kidneys. At the Grand Street Mercury Site, mercury was used to make mercury vapor lamps.

Mercury Vapor Lamp: Mercury vapor lamps, used primarily for industrial and commercial purposes, contain liquid mercury which emits light when subjected to an electrical current.

National Contingency Plan (NCP): The federal regulation that guides the implementation of the Superfund program.

Petroleum Hydrocarbons: Hydrocarbons are the components which make up oil-based products such as gasoline and fuel oil.

Potentially Responsible Party(ies): An individual(s) or company(ies) (such as owners, operators, transporters, or generators) potentially responsible for contributing to the contamination problem at a Superfund site. Whenever possible. EPA requires potentially responsible parties, through administrative and legal actions, to clean up hazardous waste sites they have contaminated.

Remediate, Remediation or Remedial Action: A series of steps taken to construct or implement a remedy that will reduce or eliminate risks to human health and the environment posed by a Superfund site.

Removal Action: An immediate action taken over the short-term to address a release or threatened release of hazardous substances. Examples of removal actions include testing and removing leaking drums; erecting a fence to secure an area; placing a temporary cap over contaminated material; and, in this case, providing temporary relocation to displaced building residents.

Superfund: The common name used for the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), the federal law which mandates cleanup of abandoned hazardous waste sites.

X-Ray Fluorescence: A contamination identification technique used in the field which uses X-Ray radiation to identify the presence of heavy metals (including mercury, lead and other toxic metals). A sample is irradiated with X-Rays, and then each element in the sample re-emits X-Rays in a unique pattern. Based on the intensity of each unique pattern, heavy metals can be identified, and the concentrations of those metals can be estimated.

Superfund Proposed Plan

Implementability

Implementability addresses an analysis of the technical and administrative feasibility of a remedy and the availability of services and materials needed to implement a particular alternative. Alternative 5 affords the highest degree of implementability in that it is technically feasible and would require a minimal amount of administrative coordination to complete. Demolition and excavation services are widely available although considerations for worker safety and maintenance of workspace under negative pressure would likely narrow the list of potential contractors. Administratively, Alternative 5 would involve consideration of the National Historic Preservation Act which may require extensive documentation of the building prior to demolition.

Since Alternative 5 would include demolition of the townhouse, careful attention would have to be paid to ensuring the structural integrity of the adjacent property at 718 Grand Street, as the townhouse is physically adjoined to the adjacent property.

Alternatives 2, 3 and 4 each raise implementability concerns due to uncertainties associated with technical feasibility as well as securing contractors capable of implementing the required remedial technologies. Based on EPA's review of the literature, remediation to the remedial action objectives specified in this document has not been recorded in the past. Further, in the case of Alternatives 2 and 3, the remedial action objective of 0.09 ug/m³ is very close to the detection limit (0.05 ug/m³) for the EPA-approved analytical method, potentially adding some uncertainty to the interpretation of analytical results. Additionally, the prior occupants have expressed to EPA that they may be unwilling to move back into the building, even after remediation is successfully completed. Finally, Alternatives 2, 3, and 4 would require close coordination with several entities, including ATSDR, the Hoboken Health Department, the Hudson Regional Health Commission, and the New Jersey Department of Health, in order to get their concurrence on reuse of the building after the conclusion of the remedial effort.

The implementability of Alternative 4 is also problematic in that the City of Hoboken has presently zoned the Site as R2, multifamily residential, with certain variances which permit artists to work in the building. In addition, City government has indicated its desire to promote residential property conversion and development within Hoboken, and has voiced objections to a return of the property to commercial/industrial zoning.

Cost

The cost estimates associated with the alternatives are summarized in Table 3. Alternative 2 is the lowest-cost, protective alternative with a present worth cost of \$9.8 million. The next three alternatives are substantially more expensive with present worth costs of \$13.1 million for Alternative 3, \$12.9 million for Alternative 4, and \$13.9 million for Alternative 5. Permanent relocation costs, near \$10 million, account for the bulk of the costs for Alternatives 3, 4, and 5.

State Acceptance

EPA has developed this Proposed Plan consultation with NJDEP, which has indicated that it concurs with the preferred alternative presented in this Proposed Plan.

Community Acceptance

Community acceptance of the preferred alternative will be assessed in the Record of Decision following review of the public comments received on the Focused Feasibility Study and on the Proposed Plan.

Preferred Alternative

Based upon the results of the Focused Feasibility Study and after careful consideration of the various alternatives presented earlier, EPA recommends Alternative 5, Demolition of the Building/Permanent Relocation

of the Building Residents/Soils Sampling, Excavation, and Off-Site Disposal/Groundwater Sampling and Analysis, as the preferred alternative for the Site. Specifically, the preferred alternative would involve permanent relocation of the prior building residents. Temporary relocation benefits would continue until permanent relocation is achieved. Permanent relocation would consist of provision of relocation benefits to owners and occupants of the Site, including: compensation for the property to be acquired; moving and related expenses; replacement housing assistance; and relocation advisory services.

The building and townhouse would be demolished and debris would be disposed of off-site. Due to the high concentration of mercury in the flooring, the flooring would be methodically removed, as described in Alternative 2 and segregated. On-site sewers, floor drains, sumps, and sump pits would be cleaned prior to removal (if necessary), and wastes generated would be collected and containerized on-site. All waste/debris generated would be characterized and disposed of off-site at EPA-approved facilities. Mercury would be recovered and recycled wherever practical. Based upon an evaluation, the foundation would be removed.

Additional discrete sampling of soil under the asphalt parking lot under the building foundation would be conducted. Soil with average mercury concentrations (at the same depth interval) above 23 mg/kg under the parking lot and foundation would be excavated and disposed of off-site at EPA-approved facilities. The excavated areas would be backfilled with clean soil to the present level of the parking lot and adjacent sidewalks. If the U.S. government conducts the property acquisition and permanent relocation, after successful implementation of the remedy the property would be sold and monies generated by the sale would offset those incurred to undertake the remedy. Six soil samples would be collected from under the parking lot and foundation which would be analyzed for all Superfund Target Compounds (organics) and Superfund Target Analytes (metals) and for Total Petroleum Hydrocarbons.

A minimum of two groundwater samples would be collected and analyzed to determine the extent to which mercury contamination in soil at the Site has impacted groundwater quality. Identification of groundwater and/or off-site soil contamination may warrant further study by EPA. A well search may also be conducted to determine groundwater quality in the surrounding area with respect to mercury.

The preferred alternative would be the most protective of human health and the environment because mercury contamination in the buildings would be permanently eliminated by a demolition effort. Demolition would eliminate any uncertainties posed by the remediation alternatives regarding exposure to residual contamination in pore spaces of the building structure.

The preferred alternative would achieve ARARs more quickly with no uncertainty of future exposure, and at a comparable cost to the other options involving permanent relocation. The preferred alternative would enable EPA to move the former building residents into permanent housing in the shortest time possible. In addition, the preferred alternative would allow for future residential use of the property, consistent with current and projected future land use patterns in Hoboken. Therefore, the preferred alternative would provide the best balance of trade-offs among alternative with respect to the evaluation criteria. EPA believes that the preferred alternative is protective of human health and the environment, complies with federal and state requirements that are legally applicable or relevant and appropriate to the remedial action, is cost-effective, and utilizes permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent possible.

Nest Steps

After EPA has presented the preferred alternative at the public meeting and has received any comments and questions during the public comment period, EPA will summarize the comments and provide its responses in a document called the "Responsiveness Summary." The Responsiveness Summary will be appended to the Record of Decision, which will describe the final alternative selected by EPA and provide EPA'S rationale for that selection.

(IMG 97166 I1)

APPENDIX B

PUBLIC NOTICES

These public Notices were published in the Jersey Journal and Hoboken Reporter newspaper to announce the public meetings and extension of the public comment period.

APPENDIX C

SIGN-IN CARDS

These cards were signed by people who attended the public meeting on July 16, 1997.

APPENDIX D

TRANSCRIPT OF JULY 16, 1997 PUBLIC MEETING

1 GRAND STREET MERCURY SITE
2 HOBOKEN, NEW JERSEY
3 PUBLIC MEETING
4 JULY 16, 1997
5 COMMENCING AT 7:00M P.M.

6

7

B E F O R E:

8

9 PAT SEPPI
10 COMMUNITY RELATIONS COORDINATOR, EPA

11

12 JOHN HANSEN
13 REMEDIAL PROJECT MANAGER, EPA

14

15 MARK MADDALONI
16 ENVIRONMENTAL SCIENTIST, EPA

17

18 CAROLE PETERSEN
19 CHIEF, NEW JERSEY REMEDIATION BRANCH

20

21 JACK HARMON
22 ON-SCENE COORDINATOR

23

24

A L S O P R E S E N T:

25

26 JOANNE M. WIREMAN
27 PROJECT MANAGER
28 ICF KAISER ENGINEERS GROUP

29

30

A P P E A R A N C E S:

31

32 CATHERINE GARYPIE, ESQ.
33 ASSISTANT REGIONAL COUNSEL
34 EPA

35

36

37

38 ATTORNEYS' COURT REPORTING SERVICE
39 P.O. BOX 57
40 HACKENSACK, NEW JERSEY 07602
41 (201) 342-1111

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1 MS. SEPPI: If everybody could take a
2 seat, I'd like to get the meeting going, please.

3 I know there's still some people
4 signing in and coming in. It's very wart, you all
5 know that, I'd like to get started.

6 First of all. I want to thank everybody
7 for coming here this evening on such a hot and sticky
8 night. We honestly did think that this high school
9 was air conditioned, and when we found out it wasn't,
10 we ran around and we were able to get some fans, and
11 I do apologize for that.

12 I'd like to introduce some of the
13 people who are up here at the table and also some
14 other people who are in the audience. A lot of you
15 may know some of these people already.

16 To my right is John Hansen, he is the
17 Remedial Project Manager for the Grand Street site;
18 Mark Maddaloni, who is an Environmental Scientist
19 with the EPA and also did the Risk Assessment; Jack
20 Harmon, who is the On-Scene Coordinator who has been
21 handling the project here since its inception; and in
22 the first row we have Carole Petersen, who is the
23 Chief of the New Jersey Remediation Branch; next to
24 Carole is Cathy Garypie, who is EPA's attorney for
25 Grand Street.

1 We also have some representatives from
2 the New Jersey Department of Environmental Protection
3 here this evening, and one person I would like to
4 mention who is standing in the back is Joanne Wireman
5 from ICF, and believe me, without her, we would not
6 be ready and standing here right now.

7 Thank you, Joanne.

8 My name is Pat Seppi, and I am
9 Community Relations Coordinator with EPA, Region 2 in
10 New York.

11 The reason that we are here tonight is
12 to share with you our Proposed Plan. Probably most
13 of you received a copy of it in the mail. If you
14 haven't, there are copies outside. If you already
15 have non copy and want another one, if would probably
16 make a nice fan, we might need that before the
17 evening goes on.

18 So you know, the alternative that EPA
19 has chosen for the Grand Street site is permanent
20 relocation of the residents and demolition of the
21 building. Now, I need to stress that this is a
22 proposed plan, this is not our final remedy, this is
23 not our final decision. That's why we are having
24 this meeting tonight, and that's why we are in the
25 thirty day public comment period. The comment period

1 started on July 9th and it will end on August 7th.
2 In those thirty days, we will be taken oral comments
3 from anybody tonight who wants to give them, and you
4 are certainly welcome to make written comments and
5 address them to John Hansen. His address is in the
6 Proposed Plan. There are also a lot of other
7 documents available for you to read that are in two
8 locations, in the Hoboken Public Library that's on
9 Park Avenue, and also in our Records Center in our
10 office in lower Manhattan, at 290 Broadway.

11 So we urge you to please go, take a
12 look at those documents, the Risk Assessment, the
13 Focused Feasibility Study is there and other related
14 documentation.

15 The most important thing about this
16 public comment period is you. Before we make any
17 kind of final decision in conjunction with DEP, we
18 want to hear your comments, we want to hear your
19 concerns. After we do that, we will take a look at
20 what you have to say, we will review it, we will
21 consider it, and then we will come up with our final
22 decision document, which is called a Record of
23 Decision. That is our legally binding document.

24 Now, a couple of things I wanted to
25 mention, a change in the agenda. Lisa Jackson was

1 supposed to be here this evening to talk about an
2 overview of the Superfund program, and she is home
3 ill and very sorry she cannot be here, as I am
4 because I have to do her little speech, and I am
5 certainly not going to do as well she could have.
6 Other than that, the agenda stands.

7 I would ask please, if you hold
8 questions until the end of our presentation, we are
9 going to try to keep it very short. We want the bulk
10 of the time to be used up with your statements and
11 questions and answers, but this is a public meeting
12 and though some of the information will be repetitive
13 to a lot of you, there are people here that have not
14 been privy to a lot of this information before.

15 There is a sign-in sheet in the back.
16 As I said, there are other handouts back there, I
17 think ATS -- oh, where are you, I knew I forgot to
18 introduce somebody. Artie Block from ATSDR is here
19 and he has also left some handouts in the back, the
20 Mercury Fact Sheets, so please help yourselves to
21 those.

22 So I think what we will do now is go to
23 an overview of the Superfund program. Now, this
24 slide is a little bit different than what you have in
25 your packet, we thought this might be a good idea to

1 show an analogy of what it takes usually for a
2 Superfund site to go from site discovery to the RIFS
3 stage and the public meeting like we are having
4 tonight and what we have been able to do at Grand
5 Street.

6 So if you look at that slide, I don't
7 want to go into a lot of detail, we will leave that
8 for the questions, but an average NPL site from site
9 discovery to the RIFS stage and the public meeting
10 can take anywhere usually from five to eight years.
11 And that is counting very one to three years and
12 sometimes more to get the site listed on the National
13 Priorities List.

14 However, at Grand Street, you can see
15 that we have been able to go from site discovery to
16 this meeting tonight in twenty months. So we really
17 have fast-tracked this whole project, and actually
18 from site discovery to proposing Grand Street for our
19 National Priorities List, it was only one year.

20 Now, if you are not familiar, the
21 National Priorities List is a list of Superfund sites
22 throughout the whole country. Grand Street was
23 proposed and we hope it will become final sometime
24 later this summer, late August or early September.

25 Now, I know there is a lot more.

1 information I could give you, but I think we are
2 going to ask John Hansen right now to give us a
3 little bit of the site background.

4 John.

5 MR. HANSEN: Good evening. I would
6 also like to stress to you this evening that we are
7 in a public comment time period during which you are
8 invited to review documents at the repository, which
9 is the Hoboken Public Library, and you can also make
10 an appointment to come to our regional office at 290
11 Broadway in Manhattan to look at that file.

12 All documents that we prepared today
13 are subject to review, and we invite your comment.

14 I would like to start out this evening
15 with a little bit of background about the Grand
16 Street mercury site.

17 The building, which is just across the
18 street catty-corner, at the corner of 8th and Grand,
19 was historically utilized as a manufacturer of
20 lighting materials by General Electric and by
21 Copper-Hewitt and some other entities. One of the
22 types of lighting materials that was manufactured at
23 the site was something called a mercury vapor lamp.
24 That's a large tube that is often about four feet
25 long that has a little tiny pool of mercury in it.

1 They also manufactured mercury switches and utilized
2 mercury to assist in making vacuums at the site. And
3 as you may be aware, you need to remove oxygen from
4 the inside of lighting material to make it a
5 noncombustible atmosphere.

6 Also somewhat at times concurrent to
7 this lighting manufacturer was a company called
8 Quality Tool and Die that manufactured tools and dies
9 for a variety of industries, including the aerospace
10 industry. They were active at the site from 1948
11 until 1988, and were run by members of the Pascale
12 family.

13 In 1993, the Grand Street Artists
14 Partnership became interested in the site and bought
15 it from the Pascales, and up to 1995, began
16 converting the building into residential and studio
17 units.

18 In March 1995, a substance which was
19 presumed to be liquid elemental mercury was found in
20 the flooring of a fifth floor unit, and EPA was
21 called in shortly after to investigate the site.

22 From March to October 1995, the Grand
23 Street Artists Partnership enlisted an environmental
24 contractor to come into the building and attempt to
25 remediate the mercury contamination on the fifth

1 floor. They found they were unable to remediate the
2 mercury, and in December 1995, based on some
3 environmental information which we will talk about in
4 just a minute, EPA and the Agency For Toxic Substance
5 Disease Registry, which is a branch of the Department
6 of Health & Human Services, along with the Center for
7 Disease Control came in and evaluated the urine of
8 people at the site for mercury concentrations.

9 In January 1996, the Hoboken Health
10 Department issued an evacuation order requiring the
11 residents of the building to move out.

12 From January 1996, EPA has been
13 extensively involved in monitoring environmental
14 media like air, the building structural components,
15 soils on the site and off the site. We've also
16 monitored the air of the building adjacent to the
17 site.

18 In April 1997, EPA took the
19 environmental data that it compiled and conducted a
20 Baseline Human Health Risk Assessment to assess the
21 risk to people inhaling mercury vapor contaminated
22 air as well as ingesting mercury in the soil in the
23 parking lot, which many of you may be aware is
24 covered with an asphalt cap. The situation we were
25 attempting to evaluate is the risk that might be

1 posed to people of that asphalt cap were to degrade
2 and people were to subsequently be exposed to mercury
3 in the soil.

4 As of this month, we've completed a
5 Focused Feasibility Study and issued the Proposed
6 Plan, which we are here to talk to you about this
7 evening. That Proposed Plan opens up the public
8 comment period, as both Pat and I mentioned to you,
9 and that public comment period ends on August 7th.

10 I would like to start by addressing the
11 sampling we have done in the air in the building. We
12 have collected almost 2,000 samples, and in those
13 2,000, we have collected time weighted average
14 samples as well as instantaneous samples, and we
15 found that approximately 70% of the samples in the
16 building identified mercury concentrations in the air
17 -- that's in the main building and the townhouse
18 which is adjacent to the main building on Grand
19 Street -- mercury concentrations in the breathing
20 zone in the air, that's approximately four to five
21 feet, ranges of a variety of levels, the highest of
22 which was 300 micrograms per cubic meter.

23 That number probably doesn't mean a lot
24 to you.

25 Mark Maddaloni is going to talk to you

1 about risk and give you a little insight to what as
2 well, but I'd like to point out initially that the
3 residential risk base standard that we developed is
4 .09 micrograms per cubic meter.

5 In other words, this value is
6 approximately three to 4,000 times higher than our
7 risk base number.

8 We also sampled extensively the
9 structural components of the building, including the
10 wooden posts and beams and following materials, the
11 bricks that form the outer shell, and the walls
12 throughout the building, the concrete and the
13 flooring of the basement, and also the tar paper in
14 the roofing materials of the building. We found
15 mercury throughout the building, but in order to be
16 absolutely sure, we went into the fifth floor units
17 and we found that same silvery liquid that was
18 initially reported by the Grand Street Artists
19 Partnership to be prevalent throughout those units.
20 We analyzed eight samples of it and we found that
21 silvery liquid was indeed mercury. We sent back and
22 we looked in the flooring of the sixteen units in the
23 building, and we found visible liquid silvery mercury
24 throughout thirteen of those units. We found that in
25 the wooden material in the building; mercury was

1 found in all of the types of wood that we sampled and
2 that is, the posts, the beams, the floor joists, the
3 flooring material, and that was not the silvery
4 elemental mercury you might be familiar with in
5 thermometers or mercury switches, if you've ever seen
6 that, like what we found in the flooring, the type of
7 mercury that we found in the wood was mercury that,
8 because mercury is a liquid, it vaporizes and mercury
9 vapor goes throughout the air. That's why we were
10 monitoring during the air monitoring, and it can
11 settle on solid surfaces, and it prefers organic
12 material, like wood or oil. And so the mercury vapor
13 rose up potentially from the mercury that's in the
14 flooring, but it could have also come as part of the
15 industrial operations that were utilizing mercury,
16 and vaporized and condensed on the walls, condensed
17 on the bricks, condensed on the tar paper in the
18 ceiling, condensed in the concrete in the basement,
19 and the concentrations we measured were from about .8
20 parts per million or mg/kg. Those terms are
21 relatively equivalent to over thirteen parts per
22 million, and that's about 1.3%.

23 We also sampled brick on the fourth and
24 fifth floors, and we found mercury concentrations to
25 range from about 40 to about 9,000 parts per million

1 or mg/kg.

2 In the basement of the building are
3 some floor drains and sump pits that were filled with
4 sediments. We sampled those sediments, and we found
5 mercury in every sample ranging in concentrations
6 from 36 mg/kg to 2,540 mg/kg.

7 In the parking lot, as I mentioned
8 before, which is covered by asphalt, we drilled
9 through the asphalt to try to determine the extent to
10 which mercury contamination was present in the soil
11 beneath that cap. We took 50 samples, 30 of which
12 were composite, over 8 feet depth, the other of
13 which were what we call discrete, they were more an
14 individual sample. We found mercury concentrations
15 in every one of them.

16 Not every one is indicative of a
17 problem at the site, but we did find mercury
18 concentrations as high as 290 mg/kg, which is
19 indicative of contamination.

20 The highest concentrations of mercury
21 we found in the soil were along the side of the
22 former industrial building, which further indicates
23 that it was contaminant from sort of industrial
24 operation.

25 We also sampled off site, we sampled at

1 an adjacent property. We took 23 samples from that
2 property, and we found that mercury concentrations
3 were not detectable in one sample and ranged up to 39
4 mg/kg, with an average of 15.6 mg/kg throughout that
5 property.

6 Mark will explain to you a little bit
7 later what the value of 15.6 means relative to our
8 risk based standard, but we determined that that
9 value was lower than our risk based standard and,
10 therefore, posed very little likelihood of
11 development of adverse health effects. We also
12 sampled the air at two off-site locations, which were
13 both adjacent to the site, and we did not find
14 mercury vapor levels in the air to be problematic in
15 the least.

16 That is good seaway to transfer to
17 Mark Maddaloni, who was involved in conducting our
18 Risk Assessment.

19 MS. SEPP: Before Mark starts, I just
20 wanted to let you know that there is some water up
21 here and some cups and some ice, if anyone gets
22 thirsty. And also one thing I forgot to mention,
23 this is being recorded tonight by a Court Reporter,
24 and when it comes to the question and answer session,
25 I will just have a couple of directions for you, but

1 that is what I just want to remind everybody, that
2 this is being recorded to be put into the record.

3 Thank you.

4 Mark.

5 MR. MADDALONI: Thank you, John.

6 As John mentioned, I'm here to report
7 the results of the Risk Assessment for the site, and
8 rather than just rattle off some numbers which might
9 be difficult to put into context, allow me to walk
10 you through EPA's Risk Assessment process.

11 It is a four part affair consisting of
12 Hazard Identification, Exposure Assessment, Toxicity
13 or Dose/Response Assessment, and, finally, they are
14 rolled into what we call a Risk Characterization,
15 where we are able to make quantitative or numerical
16 estimates of the risk at the site.

17 So the first step is the Hazard
18 Identification.

19 When we first approach a Superfund
20 site, the first thing we need to do is determine what
21 are the Contaminants of Concern. EPA works off what
22 we call a Target Compound List, which is an extensive
23 laundry list of chemicals which have historically
24 been associated with hazardous waste sites. We also
25 do a very thorough site history, which helps us in

1 our sampling patterns. Then we take all the sampling
2 data we generate and look at things like the
3 frequency of detections, the concentration, comparison
4 with background, and eventually we are able to boil
5 what often goes down to what we call our Contaminants
6 of Concern which will be carried throughout the Risk
7 Assessment.

8 At the Grand Street site, the past
9 industrial site activity, which John detailed,
10 featured prominently in our identification of mercury
11 as the singular contaminant of concern at the site.
12 So in a sense, this step was comparatively easy at
13 the Grand Street site.

14 Once we have identified the contaminant
15 or in this case the Contaminant of Concern, we need
16 to make some determination as to what kind of
17 exposures might be occurring or can potentially occur
18 from the site related to the contaminant, and that's
19 the second step, the Exposure Assessment.

20 And in this part we are essentially
21 asking two questions: where is the stuff and how does
22 it get into my body?

23 Well, where is contamination? It could
24 be in any of the available environmental media:
25 water, and that could include ground or surface

1 water; soil, which would also include sediments or
2 air, indoor and/or outdoor. Obviously, indoor air
3 was a very prominent exposure source at Grand Street.

4 The next question is: how does
5 contaminants from the environment media get into the
6 body?

7 There are three main, what I would
8 call, ports of entry into the body: ingestion,
9 inhalation, and dermal, percutaneous absorptions, and
10 then it really becomes a matter of mixing and
11 matching. We look at all the different exposure
12 pathways, and once we determined at Grand Street what
13 that was, we found significant exposure or potential
14 exposure from residential ingestion of the mercury
15 vapors in the interior or indoor air at Grand Street
16 and this is by adult and child residents as well as
17 workers, and we also looked at exposures to the
18 soilborne mercury under the parking lot and the
19 off-site area.

20 Now, once we had the exposure pathways,
21 we then make conservative estimates of the exposure
22 pathways looking at the frequency of exposure, the
23 relation of exposure, ingestion and inhalation rates,
24 and what we finally come up with is what we refer to
25 as Reasonable Maximum Exposure Dose, it is on a daily

1 basis, and you'll see we make use of that value data
2 in the Risk Characterization.

3 So now we've identified the
4 contaminant, we've made some evaluation of current
5 and/or potential exposure pathways, and now we need
6 to look at the step, which is the Toxicity
7 Assessment.

8 In this step, we would like to know
9 what kind of effects does the contaminant, in this
10 case mercury, cause and what is the dose response
11 relationship.

12 EPA has historically broken down
13 toxicity assessment to cancer and non-cancer
14 assessments. Now, all the most current scientific
15 evidence would indicate that mercury is not cancer
16 causing in either animal or human subjects, and
17 consequently we do not evaluate it as a carcinogen.
18 And that being the case, I am not going to spend
19 anymore time on how we otherwise do cancer toxicity
20 assessment, rather let me focus then on non-cancer
21 effects, which certainly mercury causes plenty of
22 those. What I mean by non-carcinogenic or systemic
23 effects is essentially all effects other than cancer,
24 toxicity to major organ systems, the cardiovascular
25 system, respiratory system, kidney, liver or some

1 other vital body part. The way EPA does this is we
2 have developed what we call reference doses, which
3 are chemical specific. A reference dose is a measure
4 of a particular chemical's threshold, the causing
5 effects to which many safety factors have been there,
6 and functionally a reference dose is an estimated
7 daily dose which can occur to the human population
8 without risk of deleterious or adverse side effects.
9 So in other words, this is what we would consider a
10 safe dose, with an adequate margin of safety.

11 Just for your information, this gets a
12 little technical, the reference are specific,
13 so you'll see two there, one for mercury ingestion
14 and the other for the solid forms, which can be
15 ingested. Without going into great detail, you can
16 see that there are quite a few serious decimal
17 places, and I think it is safe to say that there's
18 not a lot of mercury you can be exposed to on a
19 routine basis and have it considered safe.

20 So we've looked at the Hazard
21 Identification, we've identified mercury as a
22 Contaminant of Concern, we've evaluated the exposure
23 pathways to give us an estimate of what the daily
24 exposure might be to these substances, we've looked
25 at the types of effects that mercury causes. You'll

1 see kidney toxicity and central nervous system
2 toxicity. Now, finally we are prepared to make some
3 judgements about the actual risks related to the site,
4 and that's the Risk Characterization.

5 Once again, by convention, EPA breaks
6 it down into two categories, cancer and non-cancer.
7 Since mercury is not known to be cancer causing,
8 that's really a moot point here, it's not applicable,
9 so there's no cancer risk relating to this site.

10 However, we did need to evaluate the non-cancer
11 risks, and the way we do that is through a system
12 that's referred to as the Hazard Index, abbreviated
13 HI up there. The Hazard Index is a representation of
14 a chronic daily intake, this is essentially the dose
15 that we obtain from the exposure assessment, divided
16 by our safe or reference dose. As you might surmise,
17 if the chronic daily intake exceeds the safe or
18 reference dose, there is the potential for concern.
19 And the most it exceeds the reference dose or the
20 greater that number becomes or the greater it draws
21 increasingly larger than one, the risks obviously
22 increase as well.

23 Now, let me just go through what we
24 actually found through the pathways. Now, I think
25 this table is in your Proposed Plan. And as you can

1 see from the inhalation of mercury in air, that's the
2 indoor air within the site, I want to be very
3 specific about that, it's not outdoor ambient air in
4 the neighborhood, but from the interior ambient air
5 within the building we found that the child resident,
6 the adult resident, the adult worker, all
7 significantly exceed the Hazard Index of one. In the
8 case of a child, the levels that we calculated were
9 over 500 times what we believe to be a safe dose. As
10 far as the bottom line, ingestion of mercury in soil,
11 we see that the off-site child resident, resident and
12 the adult worker, those numbers are less than one,
13 which indicates that the exposure dose is under the
14 safe dose, so, therefore, we don't believe there's
15 any hazard associated with those exposure pathways.
16 For the child resident, it is 2.1, that's marginally
17 elevated.

18 That's the results of the Risk
19 Assessment.

20 One other chore that the risk assessor
21 is often asked to perform, and that is in addition to
22 assessing the site for risk, which are demonstrated
23 up there, then the question becomes well, if there
24 are hazards at the site, what would be a safe level;
25 of contaminant in these various environmental media,

1 in the air or in the soil?

2 In order to do that, that's really just
3 the flip side of the Risk Assessment coin, it is just
4 a matter of setting the exposure dose or the chronic
5 daily intake at an acceptable level or daily safe
6 level and then calculating a dose in the media of
7 concern which would be at or below that daily
8 exposure dose.

9 When I performed that calculation, you
10 see here that the child resident from inhaling
11 mercury vapors from within the building, this is what
12 we call driving the cleanup, we have to clean up to
13 the lowest level to protect a child before the
14 building could be safely rehabilitated by anyone in the
15 general public, and again children being the most
16 sensitive subpopulation here. With the relative view
17 that they be less than technically oriented, let me
18 just try to give you some perspective of what .09
19 micrograms per meter is. A microgram is
20 one-millionth of a gram. A gram is about the amount
21 of material you would find in a Sweet and Low packet
22 on a luncheonette counter. So .09, that's slightly
23 less than one-tenth of one microgram, so that amount
24 of mercury is, let's say, 1/10 millionth of the
25 amount of the contents of a Sweet and Low packet

1 disbursed into a space or a volume of a meter cubed.
2 A meter is slightly longer than a yard; a yard is 36
3 inches, a meter is 39 and change. So if you could
4 pictures this yard by yard by yard, I think we've
5 talking about a box that a washing machine might come
6 in or something, so 1/10 millionth of a Sweet and Low
7 package disbursed into the volume of a washing
8 machine sized volume is the amount of mercury we
9 believe to be safe to rehabilitate this building.

10 So confronted with that information,
11 I'm going to give you back to John to discuss EPA's
12 proposed remedy for the site.

13 MR. HANSEN: I'll agree that Mark has
14 brought up some pretty complex terms in perspective.

15 Since you're all here, I assume you
16 know pretty much where we are in Hoboken. The high
17 school is this small house like shaped icon on the
18 map that covers this entire square block, and the
19 Grand Street mercury site, as I said earlier, is
20 catty-corner to that (indicating).

21 I want to point out to you the general
22 layout of the site. Here we are in the high school,
23 and when we're talking about the former industrial
24 building, we're talking about this large area here
25 that was divided into four units per floor with the

1 exception of the basement. And if you ever are
2 reading a report and reading about the different
3 units and where the samples were taken, if this is
4 interesting to you, the A units are here, B, C, and
5 D. The townhouse that we often reference is this
6 house right here that there is a yard behind that
7 that flanks over into the area behind the industrial
8 building and goes over. The parking lot we are
9 talking about where we identified the soil sampling
10 is in this area. This building is the building that
11 was used by General Electric, Cooper-Hewitt and other
12 lighting manufacturers as well as Quality Tool and
13 Die. It is a five-story industrial building, and it
14 was build in about 1910. General Electric and
15 Cooper-Hewitt also had some manufacturing operations
16 in this building across 8th Street, Columbus Gardens,
17 a high density housing complex on here, across Adams
18 Street is residential housing, and residential
19 housing flanks the side on this side and extends down
20 Adams Street and adjacent to 720 Grand Street and
21 down the block is residential housing. Across the
22 street from the site, across Grand is a
23 commercial/industrial building complex (indicating).

24 Before we did the Risk Assessment and
25 kind of concurrent to it, we contracted out to an

1 environmental contractor the task of evaluating
2 whether or not mercury in the site could be removed
3 and whether the site could be remediated and
4 reoccupied by humans.

5 As part of that, we asked the
6 contractor to look at all of the available
7 technologies that are out there and look into their
8 effectiveness for remediating industrial buildings,
9 such as the one we are dealing with, to residential
10 standards. We also asked them to calculate the costs
11 of such remediation if that remediation was
12 determined to be possible and the cost of demolition,
13 if remediation is not possible. I do have some
14 copies of that report, by the way, up here for you to
15 look at, if you'd like to afterward. I also have
16 copies of the Risk Assessment, three copies I think I
17 brought, and four copies of the Feasibility Study.
18 You all should have a copy of the Proposed Plan. So
19 you're more than welcome to come up here and look at
20 the technical evaluation, the Focused Feasibility
21 Study and the Risk Assessment, if you want to,
22 afterward.

23 What the technical evaluation
24 determined was the mercury contamination was
25 prevalent throughout the site and that mercury

1 remediation may or may not be possible. They did
2 caution if mercury remediation attempt was made, that
3 the mercury remediation would not be successfully
4 known until after it was tried. And that mercury,
5 being a vapor at room temperature, has permeated
6 surfaces throughout the building and could
7 potentially re-release into the interior air space of
8 the building, even after a successful remedial effort
9 was undertaken and completed.

10 So based on four major points of
11 information, EPA developed a Focused Feasibility
12 Study to evaluate remedial alternatives for the Grand
13 Street site. The first of which was information that
14 was provided to EPA by parties prior to EPA
15 involvement. The second was the extensive
16 environmental monitoring that EPA undertook after
17 December '96, when EPA became involved in the site,
18 and that includes the air monitoring, the monitoring
19 of the building structural component, and the soil
20 monitoring and all the other monitoring we did.
21 Thirdly, we looked at the remedial action objectives
22 that were calculated by our Risk Assessment. And
23 fourth, the technical evaluation which identified
24 technologies and process options for removing mercury
25 from the site and provided us with some cost

1 estimates for remediating and/or demolishing the
2 site.

3 In terms of what we had to look at in
4 our Focused Feasibility Study, we identified four
5 main elements of concern. We needed to look at the
6 fate of the prior occupants of the building, we
7 needed to look at the data that we had regarding
8 mercury contamination in the buildings, we had to
9 look at the data we had regarding mercury
10 contamination in the soil, and we assessed that there
11 may be some site attributable impacts to groundwater,
12 so we're going to do some groundwater monitoring.

13 Further, we looked at the ultimate end
14 use of the Grand Street site. We are required to
15 look into that in selection of any remedy under the
16 Superfund process, and we assessed that Hoboken is
17 changing from what was once a primarily
18 commercial/industrial to a residential area and that
19 residential conversions are happening here in
20 Hoboken. The zoning for the site has been changed to
21 R2, which is multifamily residential, and Hoboken has
22 indicated that it does not want to change back to an
23 industrial/commercial classification. Therefore, the
24 most likely end use for the site is the residential
25 end use.

1 We identified five different remedial
2 alternatives. The first one, which may sound absurd
3 to you, is what would happen if we did absolutely
4 nothing. We are required to do this under the law.
5 We have to use this as a baseline for comparing this
6 to the effectiveness of the other alternatives.
7 Under no action, the temporary relocation which is
8 being afforded to the prior occupants of the site
9 would cease, we would stop maintaining the building
10 and conducting security at the site. No soil
11 remediation would occur and groundwater would not be
12 characterized. Therefore, all the risks that have
13 been identified at the site would continue to be
14 present.

15 Under our second alternative that we
16 developed, the temporary relocation program will
17 continue until such time that EPA could attempt a
18 remedial effort on the building. That means that we
19 try to remediate the building for the reuse of the
20 prior occupants, with the, as I mentioned before,
21 success of that remedy unknown until that was
22 actually completed. At which time, if we were
23 successful, the building would be reoccupied by the
24 prior occupants. Concurrent to that remedial effort,
25 we would be sampling, excavating and disposing of

1 contaminated soil off-site and we would drill some
2 monitoring wells or well points into the groundwater
3 to determine if there are any site attributable
4 impacts. This would require at least, we estimate,
5 one year of clearance monitoring. What I mean by
6 that is, one year after the remediation effort has
7 been conducted, during which the building is not
8 reoccupied, and we make sure the mercury vapors don't
9 rise, and then even after occupying, we would do
10 what's known as operation maintenance, we would do
11 that for 10 years while the building was reoccupied.
12 And if the mercury vapor levels ever went above the
13 residential risk based standards, we'd have to
14 declare remedy failure and re-evacuate the building
15 and identify some other options for the site.

16 And our third alternative, we looked at
17 permanently relocating the residents because of the
18 unsurety that we have regarding a successful
19 remediation effort, but taking that effort
20 nonetheless and attempting to remediate the building
21 for residential use by other parties.

22 Now, we would also do the soil work
23 that I mentioned and the groundwater investigation
24 that I mentioned, and at the end of a successful
25 remedial effort, we would attempt to recover the cost

1 of the building by selling it.

2 Could you go back one slide, Pat. What
3 I neglected to mention regarding alternative two was
4 that a cost estimate that we calculated for all of
5 these activities is approximately \$9.7 million, and
6 that it would take approximately 46 months to
7 achieve.

8 In alternative three, the cost jumps to
9 \$13 million, but the time estimate goes down to about
10 40 months.

11 In alternative four, we looked again at
12 relocating the residents permanently, and this time
13 remediating the building to industrial or commercial
14 standards. If you remember the slide that Mark put
15 up before regarding the remedial action objectives,
16 if we were to do this, the number we'd have to
17 achieve would be quite a bit higher than this is in
18 terms of mercury vapor in air, than the number for
19 residential reuse. So there is a greater likelihood
20 of success with this alternative.

21 We would also do the soil work and the
22 groundwater work I mentioned previously, and attempt
23 to recoup the value of the property after the
24 remediation had taken place.

25 And finally, alternative five looked at

1 permanently relocating the residents of the building
2 and demolishing both the building and the townhouse
3 because of the uncertainties associated with
4 remediating them to either residential or industrial
5 or commercial standards. We would also do the soil
6 work I mentioned and groundwater work. After we were
7 done, the property would have some intrinsic value,
8 which we would try to recover by selling it.

9 After we developed all these
10 alternatives, all these possibilities, we weighed
11 them against nine possible criteria. The first two
12 of which include overall protection of human health
13 and the environment, and compliance with
14 environmental regulations, which are known as ARARs.
15 ARARs must be achieved by any alternative that we
16 look at. All of our alternatives except for the no
17 action alternative potentially left these threshold
18 criteria with varying degrees of expected success.

19 In terms of balancing criteria, which
20 are the five criteria, including long-term
21 effectiveness and permanence; reduction of toxicity,
22 mobility or volume through treatment; short-term
23 effectiveness; implement ability; and cost, any one of
24 these could drive the selection or the non-selection
25 of any one of the remedial alternatives, but they

1 don't all have to be met absolutely for an
2 alternative to be accepted.

3 The modifying criteria, which round out
4 the nine criteria are: state and county acceptance,
5 and based on whether or not the community and the
6 county accepts what we propose, we may or may not be
7 able to implement a remedy. The state has agreed,
8 concurred with our proposal, and we evaluate
9 community acceptance during the public comment
10 period.

11 So alternative five, the one we've
12 proposed to you tonight and in our Proposed Plan,
13 includes demolition of the building, permanent
14 relocation of the prior residents of the site, soil
15 remediation, and groundwater investigation.

16 The rationale that we employed in
17 selecting this alternative is: that this alternative
18 permanently eliminates any future mercury
19 contamination or exposure to mercury vapors or
20 mercury contaminated soil at the site; it achieves
21 our goals more quickly; this alternative would cost
22 about \$13.8 million and take about 23 months to
23 implement, which is about half the time for
24 alternative two, which was an attempt at remediating
25 the building and putting the prior occupants back in;

1 it moves the residents into a permanent housing
2 situation in the shortest time possible; allows for
3 future residential use of the property; and is
4 protective of human health and the environment.

5 At this point we kind of go to an open
6 forum, public comment, which Pat will moderate.

7 MS. SEPPI: Okay. Actually we got this
8 in in our allotted time of forty-five minutes. I'm
9 very happy about that. We do have sort of an order
10 that we're going to take comments and questions.

11 First we have some prepared statements
12 from Senators Lautenberg and Torricelli's offices,
13 and then we also have Congressman Menendez, who has a
14 representative from his office to make a statement,
15 and Assemblyman Romano, and Assemblyman Rooney also.
16 Then we have a couple of attorneys, and then we'd
17 like to turn the floor over to the Grand Street
18 residents, and then anybody who has a comment or a
19 statement to make, I have your cards up here, and
20 anybody else in the audience after that is certainly
21 welcome to make a comment.

22 One thing I do ask is when you come up
23 to the microphone to make your comment, so we have
24 your name in the record, I would appreciate it if you
25 would state your name and you can spell it so we can

1 make sure that our Court Reporter gets the name
2 properly into the record.

3 So I think Lisa Plevin is here from
4 Senator Lautenberg's office.

5 MS. PLEVIN: Thanks, Pat.

6 First, I'm Lisa Plevin. I'm the
7 Projects Director for Senator Frank Lautenberg, and I
8 bring a brief statement from him.

9 I want to express my strong support for
10 EPA's proposed plan for the demolition of the Grand
11 Street Mercury Site in Hoboken.

12 As you know, I have been working with
13 the residents of the site since they first found out
14 they were being forced to evacuate their homes. I
15 have followed the details of this situation closely
16 and believe that my constituents have been through a
17 nightmare that no one should ever have to experience.

18 That's why I am pleased that your
19 Proposed Plan takes an important step in allowing the
20 residents to move forward with their lives. I know
21 that EPA has proposed the Grand Street site for
22 inclusion on the Superfund National Priorities List
23 and I am confident that you understand the importance
24 of making a decision on this as quickly as possible.
25 If this site is listed, the residents will be able to

1 focus on permanent relocation. As you know, they are
2 most anxious to begin that process so they can
3 rebuild their lives and plan for their futures.

4 I'd also like to commend you and your
5 agency -- this is a letter to Jeanne Fox, by the way
6 -- for the speed with which you have handled this
7 environmental disaster. Although the residents were
8 obviously extremely upset about their situation, my
9 office heard over and over again about how helpful
10 and supportive EPA has been.

11 I have heard from many of the residents
12 that without the Superfund program, they might have
13 been out on the streets. Thankfully, the Superfund
14 Removal Program has covered the costs of their
15 relocation and new rents. Many of the former
16 residents would have had nowhere to turn without this
17 help.

18 The Grand Street site story is an
19 important one that I will continue to tell Congress
20 as we move through the Superfund reauthorization
21 process this year. This critical program is not just
22 about cleaning up abandoned, forgotten toxic waste
23 sites in the middle of nowhere, it is also about
24 protecting the health, safety and sanity of Americans
25 who find themselves in the middle of an environmental

1 nightmare they never anticipated.

2 I look forward to working closely with
3 you on the cleanup of this site and on the relocation
4 of the former residents.

5 Sincerely, Frank R. Lautenberg, U.S.
6 Senator.

7 Thank you.

8 MS. SEPPI: Senator Kenny, I apologize,
9 I didn't mention your name. If you would like to
10 please come up and read the statement from Senator
11 Torricelli's office.

12 SENATOR KENNY: I have two statements,
13 one from Senator Torricelli and one from myself.

14 Senator Torricelli's statement.

15 Dear Mr. Hansen:

16 I am writing to offer my support on
17 behalf of the residents of 722 Grand Street, Hoboken,
18 New Jersey and the proposed remediation plan for the
19 site. I would urge that you pursue all viable
20 options, so that this matter is resolved quickly and
21 effectively. It is imperative that the needs of the
22 residents of this building remain first and foremost.

23 I concur with your agency's
24 recommendation that the site be placed on the
25 Superfund National Priorities List as an emergency

1 site and I will work to ensure that this
2 recommendation is implemented. I would also urge the
3 EPA to formally adopt the Proposed Plan. Clearly the
4 residents cannot return to the site, it must be
5 demolished and appropriately disposed of.

6 I must commend the EPA for the
7 cooperation and willingness that it has demonstrated
8 in working with the residents of the building and
9 local government to ensure that the best interests of
10 the residents and the community are protected. The
11 ongoing communication and support has been
12 encouraging. It is imperative that this support
13 continue as the permanent relocation plan proceeds.
14 It is essential that the owners secure a fair
15 settlement and remuneration for their losses. The
16 proposed plan appears to be the most protective of
17 human health and the environment and will ensure that
18 this devastating problem is finally resolved.

19 I will work to support your efforts and
20 will continue to monitor the status of the cleanup.
21 I am hopeful that this most unfortunate situation
22 will be resolved quickly and effectively.

23 Sincerely,

24 Robert G. Torricelli, U.S. Senator.

25 I represent Hoboken in the New Jersey

1 State Senate.

2 Dear Mr. Hansen:

3 The first paragraph is similar to
4 Senator Torricelli's. I will go on to say that the
5 Grand Street Artists Partnership pooled their
6 resources and purchased this building in August 1993.
7 They followed all the proper procedures to ensure
8 this former industrial site was safe for residential
9 use and, after receiving the required permits, they
10 began to move in and renovate their individual units
11 for living/work space. During this renovation
12 period, mercury contamination was found throughout
13 the building and the Hoboken Health Department took
14 the unusual course of action of ordering the families
15 to vacate the premises. The Health Department tested
16 the residents for mercury and many were found to have
17 elevated levels of mercury in their system.

18 It has been over a year and a half that
19 the families have been living in temporary housing
20 and with the uncertainty of what the future holds for
21 them. Some of their personal belongings remain in
22 the sealed building while others are in storage.
23 They have been living with the physical effects of
24 exposure to mercury, severe emotional distress and
25 financial constraints. The Grand Street artists have

1 suffered a great deal during the last two years.

2 Having closure and the need to move on with their
3 lives is important for them.

4 After reviewing your Proposed Plan for
5 the Grand Street Mercury Site and meeting with the
6 residents of 722 Grand Street, I believe that the
7 safest long-term remedy for the site should be
8 permanent relocation of the former residents,
9 acquisition of the property by the USEPA and
10 demolition of the property, while at the same time
11 ensuring that the land is restored to an
12 environmentally safe use. It is in the best interest
13 of the community to follow this course of action and
14 important that the USEPA not change the preferred
15 course of action.

16 Thank you.

17 MS. SEPPI: Thank you, Senator.

18 From Congressman Menendez's office,
19 Jose Manuel Alvarez.

20 Mr. Alvarez.

21 MR. ALVAREZ: Jose Alvarez, District
22 Director for Congressman Menendez. I'd like to read
23 a statement.

24 And it says: there are a few events
25 which define the essence of the law and illustrate

1 the nature of our social contact. We are present
2 here in Hoboken at such an event. Our primary
3 concern is the relocation of the prior residents of
4 this building and the plan for remediation of the
5 building and soil on Grand Street. But looming
6 behind the human tragedy are powerful forces seeking
7 to permanently alter the nature of the Superfund law.
8 These forces are plotting to destroy the very fabric
9 of protection for our citizens and greatly weaken the
10 safeguards against contamination each one of us has
11 come to expect. This week there will be attempts in
12 Congress to cut \$650 million and cripple the
13 Superfund program.

14 Superfund has been under severe
15 criticism from special interests who seek to shift
16 the cost of chemical contamination from those who
17 have profited from pollution to the general taxpayer
18 or in this case even the victims. The criticisms of
19 the Superfund program include: cleanups take too
20 long; cost too much; require too much cleanup;
21 charges of speculative science and liability that is
22 too strict.

23 722 Grand Street is the reason for
24 Superfund. It is a tale of a creeping, insidious
25 terror that grew to horrid proportions. For several

1 months residents did not know what they were facing.
2 Local officials quickly found the problem was beyond
3 their resources and turned to us and to USEPA. In
4 the midst of a severe snowstorm and general federal
5 shutdown, the EPA Superfund attacked the problem and
6 got the residents out.

7 Here is what we know about this site.

8 It was used until 1950 as a factory for making
9 mercury vapor lamps. There appears to be one primary
10 responsible party. There was no use of mercury after
11 1950.

12 This is not an abstract case of
13 contaminated soil, groundwater contamination or
14 threat to the food chain. People have been
15 contaminated, contaminated severely. Thirty-one
16 people associated with the building were examined,
17 twenty urine samples had mercury concentrations equal
18 to or greater than 20 micrograms per liter; 20
19 micrograms per liter is the upper limit of the
20 background concentration for mercury in adults.
21 Residents had five times the baseline risk assessment
22 for mercury exposure.

23 This is not fear mongering. I am
24 worried about my constituents. They are innocent
25 victims. They did nothing to knowingly place

1 themselves in harm's way. There was a time bomb
2 waiting in their home. It is a poison that we have
3 known about since antiquity. It has invaded their
4 bodies and we know who put it there. Who should make
5 this right? They have no homes. Their lives'
6 investments were permanently taken from them. What
7 are the long-term effects of this on our fellow
8 citizens?

9 I want my constituents made whole. I
10 want their lives returned to normality. I want this
11 nightmare ended for them and I want justice for the
12 residents, the public and their environment.

13 Thank you for giving me the opportunity
14 to give you my views.

15 MS. SEPPI: Thank you.

16 Assemblyman Romano, I believe you have
17 a statement.

18 ASSEMBLYMAN ROMAMO: Thank you.

19 Assemblyman Louis Romano. I represent Hoboken, along
20 with my colleague, Rudy Garcia.

21 To everyone in the audience, I also
22 welcome you here this evening and ask that you feel
23 free to voice your concerns about the unfortunate, at
24 best, trying situation in which the former residents
25 of the "mercury condos" find themselves.

1 Over a year ago, sixteen families were
2 forced out of the building they called home, after a
3 high concentration of mercury was discovered. This
4 building has apparently harbored this contamination
5 for years; however, it only became apparent during
6 the renovation of certain apartments on the third
7 floor in January of 1995.

8 It has been determined that the
9 building was a former industrial site and the
10 location a home for many businesses, before it was
11 purchased in 1993 by the Grand Street Artists
12 Partnership during these renovations.

13 It is not my purpose to question how
14 these residents were allowed to move into a building
15 of this nature. More importantly, it was ultimately
16 discovered and documented that mercury vapors have
17 permeated the air, causing several residents to
18 experience mercury level in their urine.

19 Now, the federal environmental
20 officials have decided to tear down the mercury
21 contaminated building, a building that was home to so
22 many artists prior to their "eviction". They are
23 telling us that it will cost approximately \$14
24 million to complete their plan.

25 The former residents of this building

1 have been living in limbo for the past year. Living
2 out of boxes.

3 I am here tonight to urge an assurance
4 from the EPA that these displaced residents will be
5 adequately reimbursed for their investment. This EPA
6 remedy must ensure that the affected families will
7 finally be put on the final road to recovery. Also,
8 I might add that I have introduced legislation along
9 with my colleague Rudy Garcia, and Senator Kenny has
10 the Senate version of a bill that would prevent this
11 sort of thing from ever happening again. My bill
12 will require any person who constructs new
13 residential housing on any property that was
14 previously used as an industrial establishment, will
15 have to investigate the property and make sure that
16 no hazardous contaminants exist.

17 Thank you for your indulgence in
18 allowing me to express my views this evening.

19 Ms. SEPPPI: Thank you. Thank you,
20 Senator Romano.

21 Assemblyman Rooney, I believe you have
22 a statement also.

23 ASSEMBLYMAN ROONEY: Assemblyman John
24 Rooney.

25 Lou, don't go away, I want to see you

1 later.

2 As Lou's colleague on the other side of
3 the aisle, the Republican side, my name is John
4 Rooney. I'm from Bergen County but I have some
5 friends who lived through this, the Bocchinos
6 for a year and a half, and I feel very badly for
7 them.

8 I've gone through the paperwork, and I
9 want to compliment the EPA, I've seen some action
10 here in a record period of time. Amazingly, which
11 maybe the residents can't appreciate, but you have
12 done with due diligence, you've been out there and
13 you've done the right thing, but I can't say that for
14 the rest of the process, and that's why I'm here.

15 As Vice Chairman of the Environment
16 Committee, I want to find out why the process failed
17 these people. This process should not fail people in
18 the State of New Jersey, it should protect them. The
19 ECRA process, the Environmental Cleanup
20 Responsibility Act is just that, it was cleanup
21 responsibility for the polluters. This should have
22 been a red flag in everybody's book, but it wasn't.
23 These people should not have been allowed to move
24 into the building.

25 The building across the street was red

1 flagged and condemned just three years earlier, and
2 it was also by the same company. So for those people
3 from GE who are here today, Generous Electric, who
4 have given us PCBs in our rivers and mercury in our
5 buildings and mercury in the urine of our residents,
6 I say thank you, yes, Generous Electric, where the
7 hell have you been?

8 I'm fed up with hearing that these
9 people are going to contest this. The right thing to
10 do is belly up to the bar, pay the tab, do the right
11 thing. Do the courteous thing, the gentlemanly
12 thing, the correct thing. Don't be fighting this
13 process, because that's the only thing that's going
14 to prevent these people from getting what they
15 deserve, what they should have. Don't use the legal
16 system as your crutch and your shield and spend more
17 damn dollars, and what Congressman Menendez says that
18 the process is being attacked, it is being attacked
19 by people in Washington who are fed up seeing the
20 lawyers take the money out of the fund, the
21 Superfund. That's where it is going. That's the
22 problem with the system today. The corporations of
23 America are losing their responsibility, their good
24 neighbor appeal to the people. I wouldn't buy
25 another GE product if it was the last product on the

1 shelf.

2 From what I've seen here and what I've
3 seen on my committee, we are dealing right now with
4 the dredge spoils in our harbors. Our harbors are
5 going to be closed if they don't dredge them out.
6 The northern part is contaminated with PCBs; GE. The
7 southern part, Diamond Shamrock with the dioxins.
8 That's the problem with our system today, we are
9 paying for it. We are the ones who have been left a
10 legacy by corporations who have no conscience.

11 So I applaud you, I'm sorry I don't
12 have a typed presentation to give you, I'll try and
13 work on one, but I want to see that this process
14 works and I also want to go back to the Legislature
15 and find out why it failed, why the DEP didn't shut
16 it down to begin with. I know we have
17 responsibility, and I'm going to look that up on my
18 own.

19 I thank you very much for allowing me
20 to speak.

21 MS. SEPPI: Thank you, Assemblyman
22 Rooney.

23 Jane Gardner from GE. I believe you
24 have a statement.

25 MS. GARDNER: It is kind of a hard act

1 to follow there.

2 I want to thank you for the opportunity
3 for General Electric to speak. I offer Assemblyman
4 Rooney, we will be happy to meet with him and talk
5 about any of the issues he raised tonight, but I
6 would like to keep this comment to the Grand Street
7 site and not get into other issues.

8 I am Manager and Counsel for GE's
9 Environmental Remediation Program.

10 We spend a tremendous amount of money
11 every year, in contrast to what Mr. Rooney said, \$100
12 million we spend in our environmental remediation
13 work throughout this country, so we stand by this
14 record.

15 We have some difficult problems, we are
16 working on them. I have been involved in this
17 process, the Grand Street site, since we first
18 learned about it in early 1996. For those of you who
19 don't remember and what some people said today, there
20 was a blizzard going on, it was one of the largest
21 blizzards of the century; the government was
22 essentially closed down. We learned from the TV
23 there were 17 families that were evacuated from their
24 homes or were going to be very shortly.

25 Shortly thereafter, we received a

1 letter from the residents' lawyers, initially asked
2 GE for assistance, that was on a Friday night. I
3 remember it very well, we met through the weekend as
4 the blizzard was starting and increasing and at GE
5 headquarters. These were high level meetings. There
6 were a lot of people involved from all over. We came
7 up with a plan. We gave money, relocation assistance
8 and offered medical assistance to the residents. We
9 stepped forward, we made that offer before we had the
10 opportunity to investigate the facts.

11 Since then, we have learned a great
12 deal about the facts that bring us here tonight. We
13 have asked ourselves some key questions, and I'd like
14 to raise them tonight. How did these people buy a
15 factory to live in? How did they get to stay? How
16 did EPA pick a remedy that will destroy a functional
17 building, pay back the investors double the
18 ill-advised investments they put into a building,
19 knowing of the mercury problems, ignoring their
20 consultants, and hiding that fact to everyone that
21 could help them prevent the situation they created?
22 The answers are very startling.

23 They bought a factory. It was an
24 almost 100 year old factory that had been used
25 properly for a factory almost its entire life. GE

1 operated it as a factory, that's true. I think it is
2 very obvious, we sold it as a factory, we sold it to
3 people who then operated it as a factory, they sold
4 it again as a factory. It was used as a factory
5 almost during its entire life. During GE's time, it
6 was a clean factory, and by the accounts of neutral
7 observers and its own employees, it was operated
8 safely and cleanly. Even by modern standards, the
9 factory meets the air standards for mercury that the
10 federal government has established as safe for
11 industrial use. It should never have become a
12 residence, and just a modicum of due care at any
13 point along the way by the seller, David Pascale, or
14 the buyers, would have prevented all the expenses
15 that EPA is proposing today. Tearing down a factory
16 that is safe to use as a factory today is not an
17 appropriate use of the Superfund. Paying relocation
18 expenses to reimburse negligent investment risks are
19 not an appropriate use of the Superfund.

20 The laws of the State of New Jersey
21 were broken. The seller, David Pascale, didn't
22 disclose the mercury contamination or historic use of
23 the building, even though he knew of the prior
24 mercury operations because his father, a long time
25 employee of the early years of mercury operations,

1 had told him so, and had even showed him one of the
2 old Cooper Hewitt mercury vapor lamps saved as a
3 family memento. The state has revoked David
4 Pascale's ECRA approval to transfer the property, on
5 the grounds that he did not, this is a quote,
6 "accurately depict the full type, extent, and
7 magnitude of the contamination." There is an ongoing
8 state criminal investigation of the ECRA application.

9 The original partners had years of
10 experience in building renovations and had numerous
11 other development projects. They could have
12 prevented all of the current situation by doing just
13 a basic environmental inspection of the factory.
14 According to their consultant, he was not even
15 allowed to inspect the building above the basement
16 level. As EPA itself has recognized in writing that
17 when someone buys a non-residential property for
18 residential use, they have a heightened duty of due
19 care in investigating the appropriateness of that
20 property for the converted use. The buyers here were
21 told the same thing in writing by their own
22 environmental consultant, and were told by that
23 consultant that the NJDEP was not looking at the case
24 as if it was a sale for conversion to residences.
25 The buyers could have notified the government when

1 sound science. To the contrary, it is based on
2 arbitrary numbers, i.e., I go first to federal
3 standards that its sister agencies have set for
4 workplace exposure. Two government agencies have set
5 two different exposure numbers for worker exposure to
6 mercury. The Occupational Safety and Health Agency,
7 (OSHA), which governs workplace exposure, has set a
8 standard of 100 micrograms per cubic meter, the
9 National Institute for Occupational Safety and Health
10 (NIOSH) has set a standard of 50. A private group,
11 the American Council of Governmental Industrial
12 Hygienists (ACGIH), recommends a standard of 25.
13 Without citing any appropriate or relevant basis, EPA
14 here says this remedy for industrial use must meet
15 0.44, which is 56 times lower than the lowest level
16 the U.S. government says is safe for workers who work
17 with mercury every day. EPA picked this number by
18 taking the lowest of three published standards, the
19 only one not set by the government itself, and then
20 arbitrarily cut it by 90%. It then took the
21 remaining 10% of the lowest standard, and cut it
22 arbitrarily 67% more, and finally took that number
23 and cut it almost another 47%, by assuming that each
24 worker is breathing in double the amount of air for
25 eight hours a day than you and I breathe. Its

1 calculations are unsupportable and bad science.

2 We're concerned that tearing this
3 building down could be a significant disruption to
4 this community. It could require thousands of truck
5 loads of demolition debris driving through the
6 community on a daily basis for days and weeks on end.
7 As a 123-year-old company that we were founded by
8 Thomas Edison, General Electric has considerable
9 expertise in safely operating mercury lighting
10 factories. GE believes that the building can and
11 should be returned to productive use as a commercial
12 or industrial building. It can be readily and safely
13 remediated to industrial use, consistent with the
14 administration's long standing support of Brownfields
15 redevelopment. Since the building can be safely
16 re-utilized, EPA exceeds its authority by demolishing
17 a safe factory. General Electric has offered,
18 numerous times to the agency at various levels, to
19 remediate the factory to ensure safe levels for
20 future industrial use. We continue to stand by that
21 offer.

22 We ask EPA to reconsider its decision
23 to demolish a building that can be readily returned
24 to safe and beneficial use. GE will continue, as it
25 does, to abide by its environmental responsibility

1 under the law; however, we ask that EPA hold
2 accountable those who are responsible for the
3 imprudent conversion of this factory in determining
4 who should pay if the proposed remedy goes forward.
5 GE also proposes that EPA submit this proposed plan
6 to the National Remedy Review Board or a panel of
7 independent experts to review the science of this
8 decision. We are not afraid of a fair or impartial
9 process. We ask EPA to administer the Superfund
10 program, as it is mandated to do by Congress, in a
11 fair, scientifically sound, and impartial way.

12 MS. SEPPI: I thank you for the
13 comments, Jane.

14 Patrick McNamara, would you like to
15 make a statement?

16 MR. McNAMARA: Good evening, my name is
17 Patrick McNamara.

18 I'm here on behalf of Mr. Anthony
19 Mastromauro, who is present here this evening. He is
20 the owner of one of the units in this building. He
21 is not a member of the Grand Street Artists
22 Partnership.

23 I'd like to commend each of the many
24 speakers before, in expressing the residents' need
25 for permanent relocation. As people at EPA are aware

1 of, people who lived in this building the last year
2 and a half or so, going through the end of 1995, have
3 had their lives turned upside down, and Mr.
4 Mastromauro is no exception. He made a very
5 substantial investment in this property, not only to
6 buy it, but to renovate it and to make it something
7 that he would be proud of and to live in for many
9 years. And he wanted me to make sure that it is
9 clear tonight on the record and he will also express
10 in-writing, that he has no intention of ever setting
11 foot in that building again under any circumstances.

12 Therefore, he has asked me tonight to
13 ask the agency to stand by the remedy that it has
14 selected with regard to demolition of this building
15 and giving financial restoration, not only for Mr.
16 Mastromauro, but to the other residents of the
17 building so they can get on with their lives.

18 We strongly ask EPA to move forward,
19 not only on this but also with the issuance of the
20 Record of Decision, which is necessary to put the
21 remedy that you put forward to the public. We also
22 look forward to seeing the site finalized and put on
23 the NPL. That's necessary and needs to move forward
24 as soon as possible.

25 Lastly, we want to thank the EPA, we

1 know you've tried to make the best effort possible
2 with what is a very cumbersome and regulatory
3 framework within Superfund, from my own experience
4 over the last 10 years, at sites surrounding the
5 northeast. I know that Superfund really isn't
6 designed to deal with this type of situation, and if
7 there's one thing I can ask you as an attorney who is
8 representing people like Anthony, I've represented
9 municipalities, I've represented corporations like
10 GE, although I haven't represented them, at other
11 Superfund sites, this process doesn't work when it
12 comes to a building like this one, it doesn't work
13 when it comes to dealing with peoples' lives. It was
14 designed to deal with the chemical control sites of
15 the world. It was designed to deal with the dump
16 sites. It wasn't designed to deal with the trauma
17 that these people have been put through and the
18 trauma that they are continuing to live with every
19 single day. And if there's one thing I can urge you
20 as an attorney who has experience with the Superfund
21 process and all talk of Superfund reform, so called
22 being real this year for the first time since 1994,
23 is to go back to people like Jeanne Fox and say
24 whatever you do to fix the program, there's a clear
25 need to fix it to create a separate program to deal

1 with sites like 722 Grand Street because, as horrible
2 a thought as it is, and even though in New Jersey,
3 which has, except for California, the most stringent
4 environmental laws in the country, it's not
5 inconceivable that this will happen again and that
6 there will be another site, especially with the
7 effort to redevelopment urban areas and the
8 Brownfields initiatives that have been taken at the
9 state and federal level, that this is going to happen
10 again. If it's not mercury, it will be lead, and 50
11 or 60 years ago it was commonplace in an industrial
12 facility that no one would ever put in a residence.

13 Thank you.

14 MS. SEPPPI: Thank you, Mr. McNamara.

15 Now, before we get to the residents, I
16 believe Dr. Gochfeld, would like to make a statement
17 on some of the residents.

18 DR. GOCHFELD: My name is Michael
19 Gochfeld. Thank you for the opportunity to address
20 you.

21 I was very impressed with the
22 presentation that our visitors from EPA made, both
23 with the depth and clarity, and I think it is very
24 important to keep in mind the difficulty at reaching
25 these numbers in the amount of time it takes to come

1 up with risk assessments of this sort.

2 I'm an Occupational Physician and
3 Clinical Professor of Environmental and Community
4 Medicine at the Robert Wood Johnson Medical School in
5 Piscataway, New Jersey. I have been on the faculty
6 there since 1980, and have specialized in problems
7 related to lead, mercury, and other toxic materials
8 in the environment. I've done a lot of work with
9 hazardous waste sites. Prior to that, I directed the
10 Division of Environment and Occupational Health at
11 the New Jersey Department of Health, and was directly
12 involved in discussions regarding evacuation of
13 residents around several sites. And even before
14 that, I performed occupational medicine examinations
15 of workers in a number of north Jersey factories that
16 handled various forms of mercury.

17 722 Grand Street was before my time,
18 however, those factories, those mercury factories are
19 now gone from New Jersey.

20 With regard to the 722 Grand Street
21 building, our Environmental and Occupational Health
22 Sciences Institute was contacted by the Agency for
23 Toxic Substances and Disease Registry (ATSDR) just
24 before Christmas 1995. And Dr. Howard Kipen, our
25 division director, participated in the public meeting

1 here. After the evacuation, during January and March
2 1996, 27 adults from the building were evaluated at
3 our clinical center, mainly by Dr. Iris Udasin, our
4 environmental specialist, and by Dr. Nancy Fiedler,
5 our clinical psychologist, with regard to medical,
6 neurobehavioral and psychological consequences of the
7 mercury exposure. This work was supported by ATSDR.

8 I represent not only my own medical
9 experience and opinions tonight, but also the
10 experience of my colleagues who participated in that
11 first wave of examinations.

12 We found evidence of mercury-related
13 neurobehavioral impairment in a number of the
14 residents, and overall there was a significant
15 negative correlation between their mercury levels and
16 their performance on tests known to be affected by
17 mercury. In other words, those with the higher
18 mercury levels had reduced muscular coordination in
19 their hands and fingers and showed evidence of tremor
20 and had other findings.

21 Now, nearly 18 months later, we're
22 going to begin to re-evaluate these residents to
23 determine how much of their function has now
24 returned, as well as to address any residual physical
25 and psychological consequences.

1 In addition to the neurobehavioral
2 performance, Dr. Fiedler tested certain psychological
3 measures which showed a severe level of psychological
4 distress among most of the residents, in relation to
5 their sudden evacuation from the homes in which they
6 had invested large sums of money as well as many
7 loving hours. They voiced anger, frustration, as
8 well as anxiety about their future. Many of the
9 residents we tested had clinically significant
10 psychiatric problems resulting from a combination of
11 the mercury exposure and the need to be evacuated.
12 This exposure to mercury had resulted in a severe
13 disruption and they had lost control of their lives.

14 Had they not been exposed to very high
15 levels of mercury, they would not have experienced
16 these disruptions and would not be suffering their
17 current distress, and I'd be home in an air
18 conditioned room.

19 Now 18 months later, still living in
20 temporary quarters, their lives still on hold, that
21 early anxiety was certainly warranted.

22 Now already most of my remaining
23 remarks have already been stated and in some cases
24 more eloquently and in some cases more loudly by
25 prior speakers who have drafted the same analysis.

1 Social scientists have studied other
2 populations forced to relocate temporarily or
3 permanently because of flooding, war, or other
4 disasters, both natural and man made. And I'll be
5 reviewing that literature and will share it with you
6 at a later date.

7 Our observations of the Grand Street
8 residents are consistent with the stresses over which
9 people have no control but are particularly damaging.

10 In that sense, the residents of the Grand Street
11 building are not unique, many other communities have
12 had disasters thrust upon them. But in another sense
13 they are unique.

14 People whose homes are rendered
15 uninhabitable by flood or fire eventually collect
16 insurance and rebuild their homes and lives. The
17 victims of Grand Street mercury have not been able to
18 do so.

19 Now, we all suffer various losses in
20 our lives and we admonish ourselves and others to
21 "get on with your life". The victims of Grand Street
22 mercury have not been able to get on with their
23 lives. They are trapped by forces over which they
24 have no control and are increasingly vulnerable to
25 psychophysiological damage. Even if the actual

1 neurological consequences of their mercury poisoning
2 eventually recover, the scarring from having lost
3 control of their lives and being on hold for so long
4 may leave a long-term or permanent mark.

5 How long can people be "on hold"? We
6 are looking in the literature for answers to that.
7 Certainly a few months is tolerable, and most of us
8 have experienced such periods, for example, between
9 jobs. But the Grand Street victims have been on hold
10 already for 18 months.

11 I don't think it would be realistic to
12 expect them to simply wait on hold for 18 months,
13 much less the 40 months projected by the EPA, if they
14 were to re-occupy the building after remediation.

15 They need a rapid and definitive
16 solution to "get on with their lives", I believe they
17 call that permanent relocation.

18 Although I have not personally
19 evaluated whether the Grand Street building could be
20 remediated to residential standards, I do know from
21 personal experience here in New Jersey, that
22 Superfund remediations rarely proceed quickly or
23 smoothly. Often years go by before the remediation
24 even begins, years of remedial investigations,
25 feasibility studies, remediation alternatives, and

1 review at the state and federal level.

2 Assuming that it were to begin
3 immediately, it would mean that the victims would
4 have been on hold for five years. I don't think
5 anybody would consider that a realistic expectation.

6 From the community medicine point of
7 view that I represent here tonight, it, is entirely
8 inconceivable that the Grand Street residents should
9 be subjected to waiting for remediation.

10 In addition, for many and perhaps all
11 of the Grand Street victims, and we just heard this
12 mentioned by the previous speakers, the building has
13 become a symbol of what has gone wrong in their
14 lives. If it were magically rendered habitable
15 overnight and they were required to return, it would
16 be a constant reminder to them of a very unpleasant
17 event and period in their lives. Although we have
18 not studied this for each individual, I strongly
19 believe that it is not realistic to expect them to
20 return to this building which, once a source of hope
21 for the future, has become a source of great pain.

22 I concur with EPA's decision not to
23 remediate this building. If it were remediated, the
24 Grand Street victims should not be expected to return
25 there and, most importantly, I urge a rapid

1 resolution of the compensation issue so that these
2 victims can seek appropriate permanent solutions and
3 get on indeed with their normal lives.

4 Thank you for this opportunity.

5 MS. SEPPPI: Thank you, Doctor.

6 Doctor, if you have an extra copy of
7 that statement, we would appreciate that for the
8 record also. Is that an extra copy?

9 DR. GOCHFELD: She has one.

10 MS. SEPPPI: I'd like to go on to some
11 of the residents, former residents have expressed an
12 interest in making statements or asking questions.

13 Curtis Crystal.

14 MR. CRYSTAL: Curtis Crystal.

15 I want to make my comments not only on
16 behalf of myself and my wife, but on behalf of our
17 partners and would in what seemed like a wonderful
18 dream. It was a wonderful dream in which we
19 transformed an idle, run down ghost of a building
20 into a thriving community of artists and artisans.
21 Through our hard work, sacrifice, determination,
22 resourcefulness, and stubborn perseverance against
23 great odds, we thought we had actually turned this
24 wonderful dream into a very wonderful reality. And
25 we dreamed for this city as well, for the community

1 we wanted to join together with in creating a bright
2 future. We did not dream of the living nightmare
3 this has become for all of us.

4 We had solved one of the most difficult
5 challenges facing those of us in the arts: how to
6 afford adequate housing that included the studio work
7 space we needed to practice our arts. Our solution
8 was to pool our resources and do it ourselves. We
9 designed our homes and studios in every detail. We
10 had everything we needed for the rest of our lives -
11 a wonderful home full of air, light and so much space
12 to grow in, to raise families in, as well as the work
13 space we needed to pursue our careers. Everything
14 was thought out - door sizes to accommodate art
15 works, the elevator size, special fireproofing,
16 electrical wiring and water lines for future needs,
17 gallery space, storage space. We had all this common
18 space on the ground floor, and we planned a community
19 gallery, a space for concerts, performances, and art
20 studios to hold classes for the community. In short,
21 we had transformed this monthballed building into a
22 place full of creative life designed to accommodate
23 all our needs present and future, private and
24 professional. Those of you who saw what we had
25 accomplished were amazed and let me tell you, so were

1 we! And in doing this, we discovered something more,
2 we discovered that yes, everybody dreams of
3 sheltering themselves in a secure and permanent home
4 of their own, but to build one's own home is the
5 moment in which we get to make one poem, at least, of
6 our lives which expresses us completely.

7 Many of us were strangers at first who
8 were brought together by this shared dream. Working
9 together, building together, learning to rely on each
10 other, deep friendships were formed. Without
11 realizing it, we were building our own small
12 community, an extended family we could depend upon.
13 We looked forward to raising children together. We
14 looked forward to celebrating together, to sharing
15 all the new challenges the future held for us. Now
16 we share the devastation of this tragedy. Our family
17 has been torn apart, we are disbursed and let me tell
18 you, we are in pain.

19 I can't begin to tell you of the
20 emotional devastation, the depression, the loss, the
21 effects from the express over the past nineteen
22 months. How do you get rid of the horror, the trauma
23 of the way we were forced out of our homes and
24 studios. Being surrounded by police, surveillance
25 helicopters flying overhead, not being able to leave

1 the building with our possessions, being assailed by
2 the press corps, our homes and studios invaded by
3 police and government official of all stripes, men in
4 "space suits" probing all over the place. We felt
5 humiliated, scared, violated. The stress of our
6 displacement," as well as the exposure we had to this
7 insidious toxin has brought on illness and suffering.
8 The uncertainty of our situation, the limbo we find
9 ourselves in is numbing. It is a daily struggle to
10 face our responsibilities and continue on with our
11 lives as indeed we must.

12 We can only hope that all the parties
13 who played a part in what has be fallen us and this
14 community will come together in a spirit of
15 constructive cooperation to forward the remedy
16 recommended by the Environmental Protection Agency.
17 It has been nineteen months since we were evacuated
18 from our homes. Nineteen months in temporary
19 relocation. That is nineteen months of being in
20 limbo, displaced. That is nineteen months with all
21 our financial resources, our life savings tied up.
22 Add to that the two and a half years we put into
23 creating and building this project, that comes to
24 over four years of our lives already tied up in this!

25 Now, after a year and a half of

1 thorough study by the United States Environmental
2 Protection Agency, a recommendation has been made.
3 They have studied our building, they have studied us.
4 Studied and studied and studied. It is clear by now
5 that this recommended plan is the only feasible plan
6 that can begin to heal this horrible tear to the
7 fabric of our lives, to the fabric of this community.
8 We fear for our futures. Is it not enough that we
9 have to live with the fears for our health and the
10 health of our children for the rest of our lives? Is
11 it not enough that we have to live with the
12 consequences of the ordeal of the evacuation and the
13 nightmare of displacement? We fear we will never be
14 able to replace what we had or afford anything close
15 to it. Proceed with this plan with all due speed!
16 Restore something of our lives! Restore our faith in
17 the system we relied upon to protect us and which
18 failed us. Please don't fail us again!

19 MS. SEPPI: Thank you.

20 Corinne Mulrenan.

21 MS. MULRENAN: I'm a former resident of
22 the building. I was in 3C. First I also want to
23 make this opportunity, I'm speaking for myself and
24 for my husband Michael and for Maxwell, and I want to
25 publicly thank EPA, you've been our allies at the

1 most difficult time of my life and I just want to say
2 thank you.

3 A situation like this impacts people in
4 different ways. If you talk to all of our neighbors,
5 each would tell you how it has interrupted their life
6 and devastated their lives. For Michael and I, we
7 had for many years before actually becoming involved
8 with the building, dreamed about how we could create
9 the perfect home and we were pretty sure we wanted to
10 do it in Hoboken, which we knew would be difficult.
11 We wanted a home that was large enough to accommodate
12 two or three children, we wanted to have studio space
13 so that I could pursue a business, I do furniture
14 restoration, but I also wanted to be home for my
15 children when that was necessary.

16 And we also, if we stayed in Hoboken,
17 wanted parking. So the building, when it presented
18 itself, seemed like a perfect opportunity. We had
19 already a built-in community, we had neighbors who
20 were nurturing, and we wanted to maintain that. We
21 wanted to start this part of our lives here.

22 So when we finally did actually realize
23 that dream, it was without question, it was the
24 hardest thing I have ever done but I think everyone
25 would agree it was really the most fulfilling

1 achievement of my life and of Michael's life. And it
2 was really quite a time to celebrate. We lived in
3 the building for a year, and it was without question
4 the best year of my life.

5 So obviously when we were abruptly
6 removed from the building, it was devastating, it was
7 overwhelming and it was surreal. It was like waking
8 up in a bad movie of the week every day. It was just
9 an unbelievable experience.

10 Michael and I had to delay our
11 pregnancy by six months because I was tested and
12 found that the levels of mercury were too high and
13 that had to dissipate, so we waited for six months.

14 Thankfully last summer I was able to
15 become pregnant and as a result, Maxwell was born in
16 March of this year. And he's wonderful, and he was
17 really a shining light in a very difficult time.

18 But now I'm 38-years-old, and I cannot
19 help but think about a brother or sister for Max.
20 And when you're a woman and you're 38, you start
21 thinking about that clock ticking. And what I know,
22 though, is that it would be very difficult for us to
23 make a decision to have another child while we are
24 living in this temporary situation. It is like
25 everything is on hold and you can't move forward the

1 same way you would when you're not in a situation.
2 So when thinking about how this has really impacted
3 my life, I would say that's the most devastating part
4 for me. This may mean that Max doesn't have a
5 brother or sister down the road, because I can't deal
6 with the obligations required of being in a situation
7 like this and in dealing with two children and the
8 responsibilities of family. It is too difficult.

9 So I'm asking EPA at this point to make
10 one of the most important decisions of my life, and I
11 believe that some real thorough testing was done,
12 based on what I've read and I've had explained to me,
13 and you've always been very good about answering my
14 questions and making sure I understand what I'm
15 hearing. The building is a toxic site and I do
16 believe for the community it should be removed. And
17 of course I also feel that myself, my family, and my
18 neighbors should be permanently relocated as quickly
19 as possible. It is the only way that we can get on
20 with our lives. And basically I guess what it comes
21 down to is my future, our future is in your hands.

22 Thank you.

23 MS. SEPPPI: Thank you, Corinne.

24 Mark Graham.

25 MR. GRAHAM: I appreciate this

1 opportunity to speak.

2 My wife and I were introduced to this
3 project in October 1992, and became actively involved
4 in December of that year. It took the group of us
5 another nine months to successfully purchase 722
6 Grand Street, and then another two and a half years
7 to see completion on the horizon. It was at that
8 point we discovered we might never reach that
9 horizon, when we discovered that over half of the
10 residents that had just turned themselves inside out
11 on this project had elevated levels of mercury in
12 their bodies.

13 We succeeded at Grand Street where
14 other groups in the past, including professional
15 developers, had failed: we took an empty building on
16 a half-empty street in a relatively dead section of
17 Hoboken, and self developed it into living units that
18 were legally zoned for artists to work and live, the
19 first, and still the only ones of their kind. Within
20 one week after we received Final Site Plan Approval
21 from the City of Hoboken, real estate signs reading
22 "Lofts for Sale" and "Lofts for Rent" appeared on
23 buildings across both streets from our building. We
24 were the ground breakers in Hoboken, we did it
25 totally on our own, with a tremendous amount of work

1 and a tremendous amount of debt, and we have lost it
2 all, except for the debt.

3 I have a sense of pride being a part of
4 a group that had the courage and the audacity to take
5 on a challenge like this. In this national climate
6 of worshipping the individual, the self-starters, the
7 risk-takers, we are the quintessential group. We
8 were also exceptionally cautious. We insisted on
9 documentation assuring us of the safety of this
10 building for residential use. When we received these
11 written assurances, we felt we were safe. In a
12 broader sense, that sense of safety is gone,
13 forcefully replaced with an underlying distrust and
14 constant stress droning within us. My wife has
15 developed a cardiac arrhythmia, and ten months after
16 the evacuation, I found myself in the hospital with
17 chest pains and elevated blood pressure. My wife was
18 over three months pregnant during the evacuation, and
19 worry for the future of our son's health is
20 relentless.

21 The reality that brings us here tonight
22 never should have happened. With our caution during
23 the pre-purchase environmental review of the
24 building, this message of "Unfit for Human
25 Habitation" was beyond comprehension. The resulting

1 evacuation was absolutely surreal, nightmarish. To
2 me, we appeared as zombies, dragging our two plastic
3 bags of belongings down through the building, silent
4 and numb with disbelief. I feel echoes of this
5 disbelief within our group to this day.

6 With the emergence of this nightmare
7 the EPA appeared. As the group of us were in a
8 highly agitated state, the EPA acted as a reference
9 point of sanity and reassurance. If it were not for
10 the information, assistance, and support the EPA
11 provided, we would have been, in addition to
12 everything else, homeless and bankrupt. I challenge
13 any of the federal officials in Washington as well as
14 any corporate entities involved to undertake to
15 lecture on the extreme environmental positions, or
16 the lack of importance of the EPA to be silent for
17 just a brief time and open their eyes to the
18 realities of the EPA's contributions to the group of
19 us and to this community. They might learn that, if
20 the EPA can be accused of having an agenda, it is
21 essentially to protect citizens from being poisoned
22 and to help those who have already been poisoned.

23 The EPA has been meticulous and
24 thorough in their handling of the research which
25 results in this recommendation to demolish our homes.

1 The realization of this termination creates an ache
2 that will last a very long time. But it is the right
3 thing to do, for us and for the surrounding
4 community.

5 For my family and for the group of us,
6 I thank the EPA for its intense efforts on our
7 behalf. You have contributed to showing us that a
8 sense of stability in our lives is coming in the
9 future, so that we can move on from this suspended
10 animation in which we find ourselves.

11 MS. SEPPI: Eileen Hoffman. I think
12 you had a statement.

13 MS. HOFFMAN: I just have a very brief
14 statement, because my partners are speaking very
15 eloquently for all of us. They speak for me as well.

16 My husband and I had five times the
17 legal levels of mercury in our system when we were
18 evacuated, and we both experienced respiratory
19 problems and short-term memory loss. And the point
20 is just the absolute terror that we experienced from
21 the unknown of having that in our system and what's
22 going to happen to us. We've both had nightmares for
23 months, and it is just a heartbreaking decision to
24 come to, but I agree completely that the building
25 should be torn down. I can't see that it could even

1 be made healthy for industrial use, given what we
2 experienced in good conscience for other people
3 habitating that building. Thank you.

4 MS. SEPPI: Thank you.

5 Meredith Lippman.

6 MS. LIPPMAN: My name is Meredith
7 Lippman, my daughter is Morgan Steadwell, and my
8 husband is John Steadwell.

9 I want to thank you for helping us so
10 much in the last 18 months. What I really want to
11 say tonight to you and I guess to the City of
12 Hoboken, I came to Hoboken in 1978, I rented a two
13 story building on 8th and Jefferson, paid \$3,600.00
14 that I borrowed as a fixture fee for a loft that I
15 could live and work in. Three years later, my lease
16 was up, I was out, whatever money and rent I had
17 paid. I had no fixtures. I then took another place
18 which was a live and work loft at 805 Clinton Street,
19 which I stayed there for about eleven years paying
20 rent, building walls, putting in toilets, sanding and
21 painting floors, to have a place where I could live
22 and make my art.

23 I've done two lofts in New York for
24 members of my family, sanded I think probably six
25 thousand square feet of floors. As an artist, I've

1 always found myself moving into an area, in this case
2 it was Hoboken, that was considered a new frontier
3 and in each case it was a rental and in each case I
4 lost my loft. After eleven years at Clinton Street,
5 we had the possibility of finally, my husband and I
6 and I think everyone else in the building, of having
7 a studio and a living space. Finally when I put up a
8 wall, we could call it ours. And finally when I
9 sanded a floor, it would be my floor. And finally
10 when I had a studio, no one could tell me I had to
11 pack up and leave or double the rent or get a new
12 tenant or decide that now we were gentrified and we
13 had to leave. The town was very welcoming to us as
14 artists in '78, boomed in the '80s, and a lot more
15 artists came out to Hoboken.

16 I can't express enough the sense of
17 loss of home, which for us is just so horrific and
18 was really emotionally devastating. I think we also
19 had the feeling that we put our trust in every agency
20 along the way over a number of years, we did
21 everything to code, we built everything to code, we
22 were inspected a zillion times, we were in City Hall
23 a zillion times. We worked with the City Of Hoboken,
24 we worked with the state agencies, we worked with
25 everyone that needed us to work with them to create a

1 legal and inspection passing code building, as well
2 as individual spaces, to find out in six feet of snow
3 at 7:00 at night that we had to take two garbage
4 bags, plastic bags of clothing with us and we then
5 went to a hotel.

6 You're aware that at that time we were
7 struggling to adopt a child, and my concern at that
8 time was to have a roof over our head, if Beijing
9 would allow me to have a child. Without you in the
10 last 18 months, my daughter would essentially be
11 homeless. There was no way, and I don't know that
12 the community is aware of this, that we all have been
13 carrying on mortgages, we've all been responsible for
14 taxes to the City of Hoboken. We have insurance on
15 the building, and we have to live up to those
16 obligations. And without your funding to help us
17 through, I think all the families would find
18 themselves unable to cope, because we had drained all
19 our resources and our family's resources in putting
20 these spaces together.

21 I urge the community, I beseech the
22 community to support your plan. I beseech the
23 community to support you in moving this resolution
24 along as quickly as possible. I have a child that's
25 going on two-years-old, I'd like to make some good

1 decisions for school, for permanent housing for her,
2 start to plan a future. I'd like to see us stop
3 being depressed. I'd like to see us stop being
4 stressed out. I'd also like to see the City of
5 Hoboken resolve that building. I'd like to see it
6 resolved and along with you in a way that would be
7 healthy for the community, and along the goals of the
8 City of Hoboken. And I would like a place to live
9 that I can call my own, and write a check each month
10 to pay a mortgage and live in the home that I'm
11 paying the mortgage on, instead of what is going on
12 at this point.

13 I thank you, and I hope that this
14 resolves itself quickly and we move into permanent
15 housing. Thank you.

16 MS. SEPPI: Thank you, Meredith.

17 China.

18 MS. MARKS: My name is China Marks.

19 In 1979, I moved from Manhattan to
20 Hoboken, where I lived and made art in raw industrial
21 space on the top floor of Hoboken Glass at 805
22 Clinton Street. Summers I baked and winters I froze.
23 The roof leaked and the rent kept rising. But
24 Hoboken got into my blood and I couldn't imagine
25 living anywhere else. Besides, without a car, how

1 much farther out in New Jersey could I really go? So
2 when in 1992 I had the chance to join a group of
3 artists developing a building for legal occupancy at
4 722 Grand Street, just a block away from where I was
5 already living, I felt lucky, very lucky.

6 It was worth spending most of my
7 savings, attending endless meetings of our group,
8 working extra hours to make more money, calling in
9 favors from everyone I knew, doing a lot of the work
10 myself, going through all the inspections and
11 certifications, putting my own drawing and painting
12 on hold for months while I packed up twenty years of
13 art and supplies and disassembled and moved towers of
14 industrial shelving, and more -- whatever I had to do
15 in order to build an affordable studio of my dreams
16 in the town I already thought of as "home".

17 In the process of building our lofts,
18 we also created a marvelous community of artists and
19 friends. The city benefited more than culturally:
20 the apparent success of our project produced
21 substantial property taxes and contributed to the
22 development of the west side of Hoboken.

23 Because in the renovation of 722 Grand
24 we complied with every regulatory and environmental
25 requirement and because I felt so safe and happy

1 there, it was hard to believe that anything serious
2 could be wrong. In the desperately painful and
3 difficult year and a half of exile, since we were
4 ordered out, I've learned otherwise -- I've learned
5 that mercury saturates our building, top to bottom,
6 and the soil around it.

7 I support the EPA's proposal to
8 permanently relocate us and to demolish the building
9 safely. Hoboken must be made free of contamination
10 by mercury. And if I can't go home, then give me
11 what I need to begin again.

12 MS. SEPPI: Thank you, China.

13 Mat.

14 MR. SCHLEY: My name is Matt Schley.
15 I'm a former resident of 722 Grand Street.

16 The first thing I want to say, I'm very
17 pleased that the process is moving on. I'm very
18 pleased EPA is recommending that my family be
19 permanently relocated.

20 I and my family are trying to rebuild
21 our lives from crushed dreams. The first year of our
22 dislocation, all we tried to do was hold on. We
23 never unpacked many of our belongings until we had
24 been living in our temporary quarters for over a
25 year. There just seemed to be no point. That was

1 the problem, there didn't seem to be a point to many
2 things. I had an overwhelming feeling of the
3 uselessness of many activities that I once took for
4 granted. I feel like I live in limbo. A place where
5 many of the things I took for granted are lost. My
6 sense of control over my destiny, the sense of hope I
7 could give to my family, the sense that my hard work
8 would make a difference in my life, I believe these
9 things are necessary to have a happy and satisfying
10 life; they were taken away.

11 I have struggled mightily with these
12 feelings. I realize they are destructive to my well
13 being. I feel as if I'm doing better, and as the
14 process moves along, there is reason for hope, but I
15 still have trouble with every day things.

16 For some reason I'm afraid or avoid
17 opening the mail. I don't like to answer the phone.
18 I expect bad news at any moment. I know these are
19 silly self-indulge phobias, but it is how I feel.
20 Then sometimes I feel hopeful. Reading the report
21 that I would be permanently relocated has given me
22 hope that there is a way out of my situation. But I
23 am also afraid. I am afraid to hope so much is
24 unknown.

25 My son, as a classroom assignment, made

1 a map of his brain. I was at his school one day
2 picking him up, and these brain maps of all the
3 children in his class were hanging on the wall
4 outside. They were very colorful. They had in them
5 things like parents, toys, friends, sports, TV. I
6 then came to my son's map. He had many of these
7 things in his map in bright colors, but at least a
8 third of the map was colored in gray and had written
9 across it "Mercury Building". That broke my heart.
10 Maybe one day it won't be such a big part of his
11 consciousness and he can think of other things. That
12 is the day I wait for.

13 So I beg you to speed this process
14 along, and to make clear to us not only that we will
15 be permanently located, but when this will happen.

16 Thank you.

17 MS. SEPPI: Now, of the former
18 residents, that's all the cards I have. If anyone is
19 interested in making a statement, if there's anyone
20 else at 722 Grand.

21 Sultan, I'm sorry, I did have a card
22 for you I think.

23 MR. CATTO: Sultan Catto.

24 I thank all the Senators, Congressmen
25 and others, the Doctor and others who talked on

1 behalf of, the decision of the EPA, including all the
2 members of the EPA, and what they've done for us, for
3 our families. I'm talking on behalf of my wife and
4 my children who are sitting in the back.

5 Immediately after we were evacuated
6 into our hotel room, my older son started having all
7 kinds of traumatic problems. Everyone living around
8 us continuously from morning to night in the middle
9 of that snowstorm talking about mercury poisoning and
10 so forth, made him think that we were somehow
11 poisoned and the smells in the air were bothering him
12 and his mother smelled and so forth. We had to look
13 for a house to move out to, and we found a house
14 where we have to live for the following year with
15 other families. And then Matt and Barbara and Hank
16 moving in with us because they couldn't find a house
17 yet. And after that, Nora and David living us for
18 the whole year, and at the end of the year, housing
19 being sold and we had to move on again, carrying
20 everything into boxes, relocating from one place to
21 another continuously. It is been really too much.

22 And my oldest son, who was just an
23 eight-year-old child then, he was going through all
24 kinds of traumas. And immediately, as soon as we
25 moved into the house, when I called up his

1 pediatrician when things were getting worse, he said,
2 "It sounds like a brain tumor," so I had to rush out
3 to Albert Einstein College to have him checked for a
4 brain tumor. And they finally determined it was not
5 a brain tumor but it had to do with the trauma he was
6 experiencing, and I take him to a psychiatrist and he
7 couldn't even stand his mother in the house.

8 Having to take him to school early in
9 the morning and having to come back from my work to
10 take him away from school and bring him with me all
11 the way to New York and have him hang around with me
12 and so forth, this was really too much for our family
13 and you can imagine what everybody else was going
14 through, similar experiences at a different level.
15 And we are still visiting a psychiatrist and so forth
16 because of this situation.

17 And the year and a half of living with
18 total uncertainty, with emotional distresses, with
19 financial losses, problems, living out of boxes,
20 moving from place to place, it is just not right. We
21 need to move, we need to move forward. We have to go
22 on with our lives, and we have to rebuild our lives.
23 We need to be permanently relocated. It is a just
24 thing to do and the only thing that I can perceive
25 that is the humanly thing that can be done for us is

1 the permanently relocation and nothing else.
2 Otherwise, you know, you see how the situation is, it
3 is really terrible for all of us.

4 Thank you.

5 MS. SEPPI: Thank you, Sultan.

6 Any other former residents wish to make
7 a statement?

8 Then I have some other cards here of
9 people who asked to make a statement, and I'm going
10 to apologize beforehand, I'm probably butchering a
11 lot of these names.

12 The first one I have is Donna Cahill
13 from the Environment Committee of Hoboken.

14 Let me just put that aside.

15 Ignatius Camporeale.

16 MR. CAMPOREALE: My name is Ignatius
17 Camporeale, and I'm a resident at 628 Jefferson
18 Street, which is only a few blocks from here.

19 I've been reading up on all the stories
20 and I just want to begin by saying how bad I feel for
21 all these residents and they've been through hell and
22 high water, and it is a shame that they had to go
23 through something like this. Let's hope that we can
24 prevent this situation from happening in the future.

25 One of the things that concerns me is

1 I'm a former meteorologist with the National Weather
2 Service in New York City, and talk about government
3 cutbacks and we've heard some of that tonight, and I
4 lost my job because the Budget Service closed its
5 office in midtown Manhattan, 30 Rockefeller Place,
6 and I'm currently a freelance meteorologist, which
7 means I'm pretty much open-to any opportunities there
8 may be in the private sector and also government
9 service. And I know that there are a lot of plans
10 that are going to be implemented on how to go about
11 cleaning this mess and weather, unfortunately, is one
12 of the elements that could come into play into how
13 speedy this process could be done, this cleaning up
14 process. And I heard about the blizzard we had in
15 1996, I was on duty during that blizzard and it did
16 paralyze this city for almost a week. I know what
17 these people went through when they had to move out
18 of this building during the middle of one of the
19 worst blizzards in the history of this country, in
20 the history of New Jersey, I should say. And I'm
21 here just to offer my services to anyone,
22 Environmental Protection Agency or anyone else that
23 might be looking for someone such as myself to
24 provide the day-to-day guidance that might be needed
25 in doing this work, particularly for those people who

1 are going to be doing the cleaning work in the
2 building. And I'm here to offer my services. If
3 anyone wants the services, I'll be more than happy to
4 provide them any way that it could speed up this
5 process to get this project under way and to get
6 these people's lives back in order again. I think
7 everyone would applaud that, and that's all I really
8 wanted to say.

9 MS. SEPPI: Is Donna back yet?

10 MS. SILBER: She's not back but can I
11 speak for the Environmental Committee.

12 MS. SEPPI: Sure, yes.

13 MS. SILBER: My name is Cynthia Silber.

14 I'm here tonight representing the
15 Environmental Committee of Hoboken, which is a
16 nonprofit community organization. We'd like to go on
17 record in support of the EPA's recommendation to
18 permanently relocate the former residents and to
19 safely demolish the Grand Street Mercury Site.

20 We certainly have a great deal of
21 empathy for the former residents and for all the
22 trauma that they've gone through. We'd like to thank
23 the EPA and would like to say that we appreciate
24 their professionalism. They sought out the
25 Environmental Committee as one of the organizations

1 in town, they sent out cards to notify our mailing
2 list about tonight's public meeting and the public
3 comment period. So your professionalism is greatly
4 appreciated and it has certainly been the echo to
5 what the former residents have said.

6 I think one of the most frustrating
7 things in observing all this from a distance is that
8 these folks have followed the process and, quite
9 frankly, the various steps that they've gone through,
10 they've been let down. And I think that no matter
11 how wonderful the EPA has been, it can't take back
12 the distrust that these residents, as well as the
13 other citizens in Hoboken, have to question the
14 process and how this happened in the first place.

15 I encourage our elected representatives
16 at all levels of government to investigate and see
17 things put right, that this doesn't happen again.

18 One of the other concerns we have,
19 since we know that a building across the street, as
20 someone defined as red flagged. Is there any other
21 buildings within our area, is there any way an
22 investigation can be done of similar problems of
23 other industrial contaminants that might come
24 forward, when a building might be converted from
25 industrial to residential space? That's an answer

1 we'd like back, what possible steps can be taken to
2 investigate that, so this wouldn't happen again.

3 We would hope that the process wouldn't
4 fail yet another group of people who were looking to
5 convert space. That's something we would like to
6 pursue with you folks. Once again, we hope that this
7 can move forward and to safely take this problem away
8 from us in Hoboken. We thank you.

9 MS. SEPPI: Thank you, Cynthia.

10 I know I'm not going to say this name
11 right, Peter Homitzky.

12 MR. HOMITZKY: Peter Homitzky.

13 I'm a property owner on Grand Street in
14 Hoboken, a couple of blocks down from 722, and I urge
15 you to follow through with the recommendations,
16 because in spite of the GE representative's
17 incredibly disingenuous statement, I also have a home
18 in upstate New York on the Hudson River where my kids
19 can't eat the fish that they catch thanks to GE, and
20 their attitude toward PCBs is somewhat, leave it
21 alone and it will go away, it will go away by itself.

22 As far as the people involved, it is a
23 tragedy. But apart from that, as I said, I live a
24 couple of blocks down on Grand Street, and supposing
25 there's a fire there, whatever mercury is contained

1 in that building is going to go right up in the air
2 in smoke and it is going to affect me. I don't think
3 it can be remediated, not in these quantities. I was
4 very surprised today at the levels, because I thought
5 they were far less.

6 And I also would like to take this
7 moment to apologize to the Bocchinos. I
8 got them into this mess by recommending this building
9 to them. I forever will feel like a smuck about
10 that.

11 In any case, thank you.

12 MS. SEPPI: Thank you.

13 Richard Weinstein.

14 MR. WEINSTEIN: I just want to make a
15 few comments, mainly because I'm not a directly
16 affected citizen, I live downtown in Hoboken on
17 Bloomfield Street. My name is Richard Weinstein.
18 I'm also an attorney practicing law in Hoboken, and I
19 spent eight and a half years with the Environmental
20 Protection Agency in Region 2. It was during the
21 time when you were developing the CERCLA regulations
22 and legislation in 1980, I had been already there
23 almost eight years.

24 I just wanted to put into perspective,
25 if you haven't said so already, what the purpose of

1 this meeting is, and I understand Lisa -- I'm sorry
2 what was her name?

3 MS. SEPPI: Lisa Jackson.

4 MR. WEINSTEIN: Lisa Jackson spoke in
5 the introductory remarks, I don't know if she put in
6 the context in a legal sense what a hearing like this
7 is about.

8 And unfortunately what I've heard
9 tonight, I've heard the EPA's technical evaluation of
10 this particular remedial action, the feasible study,
11 and the remedial investigation, but I haven't heard
12 any experts that have the qualifications that you
13 need to determine whether or not what you're
14 proposing is supportable by scientific and other
15 technical expertise.

16 I don't know, maybe I'm wrong, I don't
17 know if that's in the Record of Decision, but I think
18 that somebody should have been given an opportunity
19 to get an independent consultant in who could have
20 brought to bear his understanding of the situation
21 just as you have gone through. And I've worked on
22 Superfund cases where I've represented innocent land
23 owners who did that, and it was only when we did
24 that, that we could actually evaluate the EPA's
25 evaluation and the potentially responsible parties

1 who have come here today and made a statement that
2 they don't understand why EPA is recommending
3 demolition of this site, when I haven't heard them do
4 anything less than a demolition so EPA could pick up
5 the difference. In other words, if they were willing
6 to do half the cost due to cleanup less of a
7 demolition, and then if EPA recommended the
8 demolition anyway, they could still go ahead and do
9 the demolition and pay the money out of the
10 taxpayers' pockets and seek to recover the money back
11 from General Electric or any other responsible party.

12 I haven't heard that kind of discussion
13 here.

14 The Record of Decision is going to be
15 before a District Court at any future time when
16 General Electric defends against this action by EPA
17 for recovery of remedial costs under, I think it is
18 104 of the Act, the CERCLA Act. But the Superfund
19 reauthorization act provided in a detailed discussion
20 of what this Record of Decision would be used for,
21 and I'm not confident that the Record of Decision has
22 been fully evaluated or I should say covered, it
23 covered everything that it should.

24 For example, I read very briefly that
25 there was some question whether or not there was

1 contamination. You in your own report state that, on
2 Page 3, "After removing soil which contained
3 petroleum hydrocarbons and placing an asphalt cap
4 over the parking lot, David Pascale received an
5 approval of his ECRA 'negative declaration' by
6 NJDEP."

7 Now, you mentioned that you're going to
8 do an investigation which will be a subsurface
9 investigation after you do the demolition. But why
10 is it that you're not doing that at this point to see
11 whether or not there's going to be any impact
12 immediately on the groundwater aquifer or whatever is
13 involved in groundwater in Hoboken.

14 And that's where I come in because as a
15 resident, even though I'm on 215 Bloomfield Street,
16 the code of convection or the flow through the
17 pattern of Hoboken could impact me as well as other
18 locations in the area.

19 So I'm concerned that that kind of
20 evaluation and feasibility study was not included.
21 And it affects also the people who are the residents
22 of this building because if in fact there were
23 petroleum hydrocarbons, how can you rule out
24 carcinogens that are in petroleum as a possible
25 source of injury and danger to those residents also?

1 No question in my mind the building

2 should be torn down and the mercury contamination

3 removed and hopefully properly disposed of at an

4 acceptable landfill site. I'd iike to see where the

5 EPA is going to propose a Record of Decision of the

6 documents of where this contamination was found, the

7 levels it was found out, whether or not it was a

8 particular mercury mixture, so you might be able to

9 Identify it with the process of the making of lamps

10 at the site that was owned by General Electric for a

11 number of years. Nobody has pointed out to me that

12 the tool and die company there would have generated

13 in its process a mercury that would have been

14 contaminating the site. The most likely, given the

15 standard classification of General Electric's

16 facility and the process that was involved, I

17 understood that that was a very good probability that

18 that might have been the potentially responsible

19 party. But I haven't any proof that that's the case,

20 so I wouldn't make that statement. However, that

21 should be part of the Record of Decision and an

22 explanation of how you're targeting individual

23 potentially responsible parties. Because this Record

24 of Decision is going to be before a District Court at

25 some future time when a decision is made, as I

1 understand, as to what is the proper cleanup, whether
2 that met the National Contingency Plan and who is
3 responsible. So I think the Record of Decision not
4 only goes to remediation but it also goes to seeking
5 to hold liable those potentially responsible parties.

6 And I didn't hear much of a discussion
7 about that tonight. And correct me if I'm wrong,
8 that that Record of Decision does not include that
9 and whether or not maybe you were planning to have a
10 further hearing on that aspect of the matter.

11 Also, I don't remember hearing or
12 reading in what way you looked at other things other
13 than mercury. I know you said, in most of the
14 discussion that I heard from about 7:15, it was
15 contamination of mercury and you did the Risk
16 Assessment on mercury and you did a determination of
17 the location of the mercury, but have you ruled out
18 all other possible contamination that could have
19 affected these people and haven't you -- I don't see
20 how this is a complete evaluation of the site --
21 horizontally and vertically and whether or not, you
22 know, you have done a full evaluation.

23 But let me conclude because I really, I
24 hadn't prepared enough here to cover everything I
25 wanted to, these were just notes that I jotted down.

1 But the question I have is: did you
2 characterize the site completely horizontally and
3 vertically for all contaminant that could possibly be
4 at this site other than the one which is the most
5 obvious, which is the mercury?

6 MR. HANSEN: The site has been
7 characterized in the parking lot, the soil has been
8 characterized under the New Jersey ECRA process for
9 priority pollutants and petroleum hydrocarbons.
10 We've characterized in the soil in the parking lot
11 and at an off-site facility for mercury. We plan
12 during the remedial action to characterize the site
13 for all Superfund target analytes and target
14 compounds.

15 MR. WEINSTEIN: Some of these could be
16 carcinogens, am I right?

17 MR. HANSEN: Yes, some of them are.

18 And we also, as I stated earlier, plan
19 to characterize the groundwater. As you in response
20 to your statement or question that this had not been
21 a thorough investigation, we do intend to look at
22 those data in the future and if those do warrant
23 further study, we will take further study and further
24 action.

25 MR. WEINSTEIN: Thank you.

1 MS. SEPPI: Thank you.

2 Richard Piepszak.

3 I know I messed that up, but I think it
4 is your handwriting, it really isn't me.

5 MR. PIEPSZAK: Richard Piepszak. I
6 live on 9th And Adams. It is about a block away.

7 I came here because this is in my town,
8 and I'm a resident and I'm concerned. I want to say
9 that my heart goes out to the people at this property
10 and hope that they can go with the recommendation.

11 A couple of things that are new to me

12 --

13 MS. SEPPI: Excuse me, Richard, I'm
14 sorry to interrupt, would you mind moving. There's a
15 ringing in that mike.

16 Thank you.

17 MR. PIEPSZAK: A couple of things were
18 new to me, like the terms that we were reading. And
19 I really just have this one question that popped up
20 in my mind. How did this much mercury accumulate in
21 this building?

22 I think part of this report, one of the
23 terms was saturated. Someone had to have brought
24 that much mercury into the building. I would think
25 they should be the responsible party to have brought

1 it out. We are not talking about parts per millions,
2 we are talking about puddles of mercury, stuff that
3 just is like puddles of rain, it shouldn't be there.
4 It is liquid and it is very dangerous. I understand
5 it is a poison, it is a puddle of poison.

6 I just want to become more involved and
7 more knowledgeable, because that's how you empower
8 yourself to further run into these problems, and I
9 hope that we can go with that recommendation to the
10 EPA.

11 MS. SEPPI: Thank you.

12 John, you want to talk about the
13 quantities of mercury in the building? That might be
14 kind of conjecture at this point.

15 MR. HANSEN: Yes, I think it would be
16 conjecture to say exactly how much mercury is in the
17 building. But I will just redirect your attention by
18 identifying or I stated earlier on that 13 of the 16
19 units in which a small area of flooring was removed,
20 we did find puddles or droplets or globules or how
21 you want to describe it of the liquid mercury and
22 determined that the mercury is pervasive throughout
23 the site. And we only looked at a one square meter
24 area at each of those units, so the concentrations, I
25 will just have to say, we don't know exactly what

1 we're going to find but we know we have to take the
2 flooring out of that building.

3 MS. SEPPI: Let me just mention again,
4 if anybody is really interested in looking at the
5 Focused Feasibility Study, there are a couple of
6 copies here and there are some copies in the library,
7 and that's really sort of an in-depth explanation,
8 whereas this proposed plan is more of a summary of
9 that feasible study. So please feel free to go take
10 a look at it, make copies or take a look at one of
11 the copies up here.

12 I have one more card here, Madelyn
13 Hoffman.

14 MS. HOFFMAN: My name is Madelyn
15 Hoffman. I'm the Director of Grassroots
16 Environmental Organization, and I also happen to be
17 the New Jersey Green Party candidate for Governor,
18 ran with Ralph Nader as his Vice Presidential running
19 mate last November, but more than that I have been an
20 activist since 1980, because I was a resident of the
21 City of Newark, which isn't that far from here and
22 I've worked with over 150 citizens' groups statewide
23 on toxic chemical pollution problems. I'm here
24 tonight to lend my voice in support of the former
25 residents of 722 Grand Street and the proposed

1 remediation plan and permanent relocation of the
2 residents in that building.

3 I'm not convinced and they are not
4 convinced and you're not convinced that the risk
5 could be eliminated in any other way. The
6 pervasiveness of the mercury in the brick and in the
7 floors and in the air and the levels of mercury which
8 you found to me, even if you try to remediate, your
9 own study said so, you wouldn't know if it could be
10 successful until after the remediation was done, and
11 it would be criminal to put these residents or any
12 other residents in the position of living in a
13 building that they knew was once seriously and
14 severely contaminated. And at this point there was
15 still a question mark about whether or not it would
16 be contaminated. Plus the fact if this process would
17 take a long period of time and residents would have
18 to be in temporary residence until such remediation
19 was completed.

20 It is consistent with the City of
21 Hoboken's plans for the site, and as far as I can
22 tell, as far as what you've heard from the residents,
23 it is the only solution that will bring permanent
24 peace of mind to both these residents and other
25 residents. And it is essential that people be

1 protected from the health hazards of mercury, and
2 whether you find other contaminants at the site or
3 carcinogens at the site, that just would be icing on
4 the cake, because the threat, I suppose, by the
5 mercury now is, as you have determined, a serious
6 enough risk to remove people from that situation
7 permanently.

8 One concern I have as someone who has
9 worked with citizens' groups around the state and
10 watched cleanups occur, I know you have mentioned it
11 in some of your reports, but I would urge you to make
12 sure that in the plans for remediation you are
13 certain that you're protecting the surrounding
14 community from dust, from vapors, from fugitive
15 emissions and the like. Of course, doing this has a
16 potential of releasing mercury in the environment.

17 I saw you had plans to make sure that
18 didn't happen, and I would urge you to abide by those
19 plans and, you know, error on the side of safety and
20 caution, go overboard to make sure the surrounding
21 community is protected.

22 That was what I had prepared to say and
23 I wasn't going to get into any other issues tonight,
24 but I'm compelled to make some kind of response to
25 what I heard the representative from General Electric

1 say, just in a general way of who's responsible for
2 contamination and who's responsible for the situation
3 that the former residents find themselves in and who
4 should pay for it.

5 If the operation of that facility was
6 so clean and so safe as contended, why is that
7 building saturated with mercury from top to bottom?
8 Why is the mercury in the bricks, in the floors, in
9 the air?

10 The statements and the reality are
11 totally inconsistent. And what I'd like to say here
12 again in a general way, because we see time and time
13 again for leaking underground storage tanks and
14 contaminated wells, instead of the people who are
15 only leaking underground storage tanks say it was our
16 underground storage tank that contaminated, they'd
17 like to say well, it is the fertilizer you used or it
18 must have been the septic tank cleaners you used.

19 It is always easier to blame the
20 victim, and in this case, I would say as strongly as
21 I possibly can, particularly after sitting here and
22 listening to resident after resident tell their story
23 about what happened to them over the last number of
24 years, in this case, the victim, those affected by
25 contamination should be congratulated, not blamed,

1 they should be congratulated for dealing logically,
2 carefully and cautiously with the situation they
3 found. They should be congratulated for having the
4 courage to face what they found.

5 When you first find out about something
6 like this, the first response is, it can't be, it
7 couldn't be, it never would happen to me. But they
8 had the courage to face what they found, despite the
9 consequences it would have on their lives. They had
10 the courage to push for real solutions, despite the
11 consequences that would have on their lives. They've
12 had the courage to find ways to prevent this from
13 happening to somebody else, by supporting legislation
14 that would make it impossible for this to happen
15 again.

16 Put all that together, and put that
17 together with the partnership they forged with the
18 EPA, and we have a very rare situation in the State
19 of New Jersey and across the country where the EPA
20 and residents both agree on the nature of the hazard,
21 the seriousness of the hazard, and on the proposed
22 remedy. The information presented by the EPA today
23 is startling and leaves no doubt that there is no
24 remediation method other than demolition that will
25 guarantee the safety of that building and that will

1 guarantee the safety of the former residents and will
2 give everyone in this community, people who once
3 lived in that building and people who live around it,
4 the peace of mind they need to go on with their
5 lives.

6 I urge you to move forward as rapidly
7 as possible with this remediation strategy.

8 Thank you.

9 MS. SEPPI: That's all the cards I have
10 from people who asked to make a statement.

11 If there's anybody left in the audience
12 who would like to ask a question and make a
13 statement, please come forward.

14 MR. MACARRULLA: My name is Manuel
15 Macarrulla.

16 The way of expressing my support for
17 the former residents of 722 Grand Street, I would
18 like to just make a brief statement concerning the GE
19 representative's contention that the building would
20 be considered safe to operate industrially in
21 allowing for much higher levels of contamination than
22 for residential use.

23 Accepting that for the purpose of this
24 statement, that is, to take General Electric's word
25 for that, as a true fact, you know, when you think

1 about the fact that the former residents have
2 exhibited serious symptoms of mercury contamination
3 at much lower levels, well, all I can say about that
4 is that the Environmental Protection Agency and all
5 the citizens of Hoboken need to think about that
6 very, very carefully. We can't be swayed by how much
7 the letter of the law may seem to let General
8 Electric off the hook. There's a serious
9 contamination here, it is medically verifiable, and I
10 say again, people just need to think very carefully
11 about that. That's all.

12 MS. SEPPI: Thank you.

13 Anybody else have a question or
14 statement?

15 MR. KEOGH: Henry Keogh. I'm a parent
16 of a set of residents, my son and my daughter-in-law
17 and my grandson lived there, and I have two things.

18 First of all, it seemed the wise thing
19 to me to demolish the building, but the second thing,
20 I would like to know what happens to the financial
21 liability which these tenants have? They all have
22 mortgages. If they were relocated, would that be
23 covered or -- what happens for their liability?

24 MS. SEPPI: That's probably a question
25 that will come later on in this process. Right now

1 we have to finish up this comment period, take these
2 comments under review, write a Record of Decision,
3 which will be the final decision.

4 MR. KEOGH: Uh-huh.

5 MS. SEPPI: We still have to get Grand
6 Street permanently listed as a Superfund site on the
7 National Priorities List.

8 Once we do that, we can start
9 addressing the relocation issues that will arise.

10 You know, there are federal regulations that we use
11 for relocations. I don't want to put you off, but I
12 would just think that that question, and I know it is
13 very important to the residents, is just a little bit
14 premature. There are a couple of other steps in the
15 process that we have to get through first.

16 MR. KEOGH: Okay. Thank you.

17 MS. SEPPI: Any other questions?

18 Yes.

19 MS. CHEN: Shun-Yi Chen, and one of the
20 former member of the Grand Street Artists, I used to
21 live in 5E. I have a husband first to raise the
22 mercury present, and we believe it was not safe to
23 live in, and we welcome EPA decision to relocate and
24 demolition of the building. However, because of the
25 problem, you know, the mercury problem, we cannot

1 close our property and we will not be eligible for
2 the permanent relocation program. So I especially
3 hope EPA and former residents of Grand Street
4 Artists, will embrace us as our family and let us be
5 part of the permanent relocation package.

6 Thank you very much.

7 MS. SEPPI: Thank you.

8 Any other questions?

9 Okay. If not, then in closing just a
10 couple of things I'd like to remind you of. Please,
11 if you have written comments, don't forget to get
12 them into John by close of business August 7th. And
13 also, the other supporting documentation is available
14 in the library. And again, we'll be taking these
15 comments under consideration in reviewing them before
16 we write our final Record of Decision.

17 In the meantime, if you have any
18 questions please feel free to contact us at any time.

19 Thank you very much for coming tonight
20 and putting up with the heat and the air
21 conditioning, I mean the lack of air conditioning.
22 It wasn't as bad as we thought it was going to be.

23 Thank you again.

24 MR. HANSEN: I wanted to mention that
25 these extra copies of the Feasibility Study and Risk

1 Assessment that I brought are highly valuable
2 commodities. Anyone who comes down, first come,
3 first served basis is welcome to them.

4 Thanks a lot for coming.

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C E R T I F I C A T I O N

I, KIM O. FURBACHER,

a Certified Shorthand Reporter, License No. XIO1042,
Registered Professional Reporter and Notary Public of
the State of New Jersey, certify that the foregoing
is a true and accurate transcript of my stenographic
notes.

APPENDIX E

WRITTEN COMMENTS

EPA received these written comments during the public comment period. These have been summarized in Sections 4.0 and 5.0 of the Responsiveness Summary. EPA's responses to the written comments are also included in Sections 4.0 and 5.0.

July 12, 1997

This is my Draft response to EPA about proposed plan for 722 Grand St.

Matthew Schley

I am very pleased that the process is moving along. I am very pleased that the E.P.A. has recommended that my family be permanently relocated.

I and my family are trying to rebuild our lives from crushed dreams. The first year of our dislocation all we tried to do was hold on. We never unpacked many of our belongings until we had been living in our temporary quarters for over a year. There just seemed to be no point. That was the problem there didn't seem to be a point to many things. I had an overwhelming feeling of the uselessness of many activities.

I feel like I live in limbo. A place that where many of the things I took for granted are lost. My sense of control over my destiny, the sense of hope I could give to my family. The senses that my hard work would make a difference in my life. This may all be an illusion anyway but it is an necessary illusion to have a happy and satisfying life. These were taken away. I have struggled mightily with these feeling. I realize they are destructive to my well being I feel as if I am doing better and as the process moves along that there is reason for hope but still I have trouble with everyday things. For some reason I am afraid or avoid opening the mail. I don't like to answer the phone. I expect bad news at any moment. I know these are silly self-indulgent phobias but it is how I feel. Then sometimes I feel hopeful. Reading the report that I will be permanently relocated has given me hope that there is a way out of my situation. But I am also afraid to hope so much is unknown.

My son as a class assignment made a map of his brain. I was at his school one day picking him up and these brain maps of all the kids in his class were hanging on the walls outside the classroom. They were very colorful. They had things in them like parents, friends, toys, sports. I then came to my sons map. He had many of these things in his map in bright colors but at least a third of his map was colored in grey and had written acrossed it mercury building. That broke my heart! Maybe one day it won't be such a big part of his consciousness and he can think of other things. That is the day I wait for. So I beg you to speed this process along. And to make clear to us not only that we will be permanently relocated but when will this happen. Until I am in a permanent home I feel like a stranger, lost unwelcome in my own skin.

Corinne Mulrenan
600 Hudson Street, Apt. 1D
Hoboken, NJ 07030

John Hansen
Remedial Project Manager
US Environmental Protection Agency
290 Broadway, 19th Floor
New York, NY 10007-1866

July 16, 1997

Dear John:

First off, I'd like to thank the E.P.A. for "being there" during the most tragic event of my life...I don't dare imagine what the experience would be like without their assistance, their kindness and compassion, and their willingness to talk, share information and answer all of my questions.

The individuals who built 722 GRAND STREET had all started creating it in their imaginations years before the Partnership was born. We're the type of people who consider our homes sanctuaries where we are able to pursue our personal, professional and artistic goals...a space that will grow with us...meet our needs perhaps for the rest of our lives. (Michael and I are not fond of moving, but this past year, we have moved three times...it really sucks the life out of you!)

Michael (Solter) and I wanted to create the ideal home in which we could have enough room to raise our family, have real studio space so I could develop my business and be in Hoboken, a city we have collectively lived in for forty years...we like it here a lot...Actually realizing that goal was at that point, the most fulfilling achievement of my life and I'm certain Michael would agree. To lose it so abruptly was overwhelming, devastating and surreal...It is truly bizarre to feel all the control you have over your life quickly slip away.

We had to delay pregnancy for six months so that the mercury would leave my body. Thankfully, I became pregnant last summer and Maxwell was born in March, 1997...now HE is the greatest achievement of our lives. At nearly 38 years old I cannot help but wonder if we will decide to have another child, - a sister or brother for Max...the proverbial clock is ticking. When Michael and I discuss this we both agree that we could not handle the responsibility of a second child if this situation is not resolved and we must continue to live in temporary relocation with our futures in limbo. This is an ongoing stressful ordeal that seems to require large amounts of energy, just as children do...we're not sure we have enough of what it will take.

I am asking the E.P.A. to make one of the most important decisions of MY life...Please follow through with your recommendation to remove the contaminated building and permanently relocate my family and my neighbors as quickly as possible. Time is a precious commodity that cannot be replaced...This project and it's tragic aftermath has already cost Michael and I nearly five years of our lives. Our future is (literally) in your hands.

Michael Solter
600 Huson Street, Apt. 1D
Hoboken, NJ 07030

John Hansen
Remedial Project Manager
US Environmental Protection Agency
290 Broadway, 19th Floor
New York, NY 10007-1866

July 13, 1997

Dear John:

First and foremost, I want to thank the EPA for being there to provide temporary shelter in our time of desperate need. Without the temporary relocation assistance, we would have been out on the street. Nonetheless, we are not in the homes that we built to live the rest of our lives. Now, as much as I would like to go back, it has been demonstrated to me that this building can not be made safe for our family. I therefore strongly urge the US EPA to adopt their recommendation to permanently relocate the former residents of 722 Grand Street.

I never knew what depression really meant until the loss of our homes became a reality. This has triggered feelings in me that I didn't know were possible. In the initial weeks of the crisis time, I couldn't sleep, I couldn't eat, I hardly could work. Since then it gotten less severe, but is still there. One aspect is the uncertainty of our future health. But really the main contributor is uncertainty over our future living/working situation.

From the time we first got involved with the project in Feb., 1993, until we closed on our mortgage in 1995, we lived under the specter of not being able to complete the project. This uncertainty caused stress in us because it was such a risky proposition from the beginning. Two years may not sound like a lot of time, but it is a long time to have to worry about the same thing - getting the building done and closing on a mortgage to finance it. However, we knew that the payoff was huge and that made the stress manageable. We chose the path that we took and I could live with it. We did not choose to be evacuated from our homes. I am having a very hard time with the fact that the struggle is not over and that it may be years before we can recreate an environment similar to what we had, if we can do it at all. That is depressing.

In addition, one of the most depressing aspect of our situation is when people ask if we are back in the building. Most people don't understand that the building is beyond cleaning and we will not be going back. They don't realize it, and it pours salt on the wound every time. Before we moved in to 722 Grand Street, people would ask us all the time "so, aren't you in there, yet?!!" And we would have to say, "no, maybe a few more months..." After we moved in, it was such a pleasure to be able to say, "yes!, we're there. Would you like to come see it!" Now, we are saying, "no, we're never going back and we have no idea how long it will take before we to do it again." That is VERY depressing - not knowing if we will get the funds to re-build, and not knowing how long it may take to get the money. This is a very real concern, because our building was unique in the town of Hoboken. It was the only approved live/work condominium available and some of the largest. You simply can not buy places like these, you have to create them.

Please look at the photographs included with this letter. What you see is a glimpse of what our space looked like before and what we accomplished. Please review the list of attributes (attached) of the building in general and of our unit specifically. Clearly you can see we designed and built our space to accommodate our specific needs and to last for the long haul. Everything was done with the thought of living there the rest of our lives.

Although we will never get back all of the time an sweat we put into 722 Grand Street, we do have hope that we will be able to build a living/working situation again that will have enough room to raise a family - in Hoboken. The proposed plan by the EPA is perhaps the first step towards that end. This can not happen soon enough. I urge the EPA adopt the proposed plan to permanently relocate the former residents of 722 Grand

Street as quickly as humanly possible.

not just about cleaning up abandoned, forgotten toxic waste sites in the middle of nowhere. It is also about protecting the health, safety and sanity of Americans who find themselves in the middle of an environmental nightmare they never anticipated.

I look forward to working closely with you on the clean up of this site and on the relocation of the former residents.

Sincerely,

Statement of the General Electric Company
Public Hearing for Proposed Plan
Grand Street Artists Site, Hoboken, NJ
July 16, 1997

Thank you for the opportunity to present the views of the General Electric Company on the proposed remedy for the Grand Street Artists Partnership property. My name is Jane Gardner. I am Manager and Counsel for GE's Environmental Remediation Program.

I have been involved with this situation since GE was first notified by the residents in early January, 1996. For those of you who don't remember what was going on at that time, the Northeast was being hit with one of the worst blizzards in history. The government was virtually shut down with budget problems. We saw on TV a report that 17 families were being evicted from their homes due to mercury contamination. Shortly thereafter, we received a letter from the residents' lawyers asking for assistance from GE. We met throughout the weekend at GE headquarters and came up with a plan to provide money, relocation assistance, and medical assistance to the residents for emergency assistance. We stepped forward and made that offer without any opportunity to investigate the facts.

Since then, we have learned a great deal about the facts that bring us here tonight. We have asked ourselves several key questions. How did these people buy a factory to live in? How did they get to stay? How did EPA pick the remedy that will destroy a functional building, pay back the investors double the ill-advised investments they put into a building, knowing of the mercury problems, ignoring their consultants, and hiding that fact from all who could have helped them prevent the situation which they created? The answers are startling.

They bought a factory. This was an almost 100 year old factory that had been used properly for a factory almost its entire life. GE operated it as a factory, sold it as a factory, and then it was sold and sold again as a factory. During GE's time, it was a clean factory, and by the accounts of neutral observers and its own employees, it was operated safely and cleanly. Even by modern standards, the factory meets the air standards for mercury that the federal government has established as safe for industrial use. It should never have become a residence, and just a modicum of due care at any point along the way by the seller, David

Pascale, or the buyers, would have prevented all the expenses that EPA is proposing today. Tearing down a factory that is safe for use as a factory today is not an appropriate use of the Superfund. Paying relocation expenses to reimburse negligent investment risks are not an appropriate use of the Superfund.

The laws of the State of New Jersey were broken. The Seller, David Pascale, didn't disclose the mercury contamination or historic use of the building, even though he knew of the prior mercury operations because his father, a long time employee of the early years of mercury operations, had told him so, and had even showed him one of the old Cooper Hewitt mercury vapor lamps saved as a family memento. The State has revoked David's ECRA approval to transfer the property, on the grounds that he did not "accurately depict the full type, extent, and magnitude of the contamination." There is an ongoing state criminal investigation of David Pascale's ECRA application.

The original Partners had years of experience in building renovations, and ran numerous other redevelopment projects. They could have prevented all of the current situation by doing just a basic environmental inspection of the factory. According to their consultant, he was not allowed to inspect the building above the basement level. As EPA itself has recognized, when someone buys non-residential property for residential use, they have a heightened duty of due care in investigating the appropriateness of that property for the converted use. The buyers here were told the same thing in writing by their own environmental consultant and were told that the NJDEP was not scrutinizing the case as a sale for conversion to residences. The buyers could have notified the government when they first found mercury in 1993, then again in 1994, then again in 1995, and all throughout that year. They could have rescinded the contract and extricated themselves. They could have followed their consultants' advice and notified the authorities in early 1995, and not encouraged further purchases of units. They could have not voted to conceal the information from authorities as late as November of 1996. Their conduct was unreasonable and neither GE nor any other taxpayer should be asked to bail them out.

GE objects to the proposed remedy as scientifically unsound, inconsistent with the National Contingency Plan (NCP), and an irresponsible, politically motivated waste of taxpayer money. While GE has been unable to review all the documents that indicate EPA's deliberations on this proposed remedy, since EPA has shrouded them in secrecy, the documents which EPA has released show that EPA has ignored the criteria upon which it is obligated to base a remedy selection decision, has "stretched the law" for the residents in the words of the former residents themselves, and has turned Superfund on its head in order to accommodate those who created the very problems. EPA now wants to fix.

EPA's remedy decision is not based on sound science. To the contrary, it is based on arbitrary numbers designed to reach a pre-ordained result EPA ignores the federal standards that its sister agencies have set for workplace exposure. Two government agencies have set two different exposure numbers for worker exposure to mercury. The Occupational Safety and Health Agency (OSHA) has set a standard of 100 ug/m³; the National Institute for the Occupational Safety and Health (NIOSH) has set a standard of 50. A private group, the American Council of Governmental Industrial Hygienists (ACGIH), recommends a standard of 25. Without citing any appropriate or relevant basis, EPA here says 0.44, which is 56x times lower than the lowest level the U.S. Government says is safe for workers who work with mercury every day. EPA picked this number by taking the lowest of the three published standards, the only one not set by the government itself, and then arbitrarily cut it by 90%. It then took the remaining 10% of the lowest standard, and cut it arbitrarily 67%, and finally took that number and cut it almost another 47%, by assuming that each worker is breathing in double the amount of air for 8 hours a day than you and I breathe. It's calculations are unsupportable and bad science.

As a 123-year-old company founded by Thomas Edison, GE has considerable expertise in safely operating mercury lighting factories. GE believes that the building can and should be returned to productive use as a commercial or industrial building, it can be readily and safely remediated to industrial use, consistent with the Administration's long standing support of Brownfields redevelopment. Since the building can be safely re-utilized, EPA exceeds its authority, by demolishing a safe factory. GE has offered, numerous times, to remediate the factory to ensure safe levels for future industrial use. We continue to stand by that offer.

We ask EPA to reconsider its decision to demolish a building that can be readily returned to safe and beneficial use. GE will abide by its environmental responsibility under the law, however, ask the EPA held

accountable those who are responsible for the imprudent conversion of this factory in determining who should pay if the proposed remedy goes forward. GE proposes that EPA submit this proposed plan to the National Remedy Review Board or a panel of independent experts to review the science of this decision. We are not afraid of a fair or impartial process. We ask EPA to administer the Superfund program, as it is mandated to do by Congress, in a fair, scientifically sound, and impartial way.

Thank you.

ROBERT G. TORRICELLI
NEW JERSEY

WASHINGTON OFFICE
202-224-3224

United States Senate
Washington, DC 20510-3003

July 16, 1997

Mr. John Hansen,
Remedial Project Manager USEPA-Region II
Emergency and Remedial Response Division
290 Broadway 19th Floor
New York, New York 10007-1866

Dear Mr. Hansen,

I am writing to offer my support on behalf of the residents of 722 Grand Street Hoboken, New Jersey and the proposed remediation plan for the site. I would urge that you pursue all viable options, so that this matter is resolved quickly and effectively. It is imperative that the needs of the residents of this building remain first and foremost.

I concur with your agency's recommendation that the site be placed on the Superfund National Priorities List as an emergency site and I will work to ensure that this recommendation is implemented. I would also urge the Environmental Protection Agency (EPA), formally adopt the proposed plan. Clearly the residents cannot return to the site, it must be demolished and appropriately disposed of.

I must commend the EPA for the cooperation and willingness that it has demonstrated in working with the residents of the building and local government to ensure that the best interests of the residents and the community are protected. The on-going communication and support has been encouraging. It is imperative that this support continue as the permanent relocation plan proceeds. It is essential that the owners secure a fair settlement and remuneration for their losses. The proposed plan appears to be the most protective of human health and the environment and will ensure that this devastating problem is finally resolved.

I will work to support your efforts and will continue to monitor the status of the clean-up. I am hopeful that this most unfortunate situation will be resolved quickly and effectively.

Statement of the Hon. Robert Menendez on the Proposed Plan for 722 Grand Street, Hoboken

There are a few events which define the essence of the law and illustrate the nature of our social compact. We are present here in Hoboken at such an event. Our primary concern is the relocation of the prior residents of this building and the plan for remediation of the building and soil on Grand Street. But looming behind this human tragedy are powerful forces seeking to permanently alter the nature of the Superfund law. These Forces are plotting to destroy the very fabric of protection for our citizens and greatly weaken the safeguards against contamination each one of us has come to expect. This week there will be attempts in Congress to cut \$650 million and cripple the Superfund program.

Superfund has been under severe criticism from special interests who seek to shift the cost of chemical contamination from those who have profited from pollution to the general taxpayer or in this case even the victims. The criticisms of the Superfund program include: cleanups take too long, cost too much, require too much clean up, charges of speculative science and liability that is too strict.

22 Grand Street is the reason for Superfund. It is a tale of a creeping insidious terror that grew to horrid proportions. For several months residents did not know what they were facing. Local officials quickly found the problem was beyond their resources and turned to the US EPA. In the midst of a severe snow storm and a

general federal shut down, the EPA Superfund attacked the problem and got the residents out.

Here is what we know about this site. It was used until 1950 as a factory for making mercury vapor lamps. There appears to be one primary responsible party. There was no use of mercury after 1950.

This is not an abstract case of contaminated soil, ground water contamination or threat to the food chain. People have been contaminated -- contaminated severely, 31 people associated with the building were examined. Twenty urine samples had mercury concentrations equal to or greater than 20 micrograms per liter. 28 micrograms per liter is the upper limit of background concentration for mercury in adults. Residents had five times the baseline risk assessment for mercury exposure.

This is not fear mongering. I am worried about constituents. They are innocent victims. They did nothing to knowingly place themselves in harm's way. There was a time bomb waiting in their home. It is a poison that we have known about since antiquity. It has invaded their bodies and we know who put it there. Who should make this right? They have no homes. Their lives' investments were permanently taken from them. What are the long term effects of this on our fellow citizens?

I want the constituents made whole. I want their lives returned to normal. I want the nightmare ended, for them and I want justice for the residents, the public and their environment. Thank you for giving me the opportunity to present my views.

REMARKS FOR ASSEMBLYMAN LOUIS ROMANO
RE: MERCURY CONTAMINATED CONDOMINIUMS
PUBLIC MEETING
JULY 16, 1997
HOBOKEN HIGH SCHOOL

LADIES AND GENTLEMEN, I WELCOME YOU HERE THIS EVENING AND ASK THAT YOU FEEL FREE TO VOICE YOUR CONCERNS ABOUT THE UNFORTUNATE, TRYING SITUATION IN WHICH THE FORMER RESIDENTS OF THE "MERCURY CONDOS" FIND THEMSELVES.

OVER A YEAR AGO, SIXTEEN FAMILIES WERE FORCED OUT OF THE BUILDING THEY CALLED HOME, AFTER A HIGH CONCENTRATION OF MERCURY WAS DISCOVERED. THIS BUILDING HAS APPARENTLY HARBORED THIS CONTAMINATION FOR YEARS, HOWEVER, IT ONLY BECAME APPARENT DURING THE RENOVATION OF CERTAIN APARTMENTS IN JANUARY OF 1995.

IT HAS BEEN DETERMINED THAT THE BUILDING WAS A FORMER INDUSTRIAL SITE AND THE LOCATION A HOME FOR MANY BUSINESSES, BEFORE IT WAS PURCHASED IN 1993 BY THE GRAND STREET ARTISTS PARTNERSHIP DURING THESE RENOVATIONS.

IT IS NOT MY PURPOSE TO QUESTION HOW THESE RESIDENTS WERE ALLOWED TO MOVE INTO A BUILDING OF THIS NATURE. MORE IMPORTANTLY, IT WAS ULTIMATELY DISCOVERED AND DOCUMENTED THAT MERCURY VAPORS HAVE PERMEATED THE AIR, CAUSING SEVERAL RESIDENTS TO EXPERIENCE MERCURY LEVEL IN THEIR URINE.

FAMILIES WILL FINALLY BE PUT ON THE FINAL ROAD TO RECOVERY. ALSO, I MIGHT ADD THAT I HAVE INTRODUCED LEGISLATION THAT WILL PREVENT THIS TYPE OF THING FROM EVER HAPPENING AGAIN. MY BILL WILL REQUIRE ANY PERSON WHO CONSTRUCTS NEW RESIDENTIAL HOUSING ON ANY PROPERTY THAT WAS PREVIOUSLY USED AS AN INDUSTRIAL ESTABLISHMENT, TO INVESTIGATE THE PROPERTY AND MAKE SURE THAT NO HAZARDOUS CONTAMINANTS EXIST.

THANK YOU FOR YOUR INDULGENCE IN ALLOWING ME TO EXPRESS MY VIEWS THIS EVENING.

ASSEMBLY, No. 1886

STATE OF NEW JERSEY

INTRODUCED MAY 6, 1996

By Assemblymen ROMANO and GARCIA

1 AN ACT concerning residential housing development, supplementing
2 P.L. 1975, c.217 (C.52:27D-119 et seq.) and amending P.L. 1993,
3 c.139.

4
5 BE IT ENACTED by the Senate and General Assembly of the State
6 of New Jersey:

7
8 1. (New section) a. No person shall construct new residential
9 housing on any property that at any time was used as an industrial
10 establishment unless that person, prior to the construction, conducts
11 a preliminary assessment, and, if necessary, a site investigation to
12 determine if contamination exists at the property, including the
13 building interior, at levels in excess of the applicable remediation
14 standards as established pursuant to P.L. 1993, c.139 (C.58:10B-1 et
15 seq.). If levels of contamination are found that exceed the applicable
16 remediation standards, then the property owner shall remediate the
17 property.

18 b. No permit shall be issued pursuant to section 12 of P.L. 1975,
19 c.217 (C.52:27D-130) for new residential housing on any property
20 that at any time was used as an industrial establishment until the
21 property owner certifies that either no contamination exists at the
22 property, including the building interior, in excess of the applicable
23 remediation standards as established pursuant to P.L. 1993, c.139
24 (C.58:10B-1 et seq.) or that any contaminated site has been
25 remediated to meet all applicable standards as established pursuant to
26 P.L. 1993, c.139.

27 c. As used in this section:

28 "Contamination," "preliminary assessment," "site investigation,"
29 and "remediation" shall have the same meaning as in section 24 of
30 P.L. 1993, c.139 (C.58:10B-1).

31 "Industrial establishment" shall have the same meaning as in
32 section 3 of P.L. 1983, c.330 (C.13:1K-8).

33
34 2. Section 23 of P.L. 1993, c.139 (C.58:10B-1) is amended to read

EXPLANATION - Matter enclosed in bold-faced brackets [thus] to the above bill is not enacted and intended to be omitted in the law.

Matter underlined thus is new matter.

1 as follows:

2 23. As used in sections 23 through 43 of P.L. 1993, c.139
3 (C.58:10B-1 et seq.):

4 "Area of concern" means any location where contaminants are or
5 were known or suspected to have been discharged, generated,
6 manufactured, refined, transported, stored, handled, treated, or
7 disposed, or where contaminants have or may have migrated;

8 "Authority" means the New Jersey Economic Development
9 Authority established pursuant to P.L. 1974, c.80 (C.34:1B-1 et seq.);

10 "Contamination" or "contaminant" means any discharged hazardous
11 substance as defined pursuant to section 3 of P.L. 1976, c.141
12 (C.58:10-23.11b), hazardous waste as defined pursuant to section 1 of
13 P.L. 1976, c.99 (C.13:1E-38), or pollutant as defined pursuant to
14 section 3 of P.L. 1977, c.74 (C.58:10A-3);

15 "Department" means the Department of Environmental Protection
16 [and Energy];

17 "Discharge" means an intentional or unintentional action or
18 omission resulting in the releasing, spilling, leaking, pumping,
19 pouring, emitting, emptying, or dumping of a contaminant onto the
20 land or into the waters of the State or into a building in this State;

21 "Engineering controls" means any mechanism to contain or
22 stabilize contamination or ensure the effectiveness of a remedial
23 action. Engineering controls may include, without limitation, caps,
24 covers, dikes, trenches, leachate collection systems, signs, fences and
25 access controls;

26 "Financial assistance" means loans or loan guarantees;

27 "Institutional controls" means a mechanism used to limit human
28 activities at or near a contaminated site, or to ensure the effectiveness
29 of the remedial action over time, when contaminants remain at a
30 contaminated site in levels or concentrations above the applicable
31 remediation standard that would allow unrestricted use of that
32 property. Institutional controls may include, without limitation,
33 structure, land, and natural resource use restrictions, well restriction
34 areas, and deed notices;

35 "No further action letter" means a written determination by the
36 department that based upon an evaluation of the historical use of a
37 particular site, or of an area of concern or areas of concern at that site,
38 as applicable, and any other investigation or action the department
39 deems necessary, there are no discharged contaminants present at the
40 site, at the area of concern or areas of concern, at any other site to
41 which a discharge originating at the site has migrated, or that any
42 discharged contaminants present at the site or that have migrated from
43 the site have been remediated in accordance with applicable
44 remediation regulations;

45 "Preliminary assessment" means the first phase in the process of
46 identifying areas of concern and determining whether contaminants

1 an or were present at a site or have migrated or are migrating from a
2 site, and shall include the initial search for and evaluation of, existing
3 site specific operational and environmental information, both current
4 and historic, to determine if further investigation concerning the
5 documented, alleged, suspected or latent discharge of any contaminant
6 is required. The evaluation of historic information shall be conducted
7 from 1932 to present, except that the department may require the
8 search for and evaluation of additional information relating to
9 ownership and use of the site prior to 1932 if such information is
10 available through diligent inquiry of the public records;

11 "Remedial action" means those actions taken at a site or offsite if
12 a contaminant has migrated or is migrating therefrom, as may be
13 required by the department, including the removal, treatment,
14 containment, transportation, securing, or other engineering or
15 treatment measures, whether of a permanent nature or otherwise,
16 designed to ensure that any discharged contaminant at the site or that
17 has migrated or is migrating from the site, is remediated in
18 compliance with the applicable remediation standards;

19 "Remedial investigation" means a process to determine the nature
20 and extent of a discharge of a contaminant at a site or a discharge of
21 a contaminant that has migrated or is migrating from the site and the
22 problems presented by a discharge, and may include data collected,
23 site characterization, sampling, monitoring, and the gathering of any
24 other sufficient and relevant information necessary to determine the
25 necessity for remedial action and to support the evaluation of remedial
26 actions if necessary;

27 "Remediation" or "remediate" means all necessary actions to
28 investigate and clean up any known, suspected, or threatened
29 discharge of contaminants, including, as necessary, the preliminary
30 assessment, site investigation, remedial investigation, and remedial
31 action;

32 "Site investigation" means the collection and evaluation of data
33 adequate to determine whether or not discharged contaminants exist
34 at a site or have migrated or are migrating from the site at levels in
35 excess of the applicable remediation standards. A site investigation
36 shall be developed based upon the information collected pursuant to
37 the preliminary assessment;

38 "Remedial action workplan" means a plan for the remedial action
39 to be undertaken at a site, or at any area to which a discharge
40 originating at a site is migrating or has migrated, a description of the
41 remedial action to be used to remediate a site; a time schedule and
42 cost estimate of the implementation of the remedial action; and any
43 other information the department deems necessary;

44 "Remediation fund" means the Hazardous Discharge Site
45 Remediation Fund established pursuant to section 26 of P.L. 1993,
46 c.139 (C-58:10B-4);

1 "Remediation funding source" means the methods of financing the
2 remediation of a discharge required to be established by a person
3 performing the remediation pursuant to section 25 of P.L. 1993, c. 139
4 (C.58:10B-3);

5 "Remediation standards" means the combination of numeric and
6 narrative standards to which contaminants must be remediated for
7 soil, building interiors, groundwater, or surface water as provided by
8 the department pursuant to section 35 of P.L. 1993, c.139
9 (C.58:10B-12). (cf:P.L. 1993, c.139, s.23)

10
11 3. Section 35 of P.L. 1993, c.139(C.58:10B-12)is amended to read
12 as follows:

13 35. a. The Department of Environmental Protection [and Energy]
14 shall adopt minimum remediation standards for soil, building
15 interiors, groundwater, and surface water quality necessary for the
16 remediation of contamination of real property. The remediation
17 standards shall be developed to ensure that the potential for harm to
18 public health and safety and to the environment is minimized to
19 acceptable levels, taking into consideration the location, the
20 surroundings, the intended use of the property, the potential exposure
21 to the discharge, and the surrounding ambient conditions, whether
22 naturally occurring or man-made.

23 Until the minimum remediation standards for the protection of
24 public health and safety as described herein are adopted, the
25 department shall apply public health and safety remediation standards
26 for contamination at a site on a case-by-case basis based upon the
27 considerations and criteria enumerated in this section.

28 The department shall not propose or adopt remediation standards
29 protective of the environment pursuant to this section, except
30 standards for groundwater or surface water, until recommendations
31 are made by the Environment Advisory Task Force created pursuant
32 to section 37 of P.L. 1993, c. 199. Until the Environment Advisory
33 Task Force issues its recommendations and the department adopts
34 remediation standards protective of the environment as required by
35 this section, the department shall continue to determine the need for
36 and the application of remediation standards protective of the
37 environment on a case-by-case basis in accordance with the guidance
38 and regulations of the United States Environmental Protection Agency
39 pursuant to the "Comprehensive Environmental Response,
40 Compensation and Liability Act of 1980," 42 U.S.C. §9601 et seq. and
41 other statutory authorities as applicable.

42 b. In developing minimum remediation standards the department
43 shall:

44 (1) base the standards on generally accepted and peer reviewed
45 scientific evidence or methodologies;

46 (2) base the standards upon reasonable assumptions of exposure

1 scenarios as to amounts of contaminants to which humans or other
2 receptors will be exposed, when and where those exposures will
3 occur, and the amount of that exposure;

4 (3) avoid the use of redundant conservative assumptions. The
5 department shall avoid the use of redundant conservative assumptions
6 by the use of parameters that provide an adequate margin of safety and
7 which avoid the use of unrealistic conservative exposure parameters
8 and which guidelines make use of the guidance and regulations for
9 exposure assessment developed by the United States Environmental
10 Protection Agency pursuant to the "Comprehensive Environmental
11 Response, Compensation, and Liability Act of 1980," 42 U.S.C.
12 §9601 et seq. and other statutory authorities as applicable; and

13 (4) where feasible, establish the remediation standards as numeric
14 or narrative standards setting forth acceptable levels or concentrations
15 for particular contaminants.

16 c. (1) The department shall develop residential and nonresidential
17 soil remediation standards that are protective of public health and
18 safety. For contaminants that are mobile and transportable to
19 groundwater the residential and nonresidential soil remediation
20 standards shall be protective of groundwater and surface water.
21 Residential soil remediation standards shall be set at levels or
22 concentrations of contamination for real property based upon the use
23 of that property for residential or similar uses and which will allow
24 the unrestricted use of that property without exceeding a health risk
25 level greater than that provided in subsection d. of this section.
26 Nonresidential soil remediation standards shall be set at levels or
27 concentrations of contaminants that recognize the lower likelihood of
28 exposure to contamination on property that will not be used for
29 residential or similar uses. Whenever real property is remediated to a
30 nonresidential soil remediation standard, except as otherwise provided
31 in paragraph (3) of subsection g. of this section, the department shall
32 require, pursuant to section 36 of P.L. 1993, c.139 (C.58, 10B-13) that
33 the use of the property be restricted to nonresidential or other uses
34 compatible with the extent of the contamination of the soil and that
35 access to that site be restricted in a manner compatible with the
36 allowable use of that property.

37 (2) The department may develop differential remediation standards
38 for surface water or groundwater that take into account the current,
39 planned, or potential use of that water in accordance with the "Clean
40 Water Act" (33 U.S.C. §1251 et seq.) and the "Water Pollution
41 Control Act," P.L. 1977, c.74(C.58:10A-1 et seq.).

42 (3) The department shall develop residential and nonresidential
43 building interior remediation standards that are protective of public
44 health and safety. Residential building interior remediation standards
45 shall be set at levels or concentrations of contamination for real
46 property based upon the use of that property for residential or similar

1 uses and which will allow the unrestricted use of that property without
2 exceeding a health risk level greater than that provided in subsection
3 d. of this section. Nonresidential building interior standards shall be
4 set at levels or concentrations of contaminants that recognize the
5 lower likelihood of exposure to contamination on property that will
6 not be used for residential or similar uses. Whenever real property is
7 remediated to a nonresidential building interior remediation standard,
8 except as otherwise provided in paragraph (3) of subsection g. of this
9 section, the department shall require, pursuant to section 36 of
10 P.L. 1993, c.139 (C.58:10B-13), that the use of the property be
11 restricted to nonresidential or other uses compatible with the extent
12 of the contamination of the building interior and that access to that
13 site be restricted in a manner compatible with the allowable use of
14 that property.

15 d. In developing minimum remediation standards intended to be
16 protective of public health and safety, the department shall identify
17 the hazards posed by a contaminant to determine whether exposure to
18 that contaminant can cause an increase in the incidence of an adverse
19 health effect and whether the adverse health effect may occur in
20 humans. The department shall set minimum building interior and soil
21 remediation standards for both residential and nonresidential uses
22 that:

23 (1) for human carcinogens, as categorized by the United States
24 Environmental Protection Agency, will result in an additional cancer
25 risk of one in one million;

26 (2) for noncarcinogens, will limit the Hazard Index for any given
27 effect to a value not exceeding one.

28 The health risk levels established in this subsection are for any
29 particular contaminant and not for the cumulative effects of more than
30 one contaminant at a site.

31 e. Remediation standards and other requirements established
32 pursuant to this section shall apply to remediation activities required
33 pursuant to the "Spill Compensation and Control Act," P.L. 1976,
34 c.141 (C.58:10-23.11 et seq.), the "Water Pollution Control Act,"
35 P.L. 1977, c.74 (C.58:10A-1 et seq.), P.L. 1986, c.102 (C.58:10A-21
36 et seq.), the "Industrial Site Recovery Act," P.L. 1983, c.330
37 (C.13:1K-6 et al.), the "Solid Waste Management Act," P.L. 1970, c.39
38 (C.13:1E-1 et seq.), the "Comprehensive Regulated Medical Waste
39 Management Act," P L. 1989, c.34 (C.13:1E-48.1 et seq.), the "Major
40 Hazardous Waste Facilities Siting Act," P.L. 1981, c.279 (C.13:1E-49
41 et seq.), the "Sanitary Landfill Facility Closure and Contingency Fund
42 Act," P.L. 1981, c.306 (C.13:1E-100 et seq.), the "Regional Low-Level
43 Radioactive Waste Disposal Facility Siting Act," P.L. 1987, c.333
44 (C.13:1E-177 et seq.), or any other law or regulation by which the
45 State may compel a person to perform remediation activities on
46 contaminated property. However, nothing in this subsection shall be

1 construed to limit the authority of the department to establish
2 discharge limits for pollutants or to prescribe penalties for violations
3 of those limits pursuant to P.L. 1977, c.74 (C.58:10A-1 et seq.), or to
4 require the complete removal of nonhazardous solid waste pursuant
5 to law.

6 f.(1) A person performing a remediation of contaminated real
7 property, in lieu of using the established minimum soil remediation
8 standard for either residential use or nonresidential use adopted by the
9 department pursuant to subsection c. of this section, may submit to the
10 department a request to use an alternative residential use or
11 nonresidential use soil remediation standard. The use of an
12 alternative soil remediation standard shall be based upon site specific
13 factors which may include (1) physical site characteristics which may
14 vary from those used by the department in the development of the soil
15 remediation standards adopted pursuant to this section; or (2) a site
16 specific risk assessment. If a person performing a remediation
17 requests to use an alternative soil remediation standard based upon a
18 site specific risk assessment, that person shall demonstrate to the
19 department that the requested deviation from the risk assessment
20 protocol used by the department in the development of soil
21 remediation standards pursuant to this section is consistent with the
22 guidance and regulations for exposure assessment developed by the
23 United States Environmental Protection Agency pursuant to the
24 "Comprehensive Environmental Response, Compensation, and
25 Liability Act of 1980," 42 U.S.C. 9601 et seq. and other statutory
26 authorities as applicable. A site specific risk assessment may consider
27 exposure scenarios and assumptions that take into account the form
28 of the contaminant present, natural biodegradation, fate and transport
29 of the contaminant, and available toxicological data that are based
30 upon generally accepted and peer reviewed scientific evidence or
31 methodologies.

32 Upon a determination by the department that the requested
33 alternative remediation standard is protective of public health and
34 safety, as established in subsection d. of this section, and protective
35 of the environment pursuant to subsection a. of this section, the
36 alternative residential use or nonresidential use soil remediation
37 standard shall be approved by the department.

38 (2) The department may, upon its own initiative, require an
39 alternative remediation standard for a particular contaminant for a
40 specific real property site, in lieu of using the established minimum
41 residential use or nonresidential use soil remediation standard adopted
42 by the department for a particular contaminant pursuant to this
43 section. The department may require an alternative remediation
44 standard pursuant to this paragraph upon a determination by the
45 department, based on the weight of the scientific evidence, that due
46 to specific physical site characteristics of the subject real property, the

1 use of the adopted residential use or nonresidential use soil
2 remediation standards would not be protective of public health or
3 safety or of the environment, as appropriate.

4 g. The development, selection, and implementation of any
5 remediation standard or remedial action shall ensure that it is
6 protective of public health, safety, and the environment, as applicable,
7 as provided in this section. In determining, the appropriate remedial
8 action that shall occur at a site in order to meet the established
9 remediation standards, the department, or any person performing the
10 remediation, shall base its decision on the following factors:

11 (1) Permanent and nonpermanent remedies shall be allowed except
12 that permanent remedies shall be preferred over nonpermanent
13 remedies for remedial actions;

14 (2) Contamination may, upon the department's approval, be left
15 onsite at levels or concentrations that exceed the minimum building
16 interior or soil remediation standards for residential use or
17 nonresidential use if the implementation of institutional or
18 engineering controls at that site will result in the protection of public
19 health, safety and the environment at the risk level established in
20 subsection d. of this section and if the requirements established in
21 subsections a., b., c. and d. of section 36 of P.L. 1993, c.139
22 (C-58:10B-13) are met;

23 (3) Real property on which there is soil or a building interior that
24 has not been remediated to the residential building interior or soil
25 remediation standards, or real property on which the building interior,
26 soil, groundwater, or surface water has been remediated to meet the
27 required health risk level by the use of engineering or institutional
28 controls, may be developed or used for residential purposes, or for any
29 other similar purpose, if (a) all areas of that real property or within a
30 building interior at which a person may come into contact with the
31 building interior or with soil are remediated to meet the residential
32 building interior or soil remediation standards and (b) it is clearly
33 demonstrated that for all areas of the real property, other than those
34 described in subparagraph (a) above, engineering and institutional
35 controls can be implemented and maintained on the real property
36 sufficient to meet the health risk level as established in subsection d.
37 of this section;

38 (4) Remediation shall not be required beyond the regional natural
39 background levels for any particular contaminant. The department
40 shall develop regulations that set forth a process to identify
41 background levels of contaminants for a particular region. For the
42 purpose of this paragraph "regional natural background levels" means
43 the concentration of a contaminant consistently present in the
44 environment of the region of the site and which has not been
45 influenced by localized human activities;

46 (5) Remediation shall not be required of the owner or operator of

1 real property for contamination coming onto the site from another
2 property owned and operated by another person, unless the owner or
3 operator is in any way responsible for the discharge;

4 (6) Groundwater that is contaminated shall not be required to be
5 remediated to a level or concentration for any particular contaminant
6 lower than the level or concentration that is migrating onto the
7 property from another property owned and operated by another
8 person;

9 (7) The technical performance, effectiveness and reliability of the
10 proposed remedial action in attaining and maintaining compliance
11 with applicable remediation standards and required health risk levels.
12 In reviewing a proposed remedial action, the department shall also
13 consider the ability of the owner or operator to implement the
14 proposed remedial action within a reasonable time frame without
15 jeopardizing public health, safety or the environment;

16 (8) In the case of a proposed remedial action that will not meet the
17 established minimum residential use soil remediation standards, the
18 cost of all available permanent remedies is unreasonable, as
19 determined by department rules designed to provide a cost-based
20 preference for the use of permanent remedies. The department shall
21 adopt regulations, no later than 18 months after the effective date of
22 this act, establishing criteria and procedures for allowing a person to
23 demonstrate that the cost of all available permanent remedies is
24 unreasonable. Until the department adopts those regulations, it shall
25 not require a person performing a remedial action to implement a
26 permanent remedy, unless the cost of implementing a nonpermanent
27 remedy is 50 percent or more than the cost of implementing a
28 permanent remedy; provided, however, that the preceding provision
29 shall not apply to any owner or operator of an industrial establishment
30 who is implementing a remedial action pursuant to subsection i. of
31 section 4 of P.L. 1983, c.330;

32 (9) The use of the established residential building interior or
33 soil remediation standard shall not be unreasonably disapproved by
34 the department.

35 The department may require the person performing the remediation
36 to supply the information required pursuant to this subsection as is
37 necessary for the department to make a determination.

38 h. (1) The department shall adopt regulations which establish a
39 procedure for a person to demonstrate that a particular parcel of land
40 contains large quantities of historical fill material. Upon a
41 determination by the department that large quantities of historic fill
42 material exist on that parcel of land, there is a rebuttable presumption
43 that the department shall not require any person to remove or treat the
44 fill material in order to comply with a remediation standard. In these
45 areas the department shall establish by regulation the requirement for
46 engineering or institutional controls that are designed to prevent

1 exposure of these contaminants to humans, that allow for the
2 continued use of the property, that are less costly than removal of
3 treatment, which maintain the health risk levels as established in
4 subsection d. of this section, and, as applicable, are protective of the
5 environment. The department may rebut the presumption only upon
6 a finding by the preponderance of the evidence that the use of
7 engineering or institutional controls would not be effective in
8 protecting public health, safety, and the environment. For the
9 purposes of this paragraph "historic fill material" means generally
10 large volumes of non-indigenous material, used to raise the
11 topographic elevation of a site, which were contaminated prior to
12 emplacement and are in no way connected with the operations at the
13 location of emplacement and which include, but are not limited to,
14 construction debris, dredge spoils, incinerator residue, demolition
15 debris, fly ash, and non-hazardous solid waste. Historic fill material
16 shall not include any material which is substantially chromate
17 chemical production waste or any other chemical production waste or
18 waste from processing of metal or mineral ores, residues, slags or
19 tailings.

20 (2) The department shall develop recommendations for remedial
21 actions in large areas of historic industrial contamination. These
22 recommendations shall be designed to meet the health risk levels
23 established in subsection d. of this section, and to be protective of the
24 environment and shall take into account the industrial history of these
25 sites, the extent of the contamination that may exist, the costs of
26 remedial actions, the economic impacts of these policies, and the
27 anticipated uses of these properties. The department, within one year
28 of the enactment of this act, shall issue a report to the Senate
29 Environment Committee and to the Assembly Energy and Hazardous
30 Waste Committee, or their successors, explaining these
31 recommendations and making any recommendations for legislative or
32 regulatory action.

33 (3) The department may not, as a condition of allowing the use of
34 a nonresidential use soil remediation standard, or the use of
35 institutional or engineering controls, or where a building interior will
36 not be remediated to meet the residential building interior remediation
37 standards, require the owner of that real property, except as provided
38 in section 36 of P.L. 1993. c.139 (C.58:10B-13), to restrict the use of
39 that property through the filing of a deed easement, covenant, or
40 condition.

41 i. The department may not require a remedial action workplan to
42 be prepared or implemented or engineering or institutional controls
43 to be imposed upon any real property unless sampling performed at
44 that real property demonstrates the existence of contamination above
45 the applicable remediation standards.

46 j. Upon the approval by the department of a remedial action

1 workplan, or similar plan that describes the extent of contamination
2 at a site and the remedial action to be implemented to address that
3 contamination, the department may not subsequently require a change
4 to that workplan or similar plan in order to compel a different
5 remediation standard due to the fact that the established remediation
6 standards have changed; however, the department may compel a
7 different remediation standard if the difference between the new
8 remediation standard and the remediation standard approved in the
9 workplan or other plan differs by an order of magnitude. The
10 limitation to the department's authority to change a workplan or
11 similar plan pursuant to this subsection shall only apply if the
12 workplan or similar plan is being implemented in a reasonable
13 timeframe, as may be indicated in the approved remedial action
14 workplan or similar plan. k. Notwithstanding any other provisions
15 of this section, all remediation standards and remedial actions that
16 involve real property located in the Pinelands area shall be consistent
17 with the provisions of the "Pinelands Protection Act," P.L. 1979, c.111
18 (C.13:18A-1 et seq.), any rules and regulations promulgated pursuant
19 thereto, and with section 502 of the National Parks and Recreation
20 Act of 1978, 16 U.S.C. §4711.

21 1. Upon the adoption of a remediation standard for a particular
22 contaminant in soil, a building interior, groundwater, or surface water
23 pursuant to this section, the department may amend that remediation
24 standard only upon a finding that a new standard is necessary to
25 maintain the health risk levels established in subsection d. of section
26 35 of P.L. 1993, c.139 (C.58:10B-12) or to protect the environment,
27 as applicable. The department may not amend a public health based
28 soil or building interior remediation standard to a level that would
29 result in a health risk level more protective than that provided for in
30 subsection d. of section 35 of P.L. 1993, c.139 (C.58:10B-12).

31 m. Nothing in P.L. 1993, c.139 shall be construed to restrict or in
32 any way diminish the public participation which is otherwise provided
33 under the provisions of the "Spill Compensation and Control Act,"
34 P.L. 1976, c.141 (C.58:10-23.11 et seq.).
35 (cf: P.L. 1993, c.139, s.35)
36

37 4. Section 36 of P.L. 1993, c.139 (C.58:10B-13) is amended to read
38 as follows:

39 36. a. When real property is remediated to a nonresidential
40 building interior or soil remediation standard or engineering or
41 institutional controls are used in lieu of remediating a site to meet an
42 established remediation standard for a building interior, soil,
43 groundwater, or surface water, the department shall, as a condition of
44 the use of that standard or control measure:

45 (1) require the establishment of any engineering or institutional
46 controls the department determines are reasonably necessary to

1 prevent exposure to the contaminants, require maintenance, as
2 necessary, of those controls, and require the restriction of the use of
3 the property in a manner that prevents exposure;

4 (2) require, with the consent of the owner of the real property, the
5 recording with the office of the county recording officer, in the county
6 in which the property is located, a notice to inform prospective
7 holders of an interest in the property that contamination exists on the
8 property at a level that may statutorily restrict certain uses of or access
9 to all or part of that property, a delineation of those restrictions, a
10 description of all specific engineering or institutional controls at the
11 property that exist and that shall be maintained in order to prevent
12 exposure to contaminants remaining on the property, and the written
13 consent to the notice by the owner of the property;

14 (3) require a notice to the governing body of each municipality in
15 which the property is located that contaminants will exist at the
16 property above residential use soil remediation standards or any other
17 remediation standards and specifying the restrictions on the use of or
18 access to all or part of that property and of the specific engineering or
19 institutional controls at the property that exist and that shall be
20 maintained,

21 (4) require, when determined necessary by the department, that
22 signs be posted at any location at the site where access is restricted or
23 in those areas that must be maintained in a prescribed manner, to
24 inform persons on the property that there are restrictions on the use of
25 that property or restrictions on access to any part of the site;

26 (5) require that a list of the restrictions be kept on site for
27 inspection by governmental enforcement officials; and

28 (6) require a person, prior to commencing a remedial action, to
29 notify the governing body of each municipality wherein the property
30 being remediated is located. The notice shall include, but not be
31 limited to, the commencement date for the remedial action; the name,
32 site address and business telephone number of the person
33 implementing the remedial action, or his designated representative,
34 and a brief description of the remedial action.

35 b. If the owner of the real property does not consent to the
36 recording of a notice pursuant to paragraph (2) of subsection a. of this
37 section, the department shall require the use of a residential building
38 interior and soil remediation standard in the remediation of that real
39 property.

40 c. Whenever engineering or institutional controls on property as
41 provided in subsection a. of this section are no longer required, or
42 whenever the engineering or institutional controls are changed
43 because of the performance of subsequent remedial activities, a
44 change in conditions at the site, or the adoption of revised remediation
45 standards, the department shall require that the owner or operator of
46 that property record with the office of the county recording officer a

1 notice that the use of the property is no longer restricted or delineating
2 the new restrictions. The department shall also require that the owner
3 or operator notify, in writing, the municipality in which the property
4 is located of the removal or change of the restrictive use conditions.

5 d. The owner or lessee of any real property, or any person
6 operating a business on real property, which has been remediated to
7 a nonresidential use building interior or soil remediation standard or
8 on which the department has allowed engineering or institutional
9 controls for a building interior, soil, groundwater, or surface water to
10 protect the public health, safety, or the environment, as applicable,
11 shall maintain the engineering or institutional controls as required by
12 the department. An owner, lessee, or operator who takes any action
13 that results in the improper alteration or removal of engineering or
14 institutional controls or who fails to maintain the engineering or
15 institutional controls as required by the department, shall be subject
16 to the penalties and actions set forth in section 22 of P.L. 1976, c.141
17 (C.58:10-23.11u). The provisions of this subsection shall not apply
18 if a notification received pursuant to subsection b. of this section
19 authorizes all restrictions or controls to be removed from the subject
20 property.

21 e. Notwithstanding the provisions of any other law, or any rule,
22 regulation, or order adopted pursuant thereto to the contrary,
23 whenever contamination at a property is remediated in compliance
24 with any building interior, soil, groundwater, or surface water
25 remediation standards that were in effect at the completion of the
26 remediation, the owner or operator of the property or person
27 performing the remediation, except as otherwise provided in this
28 section, shall not be liable for the cost of any additional remediation
29 that may be required by a subsequent adoption by the department of
30 a more stringent remediation standard for a particular contaminant.
31 Upon the adoption of a regulation that amends a remediation standard,
32 only a person who is liable to clean up and remove that contamination
33 pursuant to section 8 of P.L. 1976, c.141 (C-58:10-23.11g) shall be
34 liable for any additional remediation costs necessary to bring the site
35 into compliance with the new remediation standards except that no
36 person shall be so liable unless the difference between the new
37 remediation standard and the level or concentration of a contaminant
38 at the property differs by an order of magnitude.

39 Nothing in the provisions of this subsection shall be construed to
40 affect the authority of the department, pursuant to subsection f. of this
41 section, to require additional remediation on real property where
42 engineering or institutional controls were implemented.

43 Nothing in the provisions of this subsection shall limit the rights
44 of a person, other than the State, or any department or agency thereof,
45 to bring a civil action for damages, contribution, or indemnification
46 as provided by statutory or common law.

1 f. Whenever the department approves or has approved the use of
2 engineering or institutional controls for the remediation of a building
3 interior, soil, groundwater, or surface water, to protect public health,
4 safety or the environment in lieu of remediating a site to a condition
5 that meets an established residential remediation standard, the
6 department shall not require additional remediation of that site unless
7 the engineering or institutional controls no longer are protective of
8 public health, safety, or the environment.
9 (cf: P.L. 1993, c.139, s.36)

10
11 5. This act shall take effect 90 days from enactment.
12

13
14 STATEMENT
15

16 This bill would require any person who constructs new residential
17 housing on any property that has been used as an industrial
18 establishment, to investigate the property to determine if any
19 hazardous contaminants are present at levels in excess of the
20 applicable remediation standards. The Department of Environmental
21 Protection is required to establish the applicable standards.

22 The bill would also require that as a condition for the issuance of
23 the construction permit as required pursuant to the "State Uniform
24 Construction Code Act," P.L. 1975, c.217 (C.52:27D-119 et seq.), the
25 property owner certify either that no contamination exists at the site
26 in excess of the applicable remediation standards or that the site has
27 been remediated.

28
29
30
31
32 Requires investigation and cleanup remediation requirements to be
33 developed for residential housing.

COUNTY OF HUDSON
OFFICE OF THE COUNTY EXECUTIVE
BRENNAN COURT HOUSE
583 NEWARK AVENUE

ROBERT C. JANISZEWSKI JERSEY CITY, NEW JERSEY 07306 (201) 795-6200
COUNTY EXECUTIVE

July 16, 1997

Mr. John Hansen, Regional Project Manager
US EPA-Region II
Emergency and Remedial Response Division
290 Broadway 19th Floor
New York, New York 10007-1866

Dear Mr. Hanson:

Please accept this letter of support for the US EPA's plans and efforts relating to the Grand Street Mercury Superfund site. It is of paramount importance to the health and well-being of Hoboken residents that the US EPA demolish the contaminated building(s) and remediate the polluted site in a safe and timely manner.

I am extremely confident that in permanently relocating the former residents of the Grand Street property, the US EPA will use the utmost care and respect. However, the former residents of the site should be treated as victims in this matter -- for many of them, the sequence of events has amounted to a total loss. I strongly urge the US EPA to provide the owners and their families with the fair-market-value of their properties.

The County of Hudson stands ready to provide any assistance to the former residents of the site, the City of Hoboken and the US EPA. If you have any questions feel free to call me at (201) 795-6200.

c Congressman Robert Menendez
 State Senator Bernard Kenny
 Assemblyman Rudy Garcia
 Assemblyman Louis Romano
 Freeholder Maurice Fitzgibbons
 Mayor Anthony Russo

HOBOKEN TESTIMONY 7/16/97

Michael Gochfeld, MD, PhD

Department of Environmental and Community Medicine
and

Environmental and Occupational Health Sciences Institute

Robert Wood Johnson Medical School

Piscataway, NJ 08855-1179

I am Doctor Michael Gochfeld, Clinical Professor of Environmental and Community Medicine at the Robert Wood Johnson Medical School in Piscataway, New Jersey. I have been on the faculty there since 1980 and have specialized in problems related to lead, mercury and other toxic materials in the environment. Prior to that I directed the Division of Environmental and Occupational Health at the New Jersey Department of Health, and was directly involved in discussions regarding evacuation of residents around several sites. Before that I performed occupational medicine examinations of workers in a number of north Jersey factories that handled various forms of mercury.

With regard to the 722 Grand Street building, our Environmental and Occupational Health Sciences Institute was contacted by the Agency for Toxic Substances and Disease Registry (ATSDR) on December 23, 1995, and Dr. Howard Kipen, Director of our Division of Occupational Medicine participated in a public meeting Building. During January to March 1996, 27 adults from the building were evaluated at our clinical center, mainly by Dr. Iris Udasin, one of our environmental medicine physicians, and Dr. Nancy Fiedler, our clinical psychologist, with regard to medical and neurobehavioral consequences of mercury exposure. This work was supported by ATSDR.

My remarks tonight represent my own medical experience and opinions, but I also represent my colleagues at the Medical School, Drs. Udasin, Fiedler, and Kipen.

We found evidence of mercury-related neurobehavioral impairment in a number of the residents, and overall there was a significant negative correlation between their mercury levels and their performance on tests known to be affected by mercury. In other words, those with the higher mercury levels had reduced muscular coordination in their hands and fingers and showed evidence of a tremor.

Now, nearly 18 months later, we're beginning to re-evaluate the residents to determine how much of their function has returned now that they're no longer exposed to mercury.

In addition to the neurobehavioral performance, Dr. Fiedler tested certain psychological measures which showed a severe level of psychologic distress among most of the residents, in relation to their sudden evacuation from the homes in which they had invested large sums of money as well as many hours. They voiced anger, frustration, and anxiety about their future. Many of the residents tested had clinically significant psychiatric problems resulting from the a combination of the mercury exposure and the need to be evacuated. Their exposure to mercury had resulted in severe disruption and they had lost control of their lives.

Had they not been exposed to very high levels of mercury, they would not have experienced these disruptions and would not be suffering their current distress.

Now 18 months later, still living in temporary quarters, their lives still on hold, their early anxiety was certainly warranted.

Social scientists have studied other populations forced to relocate temporarily or permanently because of flooding, war, or other disasters. Such studies document the scarring effects and the disruption of lives.

Stresses over which people have no control are particularly damaging. In that sense the residents of the Grand Street Building are not unique. But in another sense they ARE unique.

People whose homes are rendered uninhabitable by fire or flood eventually collect insurance and rebuild their homes and lives. The victims of Grand Street mercury, have not been able to do so.

We all suffer various losses in our lives, and we admonish ourselves and others to "get on with your life". The victims of Grand Street mercury have not been able to get on with their lives.

Trapped by forces over which they have no control, the former Grand Street residents, are increasingly vulnerable to psychophysiological damage. Although the actual neurologic consequences of their mercury poisoning may eventually recover, the scarring from having lost control of their lives and being "on hold" for so long, may leave a long-term or even permanent mark.

How long can people be "on hold". Certainly a few months is tolerable, and most of us have experienced such periods, for example between jobs. But the Grand Street victims have been on hold already for 18 months.

It would be totally unrealistic to expect them to simply wait "on hold" for another 18 months, or for the 46 months projected by EPA if they were to re-occupy the building after remediation.

They need rapid and definitive resolution so they can indeed "get on with their lives" and resume control over their future.

Although I have not personally evaluated whether the Grand Street building could be remediated to residential standards, I do know from personal experience here in New Jersey, that Superfund remediations, rarely proceed quickly or smoothly. Often years go by before the remediation even begins. During this period, environmental consultants conduct "remedial investigations and feasibility studies" and environmental engineers set forth remediation alternatives which are then subject to several levels of review at the State and Federal level. Even if all parties were able to expedite the studies and review process, remediation would not begin immediately. The EPA has estimated that remediation would take more than 3 1/2 years. Thus assuming it were to begin immediately, it would mean that the victims would have been living "on hold" for at least five years.

Thus from a Community Medicine point of view, it is entirely inconceivable that the Grand Street residents should be subjected to waiting for remediation.

In addition, for many and perhaps all of the Grand Street victims, the building has become a symbol of what has gone wrong in their lives. If the building were magically rendered habitable overnight and they were required to return, it would be a constant reminder to them of a very unpleasant event and period in their lives. Although we have not studied this for each individual, I strongly believe that it is unrealistic to expect these people to return to this building which, once a source of hope, has become a source of great pain.

I concur with the EPA's decision NOT to remediate this building for residential purposes. If it were remediated the Grand Street victims should not be expected to return there. Most importantly, I urge a rapid resolution of the compensation issue so that these victims can seek appropriate housing and begin pursuing normal lives.

Michael Gochfeld, MD, PhD

Mark Graham
1026 Hudson Street
Hoboken, NJ 07030
201-792-4037

Statement on EPA's Recommendation for
722 Grand Street Mercury Site

I appreciate this opportunity to speak.

My wife and I were introduced to this project in October, 1992, and became actively involved in December of that year. It took the group of us another nine months to successfully purchase 722 Grand Street, and then another two and a half years to see completion on the horizon. It was at that point we discovered we might never reach that horizon, when we discovered that over half of the residents that had just turned themselves inside out on this project had elevated levels of mercury in their bodies.

We succeeded at Grand Street where other groups in the past, including professional developers, had failed: we took an empty building on a half-empty street in a relatively dead section of Hoboken, and self developed it into living units that were legally zoned for artists to work and live, the first, and still the only ones of their kind. Within one week after we received Final Site Plan Approval from the City of Hoboken, real estate signs reading "Lofts for Sale" and "Lofts for Rent" appeared on buildings across both streets from our building. We were the ground breakers in Hoboken, we did it totally on our own, with a tremendous amount of work and a tremendous amount of debt, and we have lost it all, except for the debt.

I have a sense of pride being part of a group that had the courage and the audacity to take on a challenge like this. In this national climate of worshipping the individual, the self-starters, the risk-takers, we are the quintessential group. We were also exceptionally cautious. We insisted on documentation assuring us of the safety of this building for residential use. When we received these written assurances, we felt we were safe. In a broader sense, that sense of safety is gone, forcefully replaced with an underlying distrust and constant stress droning within us. My wife has developed a cardiac arrhythmia, and ten months after the evacuation, I found myself in the hospital with chest pains and elevated blood pressure. My wife was over three months pregnant during the evacuation, and worry for the future of our son's health is relentless.

COMMENT ON THE PROPOSED PLAN BY THE U.S. ENVIRONMENTAL AGENCY FOR THE GRAND STREET MERCURY SITE

I want to make my comments not only on behalf of myself and my wife but on behalf of our partners in what seemed like a wonderful dream. It was a wonderful dream in which we transformed an idle, run down ghost of building into a thriving community of artists and studios. Through our hard work, sacrifice, determination, resourcefulness and stubborn perseverance against great odds we thought we had actually turned this wonderful dream into a very wonderful reality. And we dreamed for this city as well, for the community we wanted to join together with in creating a bright future. We did not dream of the living nightmare this has become for all of us.

We had solved one of the most difficult challenges facing those of us in the arts: how to afford adequate housing that included the studio work space we needed to practice our arts. Our solution was to pool our resources and do it ourselves. We designed our homes and studios in every detail. We had every thing we needed for the rest of our lives - a wonderful home full of air, light and so much space to grow in, to raise families in, as well as the work space we needed to pursue our careers.. Everything was thought out - door sizes to accommodate art works, the elevator size, special fireproofing, electrical wiring and water lines for future needs, gallery space, storage space. We had all this common space on the ground floor and we had planned a community gallery, a space for concerts, performances, and art studios to hold classes for the community. In short we had transformed this mothballed building into a place full of creative life designed to accommodate all our needs present and future, private and professional. Those of you who saw what we had accomplished were amazed and let me tell you so were we! And in doing this we discovered something more: we discovered that yes, everybody dreams of finding themselves in a secure and permanent home of their own, but to build one's own home is the moment in which we got to make one poem, at least, of our lives which expresses us completely.

Many of us were strangers at first who were brought together by this shared dream. Working together, building together, learning to rely on each other, deep friendships were formed. Without realizing it we were building our own small community, an extended family we could depend upon, We looked forward to raising children together. We looked forward to celebrating together, to sharing all the new challenges the future held for us. Now we share the devastation of this tragedy. Our family has been torn apart, we are dispersed and let me tell you we are in pain.

I can't begin to tell you of the emotional devastation, the depression, the loss, the effects from the stress over the past nineteen months. How do you get rid of the horror, the trauma of the way we were forced out of our homes and studios. Being surrounded by police, surveillance helicopters flying overhead, not being able to leave the building with our possessions, being assailed by the press corps, our homes and studios invaded by police and government officials of all stripes, men in "space suits" probing all over the place. We felt humiliated, scared, violated. The stress of our displacement, as well as the exposure we had to this insidious toxin has brought on illness and suffering. The uncertainty of our situation, the limbo we find ourselves in is numbing. It is a daily struggle to face our responsibilities and continue on with our lives as indeed we must.

We can only hope that all the parties who played a part in what has befallen us and this community will come together in a spirit of constructive cooperation to forward the remedy recommended by the Environmental Protection Agency. It has been nineteen months since we were evacuated from our homes. Nineteen months in temporary relocation. That is nineteen months of being in limbo, displaced. That is nineteen months with all our financial resources, our life savings, tied up. Add to that the two and half years we put into creating and building this project - that comes to over four years of our lives already tied up in this!

Now after a year and half of thorough study by the U.S. Environmental Protection Agency a recommendation has been made. They have studied our building, they have studied us. Studied and

China Marks ò 22 Catherine St., 2nd Flr. ò New York, NY 10039 ò (212) 587-3329

STATEMENT FOR PUBLIC MEETING, HOBOKEN HIGH SCHOOL, 7-16-97

My name is China Marks.

In 1979 I moved from Manhattan to Hoboken, where I lived and made art in raw industrial space on the top floor of Hoboken Glass at 805 Clinton Street. Summers I baked and winters I froze. The roof leaked and the rent kept rising. But Hoboken got into my blood, and I couldn't imagine living anywhere else. Besides, without a car, how much farther out in New Jersey could I really go? So when in 1992. I had the chance to join a group of artists developing a building for legal occupancy at 722 Grand St., just a block away from where I was already living I felt very lucky.

It was worth spending most of my savings, attending endless meetings of our group, working extra hours to make more money, calling in favors from everyone I knew, doing a lot of the work myself, going through all the inspections and certifications, putting my drawing and painting on hold for months while I packed up twenty years of art and supplies and disassembled and moved towers of industrial shelving and more--whatever I had to do in order to build an affordable studio of my dreams in the town I already thought of as "home."

In the process of building our lofts, we also created a marvelous community of artists and friends. The city benefitted more than culturally: the apparent success of our project produced substantial property taxes and contributed to the development of the west side of Hoboken.

Because in the renovation of 722 Grand we complied with every regulatory and environmental requirement and because I felt so safe and happy there, it was hard to believe that anything serious could be wrong. In the desperately painful and difficult year and a half of exile since we were ordered out, I've learned otherwise--that mercury saturates our building, top to bottom, and the soil around it.

I support the EPA's proposal to permanently relocate us and to demolish the building safely. Hoboken must be made free of contamination by mercury. And if I can't go home, then give me what I need to begin again.

July 16, 1997

John Hansen
Remedial Project Manager
U.S. Environmental Protection Agency
290 Broadway 19th floor
New York, NY 10007-1866

Dear John Hansen,

I am glad to have read your report, which is both thorough and explicit about the options researched by the EPA to solve the hazard of my former home, the mercury contaminated site at 722 Grand Street. The recommendation to demolish the building and remove it and it's soil from the Hoboken community is truly the only safe and sane solution. The recommendation to grant myself and the other families permanent relocation is a welcome light at the end of our tunnel. Both these recommendations will help to heal this terrible long and drawn out wound we have been living through.

Since the knock at my door on December 21, 1995 and a request for urine from myself, my husband and my baby, my life has never been the same. Every day has some element of stress, fear and sadness because of the exposure we have been exposed to and the loss of what we created for a home.

We left the next morning, after receiving the high mercury readings in my husband, my eight month old baby and myself. We did not know where we were to go and what we were to do. It was one of the worst nights of my life. We did not sleep and were filled with questions and feared for our health and that of our little baby. It was very difficult to leave the home that we built with our own hands, the home that had all our belongings, the home with all my artwork in it; where I planned to spend the rest of my life. Where we planned to build a family.

We were evacuated in one of the worst winters in New Jersey's history, I think the snow drifts were over six feet. It was extremely difficult to try to find an apartment besides trying to keep sane in our temporary quarters. Looking back, I can't believe all that we did in such a brief amount of time. I commend the EPA for their assistance and in particular for Pat Seppi and Irmee Huhn and Jack Harmon who lived through it with us and were there to try to help us.

After moving, an unusual move considering the circumstances; a home, a studio and much of my belongings to storage, I continue to go to storage a few times a month and just trying to make do with whatever we have. I must still tell you of the difficult situation we are in. It is strange but a reality about health is sinking in and instead of running on adrenaline in order to function, as I have been for the past 19 months. I am realizing that I must deal with all of this. You see I have been spending quite a bit of energy on trying to forget and pretend this never really happened. However, finally, it is quite clear that the fears we have had may be becoming reality. Stephen is having kidney problems, I am having short term memory problems and I am seeing Ezra's shake being related to his nervous system.

I have come to terms with never returning to the building and that the responsible solution is to remove it from the community. This recommendation will help to bring closure to this nightmare or lets say one part of it. The permanent relocation will help to bring stability and security in some ways to my family. Not having these things for almost two years has certainly created some serious psychological and emotional problems in my family, which I hope this decision will help to heal.

16 July 1997

EPA Hearing RE: 722 Grand St, Hoboken NJ

To whom it may concern:

I strongly support the concept of building reuse as well as organizing long term work/live spaces for artists and have been very troubled by the troubles at 722 Grand Street.

The media has provided only spotty facts on the subject leaving one to get much of their information on the street. I have the following comments and questions:

Is the building's mercury levels too high for industrial use?

The artists and their families have obviously suffered the most but as the buyers, I feel they had the ultimate responsibility to know what they were buying. Being naive is not valid. If they did not know to ask, then their lawyers should have asked for them. If the lawyers did not look into this and protect their clients, then they are equally liable. I have not yet heard any blame put on the shoulders of the lawyers.

Since this entire affair resulted because of numerous instances which seemed to fall through the cracks, blame can be spread all around. Various government agencies need to be involved to sort out the mess since the government is also liable for not flagging the situation in time.

How much did the seller reveal of the building's history? How much did they know? They are certainly responsible to find out if the building use was going to change, providing them with a higher sales price.

This was the wrong building, with the wrong seller and wrong buyers but the idea was a good one. I support the idea of the artists being relocated.

I would like the idea of artist work/live spaces to be pursued in Hoboken and not be avoided because of this mess.

Thank you for your attention to this matter. Good luck.

128 Grand St.
New Milford, NJ 07646
July 18, 1997

John Hansen
U.S. Environmental Protection Agency
290 Broadway, 19th Floor
New York, NY 10007

Dear Mr. Hansen:

On July 16 I was at Hoboken High School and heard your presentation on the Grand Street Mercury Site. (My son was one of the residents there.) EPA's recommendation that the site be demolished seemed to make the most sense, in view of the fact that Hoboken wants to keep the site residential and you could never be sure all the mercury was removed. On behalf of my son and his family, I want to thank you for all you have done.

Sincerely,

Henry Keough

John Hansen
Remedial Project Manager
U.S. Environmental Protection Agency
290 Broadway, 19th Floor
New York, NY 10007-1866

Eileen Hoffman
600 Hudson Street, Apt. 2A
Hoboken, NJ 07030

July 21, 1997

Dear Mr. Hansen,

I am writing in response to the Focussed Feasibility Study concerning 722 Grand Street. I am a former resident of the building. It is a heartbreaking decision to decide to destroy something you so lovingly created, but I am unequivocally in favor of the decision to demolish the building.

To provide you with a brief history, I am an artist who made a commitment to live in the New York art world. I spent five years looking for an affordable, suitable home that came close to my dreams. Grand Street more than exceeded these criteria. I was able to create a magnificent home and studio with its high ceilings, skylights, sunsets, and long vistas. The community we created was a huge contradiction to the isolation of urban life. I felt hopeful about starting a family here and continuing my career as an artist.

However, Mercury was discovered in my unit shortly after I moved in. From that moment on, my life has had an underlying sense of dread; I did not know what was to become of my home or health. The eviction simply added another level of terror. For me, It brought up my families connection to the Holocaust; tremendous distrust and a difficulty in being able to tell that the world was safe.

The fabric of my life has completely changed. My studio is some distance away from my home. The balance of art, work and home life I had built has been shattered. I am torn between home and studio, It seems I am constantly traveling between the two, carrying half my belongings back and forth. I am seldom home; relaxed time with my husband is rare. I find it difficult to work in an isolated studio, as I am used to having people around me and miss the easy camaraderie necessary for me to work creatively. Chronically exhausted, I struggle to hold my life together.

To add to this pressure, blood tests revealed that I have five times the safe, legal level of mercury in my system. It is difficult to express the terror that living with such a high level of contamination can cause. I have experienced respiratory problems and short term memory loss, and had intense nightmares that are just now beginning to subside. The far-reaching effects of this poisoning have yet to be determined, and thus my plans to start a family have been postponed indefinitely: I cannot be assured of the health of my child.

Despite all these concerns, I am aware of how fortunate all the former residents have been to have had the EPA come to our assistance. You have challenged big business on behalf of the individual, and for your careful scientific investigation of the building I am grateful. Finally, I feel assured that the EPA has come to an educated decision about the building.

I feel strongly that the building should not be remediated for industrial use. I could not, in good conscience, leave the building behind with the potential of damaging other peoples' health as it has mine. This risk is not an acceptable solution. It was not alright for us to be subjected to that poison and it is not alright to leave it behind for someone else. I am terribly saddened to say this, but I want to see the building demolished.

I need to start putting attention on rebuilding my life. I and the other former residents need to make a clean break from this sad experience and get on with our lives.

Thank you for your attention to this matter.

Sincerely,

Eileen Hoffman

John Hansen
Remedial Project Manager
U.S. Environmental Protection Agency
290 Broadway, 19th Floor
New York, NY 10007-1866

Robert Vichnis
600 Hudson Street, Apt. 2A
Hoboken, NJ 07030

July 21, 1997

Dear Mr. Hansen,

With the release of the EPA Focussed Feasibility Study I cautiously hope that this nightmare will soon be coming to an end. My wife and I are former residents of 722 Grand Street. This was a dream that did indeed turn into a nightmare. After searching five years for an ideal home that combined plentiful living/working space, a good location and a close community, I was thrilled to join this project. The goal was to turn a dead factory on the edge of Hoboken into a vibrant center of life for the community. Pouring our energies and life savings into years of labor, attending countless meetings in the unheated basement, speaking with innumerable public officials, and passing every sort of inspection (local, federal, environmental), we had finally made this dream a reality. This was where I intended to spend the rest of my life.

But this dream was not to come to fruition; in what should have been the final hours of this long project, mercury was discovered under the floorboards of one unit and ultimately throughout the building. A massive spiraling down followed. Just as the mercury had seeped into the cracks of this building, my hopes now seeped out. My home and body were contaminated; my long-term plans, a shambles.

I now live continually with the fear of what this mercury has done to my body. I still experience symptoms from the contamination: most prominently, respiratory problems, short-term memory loss, and sleep and vision disorders. I am frightened about my future health, not only for next year, but twenty years hence.

Mentally and emotionally this has been a devastating experience. Directly after the evacuation the stress and trauma were so intense that I could hardly function and was unable to work for six months. I also suffered from chest pains. I had no control over my life. This debacle has also created great stress in my marriage to the point where my wife and I are now seeing a marriage counselor. The trauma of this experience--the discovery of the mercury, that moment I learned my body was poisoned, the invasion of countless strangers from innumerable governmental agencies, the evacuation during the worst blizzard in New Jersey history, being homeless--still sits with me.

Now a year and a half later I am still living out of boxes in a temporary location and do not know when I will be able to say that this saga has come to an end. Most of my belongings are in storage and in a certain sense one could say that my life is, too. I cannot make plans or have dreams for my future. Due to the stress and uncertainty, I have not been able to produce art for a year and a half. Furthermore, I had wanted to start a family in Grand Street. This has been put on indefinite hold. Both my wife and I were highly contaminated by the mercury: I had almost six times of what is considered the safe level for adults. Fears of the effects of this contamination and of our uncertain future have caused us to wait, and in light of both our ages, our chances may be slipping away forever.

Now with the release of this Focussed Feasibility Study and the EPA-preferred alternative of demolition and permanent relocation, I find myself full of hope again. I firmly support this decision and ask that it be carried out with due speed. If only due to the potential for fire, demolition is the only answer. I applaud the EPA for the extensive scientific research it has conducted at 722 Grand Street. While waiting this past year and a half has been nerve-wracking, the methodical steps the EPA has taken to collect this data has made this wait more manageable, and with the release of this detailed study, more understandable. I also want to thank the EPA for all the efforts it has made on our behalf. Our situation is a prime example of the importance of the Superfund.

Tova Beck and Zak Friedman
P.O. Box 930, Hoboken, NJ 07030
Tel: 201-420-4804 ÷ Fax: 201-420-4805
E-mail: petrocontrol@earthlink.net

July 25, 1997

Mr. John Hansen,
Remedial Project Manager USEPA-Region II
Emergency and Remedial Response Division
New York, NY 10007-1866

Re: Hoboken Grand Street Mercury Site

Dear Mr. Hansen,

As a family that was evacuated from the contaminated building at 722 Grand Street, Hoboken NJ, we would like to put on record how appreciative we are of EPA's work throughout this disaster.

We joined the Grand Street Artists partnership to buy this building in good faith, with the intention of developing one of the units of the building (5B) as a live and work space, suitable for our needs. We thought we were creating a home and a community to live in. We invested our life savings plus many long hours of work, buying the property and developing our unit, which came out breathtakingly beautiful.

When mercury was discovered in the building and forced our evacuation, we were financially and emotionally devastated. We lost the resilience to recover from the shock of losing the home we worked so hard to build.

We cannot overemphasize how helpful the EPA support has been to us. Our temporary accommodations, imperfect as they were, have given us an anchor and permitted life to go on. If not for that help we would have been homeless and on the streets.

Now the EPA has made a recommendation in favor of remediating the Grand Street building and permanently relocating the residents. We very much hope that the EPA will go through with this recommendation as soon as possible. Only then can we put this unfortunate event behind us.

We intend to continue to live in the City of Hoboken, and as Hoboken citizens we would very much like to see the building site cleaned up and made safe.

Please do keep on the good work. We hope that future legislation would prevent such unfortunate and unnecessary disasters from ever taking place again.

Sincerely,

Tova Beck-Friedman & Zak Friedman
Former residents of
722 Grand Street
apt: 5B
Hoboken, NJ

July 19, 1997

John Hansen
Remedial Project Manager
U.S. Environmental Protection Agency
290 Broadway, 19th Floor
New York, New York 10007-1866

Dear John:

It is with great relief that I read the E.P.A.'s Superfund Proposed Plan for the Grand Street Mercury Site. The release of this report signals, I hope, an end to what has thus far been an agonizing 18 months.

We spent two years building our dream home. Two years of scrimping, borrowing, using every penny we had to build a home that would meet our every need. Our lives were put on hold, friends and family neglected, while we struggled to convert a derelict factory building into an inviting nest full of light and air. All of the stress and construction-related tension ended the day we moved in. That was the pay-off. We were the happiest we had ever been. Not only did we have a wonderful home, but we also had neighbors, friends who became family, sharing the same interests and goals.

This dream existence came to a crashing halt when we were forcibly evacuated by government and local health agencies on January 11, 1996. Since that day life has become a nightmare. We have moved three times in the past year, initially with only those belongings that would fit in a plastic garbage bag. Most of our possessions are in storage and our lives are on hold. The quality of life we sought is gone. In its place is depression, anxiety about the future, and fears for our health. It is bad enough losing one's home, but is worse to have to relive the experience over and over again when interviewed by the press, our lawyers and government. I cannot wait for the day when the topic of conversation among friends and strangers will no longer revolve around "the mercury building."

What is most upsetting however, is that we, the victims in this disaster, are perceived in some quarters as criminals, responsible for the mercury problem, and that we should bear the costs of cleaning it up! Well, let me tell you, I have gone into debt cleaning the mercury out of a building that was sold to us supposedly MERCURY FREE! We would, none of us, ever have considered buying a toxin-soaked building to live in. We relied on the assurance of the state government, our lawyers and environmental experts that the building was clean. Now, as it turns out, nothing could be farther from the truth.

I am weary of this process. I feel like I've been poked, jabbed, probed, pinched, tweaked, examined and cross-examined endlessly. Can't we please stop the debate? Let us have some closure and put this all behind us. Our ordeal continues as long as we remain displaced. Please, help us to rebuild our lives.

Nora Jacobson
39 Kendall Station Road
Norwich, Vermont 05055

July 27, 1997

John Hansen
Remedial Project Manager
U.S. Environmental Protection Agency
290 Broadway, 19th floor
New York, NY 10007-1866

Dear Mr. Hansen,

I was unable to attend the hearing on July 16th concerning the Grand Street Mercury Site, but as one of the displaced residents, I wanted to let my feelings known concerning the proposed plan.

First of all, I would like to express appreciation for the E.P.A.'s responsiveness and sensitivity to our needs. Although our predicament is terrible, given the amount of time, work, love and money we invested in making that building our home, we have been well treated by the Environmental Protection Agency.

My own feelings about the proposed plan are this: I wish that the building could be remedied and that we could (those who wanted to) move back into the building. However I understand that it is unclear that the building could ever be fully cleaned, at least to the extent required for residential use and that if we did move back in, and if mercury were detected later on, we would once again be forced to move. I don't want to go through that again. It was a terrible disruption in our lives.

Consequently, it is with regret that I find myself going along with the EPA's preferred remedy. I feel disgusted by the huge waste of resources, but I'm relieved that the EPA, which deemed it necessary to evict us, is also taking responsibility for relocating, us.

Thank you for the opportunity to express my feelings.

Environment Committee of Hoboken
P.O. Box M252
Hoboken, NJ 07030

July 31, 1997

Mr. John Hansen
Remedial Project Manager
US Environmental Protection Agency
290 Broadway, 19th Floor
New York, NY 10007-1866

Dear Mr. Hansen,

I attended the public meeting of the Grand Street Mercury site on Wednesday, July 16, 1997 but was unable to bear the oppressive heat waiting for my turn to speak.

I thought the EPA's presentation was very well done and specific. My organization, the Environment Committee of Hoboken, sent out over 125 postcards to our mailing list informing members about the meeting. We also posted flyers made up by Sabrina Boccino at our Farmers' Market on Tuesday. We would be happy to help disseminate any other information at the market in the future.

The Environment Committee of Hoboken enthusiastically supports the EPA's preferred alternative to permanently relocate the residents and demolish the building. We see this solution as the only acceptable course of action for the condo residents and the City of Hoboken. It is sobering to realize that we have lived with this undetected hazard in our midst for so long.

We sincerely appreciate the accelerated process the EPA has afforded this site. We encourage and believe your agency will continue fast tracking this clean up. While we understand you have procedures to be followed, our interest is to have this danger eradicated as soon as possible. If there is any help we can provide to that end, we would be happy to do so.

COMMENTS OF DAVID P. PASCALS
IN RESPONSE TO THE JULY 1997 FOCUSSED FEASIBILITY STUDY AND PROPOSED PLAN

Dear Mr. Hansen:

We submit the following comments on behalf of David P. Pascale, a former owner of the property at 720-732 Grand Street, Hoboken, (the "Property") regarding the July 1997 Focussed Feasibility Study and Proposed Plan respecting relocation of residents and remediation of the Property.

Mr. Pascale is not a Potentially Responsible Party under CERCLA. (See the prior correspondence dated January 22, 1997 from Michael Edelson, Esq., to Catherine Garypie, Esq., annexed.) This letter is written in Mr. Pascale's interest as the owner of adjacent property at 718 Grand Street, Hoboken, and in recognition that the current owners and General Electric company (the generator of the mercury located at the Property) have sought to shift their costs and responsibilities to him through litigation now pending in the United States District Court of the District of New Jersey.

As the Study acknowledges, "A remedy is deemed protective [of human health and the environment] if it adequately eliminates, reduces or controls, in both the short- and long-term, risks to humm health and the environment." (Study at 92.) Yet the recommendations studied by the EPA "screened out" any proposal which did "...not completely remove bulk elemental mercury at the Site." (Study at 70.) The Study should have included those alternatives, because the Study demonstrates that there exists "Protective" remedies which adequately reduce or control mercury at the Property. (See Study at 59-64 - Options 7 through 13.)

By screening out all remedies which reduce and control, rather than completely eliminate, bulk mercury at the site, EPA has chosen from a menu of options involving relatively high costs of remediation, in a narrow range (between \$3.5 million and \$4.3 million). However, achieving substantial (but less than complete) removal and encapsulation--techniques the study acknowledges are effective--can likely be achieved at fractions of the proposed costs in the Study and Plan. This information should be developed and presented by EPA before action is taken on the current proposed Plan.

We also must note at the outset that the Study and Proposed Plan erroneously identify Mr. Pascale's wife, Sherrill Pascale, as a former owner of the Property. Sherrill Pascale never owned the Property. She joined in a Deed conveying the Property to Grand Street Artists Partnership, which was done at the request of such partnership's title company in order to extinguish inchoate rights of dower she might have otherwise been able to assert. The back title information reflecting that Ms. Pascale was never in the chain of title was obtained by the Grand Street Artists prior to their purchase of the Property and has been available to all parties to the pending litigation, including General Electric Company.

The ultimate recommendation of the EPA, i.e. demolition, is not only unduly costly but likely involves as much danger to the community as other techniques. Demolition assures the release of encapsulated mercury into the environment, other techniques (such as washing, vacuuming, etc.) followed by encapsultion would not involve such risk of release of the mercury, say never result in release of the mercury into the community, and preserve a historically significant structure.

EPA further assumes that the appropriate remedy in this matter involves permanent relocation of the former residents. If permanent relocation is the desired option, it nevertheless cannot justify the types of costs apparently contemplated (which are barely documented in the Study and Plan). In particular, the costs of the "permanent relocation" options all result in costs which are greatly out of proportion to the value of the Property, even as improved by the former residents, and so appear to present a windfall to the former residents.

Specifically, the former residents invested approximately \$175,000 per unit for 17 units: \$2,975,00. (Study at 105.) They purchased the Property for \$1,500,000. Thus their total fair market value should be approximately \$4,475,000. EPA estimates the residual value of the Property as a residential building at \$1,568,500. (Study at 124.) If EPA adds the value of the same improvements--even with a lot increase for inflation or market factors--the improvements have a value of less than \$4,900,000.

Thus EPA's total permanent relocation payment (exclusive of temporary relocation and moving expenses) should be \$4,900,000 or less. However, EPA costs this element at \$9,915,600 (Study - Table 6-5 at 129), more than twice the value.

The assumptions and techniques by which EPA comes to its estimated payment of \$9,915,600 for this element must be questioned. EPA claims to base it upon a confidential appraisals (Study at 123-124), which we have not had the opportunity to see.

EPA will of course seek to shift the costs to Potentially Responsible Parties. EPA must exercise care, however, in selecting the appropriate remedy or seeking to impose costs on the allegedly responsible parties. Common sense bars providing a permanent relocation at a cost so disproportionate to the value of the former dwellings.

The proposed remedy here has not been adequately studied or shown necessary or cost-effective. EPA has failed to study other less-costly techniques which appear to be adequately protective of human health and environment, meet all applicable relevant or appropriate requirements (ARARs), provide long-term effectiveness, may be less risky than the proposed demolition strategy, can be accomplished far more quickly and will likely cost much less. Until EPA performs such a study, it should not proceed with the current proposed Plan. EPA has secured support of former residents and others by holding out a permanent relocation proposal premised on a windfall recovery for the former residents far out of proportion to any reasonable estimate of relocation costs.

2 Indeed, this smacks of providing a bonanza to many former residents, who undertook their own independent investigations prior to purchase and were by their own admission aware of the presence of mercury as early as two occasions in 1993 and another occasion in 1994 before most of the renovation costs were incurred (Study at 6), and so could have avoided their alleged capital costs and the need for relocation through their own exercise of care.

From the information now available, Mr. Pascale suggests that EPA consider providing permanent relocation at a cost commensurate with the value of the former residences; reducing bulk mercury at the Property through a variety of simple, cost-effective processes followed by encapsulation of remaining elemental mercury; and restoration of the building to productive commercial use.

MEM/dm

CC: Mr. David P. Pascale

Dear Ms. Garypie:

We write as attorneys for David Pascale to advise the United States Environmental Protection Agency ("EPA") that Mr. Pascale is not in a position to sign the proposed Administrative order on Consent ("AOC") circulated by the EPA.

Mr. Pascale does not have the resources or ability to perform the obligations which would be under-taken or imposed upon the Potentially Responsible Parties ("PRPs") by the terms of the AOC.

It has at all times been David Pascale's position that he is not a PRP as defined by 42 U.S.C. § 9607(a).

It is our understanding that Grand Street Artists Partnership ("GSAP") put forth two arguments for the naming of David Pascale as a PRP. GSAP argued that John J. Pascale, Sr., David's father, has claimed that David had knowledge of the prior history of the building; to wit, that it had once been used for the manufacture of mercury vapor lamps. At the same time, John Pascale has asserted directly to the EPA that no mercury was used in the building to his knowledge after he purchased it in 1955, and that from and after the date of his purchase, he saw no evidence of and had no knowledge that there was any mercury in the building. Even if John Pascale's allegation that David Pascale knew the building had been used sometime prior to 1955 for the manufacture of mercury vapor lamps, it would not provide David with knowledge of the presence of mercury on or about the premises. In any event, knowledge of prior uses of hazardous materials does not make a person a PRP under the definition of CERCLA.

GSAP has further argued that David Pascale is a PRP because he was "an owner at the time of disposal." That argument fails. See generally *United States of America v. CDMG Realty Co., et al.*, 96 F-3d 706 (3rd Cir. 1996). Any gradual releases of residual mercury do not constitute a disposal. *Id.* The only active "disposal" assumed by GSAP was that David Pascale, on behalf of Quality Tool & Die Co., Inc., arranged for the decommissioning of an underground storage tank and disposal of contaminated soil. It is our understanding that the removal and disposal were accomplished in accordance with the requirements and regulations of the New Jersey Department of Environmental Protection and supervised throughout by an environmental engineering firm, precluding CERCLA liability. Under those circumstances, David Pascale is not "an owner at the time of disposal" under CERCLA. *Id.*

By contrast, it is absolutely clear that some if not the majority of the partners in GSAP, as well as the partnership itself, meet the definition of a PRP under CERCLA. However, as of the date of this letter, they have not been named as PRPs by the EPA.

Notwithstanding the foregoing, and without prejudice to the position set forth above, David Pascale was prepared to attempt to negotiate an appropriate contribution with the other named PRPs in order to be able to join as a signatory to the AOC.

HELLRING LINDEMAN GOLDSTEIN & SIEGAL

Catherine Garypie, Esq. -3- January 22, 1997

it is David Pascal's position that a meaningful AOC requires that all PRPs would have to participate, and in particular General Electric Company ("GE") must assume preeminent responsibility because (a) there is no dispute that of the named PRPs, GE is the only one responsible for using mercury on the promises " profiting from that use, (b) GE is the only named PRP with the resources necessary to perform the obligations that would be required under the terms of the AOC, and (c) GE is the only PRP with the necessary expertise and manpower to meaningfully address remediation of the site. We have been advised, however, that GE will not sign the AOC.

For the reasons set forth above, David Pascale cannot consent to join in the AOC without the participation of GE and without a realistic allocation of responsibilities among all PRPs.

Very truly yours,

ME/dm

cc: Mr. David Pascale

Aug 6, 1997

Shun-Yi Chon/Ching-Huang Chung
513 Broadway 3A
New York, NY 10012

John Hansen/Catherine Garypie
Remedial Project Manager/Assistant Regional Counsel
US Environmental Protection Agency
290 Broadway 19th Floor
New York, NY 10007-1866

Dear Mr. Hansen and Ms. Garypie:

We welcome EPA's recommendation adopting Alternative 5 regarding the Grand Street Mercury Site. We believe that EPA has made the most appropriate decision.

According to EPA's letter (Nov. 21, 1996), we are eligible to receive temporary relocation benefits and this benefits is retroactive to the date EPA began response activities at the Grand Street Mercury Site, which is Jan,5, 1996. In the same letter (Nov. 21, 1996), EPA requires that we submit documentation of payment for housing costs in order to receive the above benefits. However, unlike other tenants that were relocated by EPA immediately upon vacated the mercury site, we did not relocate to temporary housing until we received EPA's permission to do so on Nov. 21, 1996. Since we did not have sufficient fund for such temporary housing, we did not seek for such housing and will not be able to produce such document to receive reimbursement.

However, we do have documentation to show that we borrowed more than \$15,000 in 1996 for our immediate need such as interests and apartment maintenance. etc., (see attachment A) because we were not be able to move into the Grand Street unit. We hope that this document will meet EPA's requirement for reimbursement due to our special situation. in addition, we will also need an amount of \$21,207 to satisfy the interests payment to our loan (see attachment B) so that we will not be foreclose by our creditor.

We sincerely hope that EPA will consider that these documents are satisfactory to obtain the reimbursement. Furthermore, we urge EPA to consider that we are equal partners of all other Grand Street Mercury Site's tenants so that we are eligible for permanent relocation benefits. We are the first tenant (and victim) to report the contamination of mercury in the Grand Street site and were evicted from the unit 5D as early as January 1995. We suffered the same frustration and aggravation (if not more) as the other tenants. Because of mercury contamination, we were not able to close the property with the partnership and the bank. EPA should consider this not as the reason to exclude us from the other tenants but a consequence of the mercury contamination. We not only were not able to move to our dream house but also had to carry a big loan for our down payment and construction costs. To deny us the right as the other tenants will be a devastating blow to us.

We hope that you would consider our request favorable and look for to hearing from you at your earliest convenience.

Sincerely Yours,

Shun-Yi Chen/Ching-Huang Chung

Lucia Bocchino
109 Yesler Way
Hillsdale, N.J. 07642

August 13, 1997

John Hansen
Remedial Project Mgr.
U.S. Environmental Agency
290 Broadway
New York, N.Y. 10007-1866

I am writing this letter to express my deep concern for the health, welfare and future of my daughter Serena Bocchino, her husband Stephen Keough, son Ezra and future children. Serena and Stephen built their home-a living space for the family and a studio space for Serena, a professional painter. They celebrated their first Christmas in the new home. Shortly after, mercury was discovered in one of the lofts. Serena, Stephen and Ezra were forced to move out. Their health was in great jeopardy.

My daughter, husband and child came to live in my home in Hillsdale N.J. During that terrible winter of '95. I saw the daily stress and strain they endured. To this day they are still enduring tremendous daily pressures.

I strongly support the EPA's recommendation to demolish the building At 722 Grand Street and decontamination of the entire area in order to insure safety and health of the Hoboken residents.

August 30,1997

U.S. Environmental Protection Agency
290 Broadway, 19 th Floor
New York, New York 10007-1866

Attention: Mr. John Hansen, Remedial Project Manager

Reference: Grand St. Mercury Site, Hoboken. N.J.

Dear John,

I have reviewed: the Focused Feasibility Study, the Risk Assessment, the Proposed Plan, and the other supporting documentation made available to me at the Hoboken Library. I support the USEPA recommended Alternative 5, Demolition of the Building/Permanant Relocation of the Building Residents/Soil Sampling, Excavation, and Offsite Disposal/Ground water Sampling and Analysis as the preferred method of dealing with this site.

As you are aware I am a former resident of 722 Grand Street. My wife and I have spent an extraordinary amount of time developing this building into a home for our family. We had planned to consolidate this space into a home with a artist's studio where we could raise our children while my wife could persue her carrer as a artist. Please be aware this was a long anticipated dream of ours not an idea that we came up with in 1993. My wife is a second generation artist, she has first hand knowledge of the dificulties encountered by a woman juggling the roles of wife, mother and artist.

For me the words "Grand Street" used to conjour up wonderful memories of my childhood spent at 128 Grand Street, New Milford, New Jersey. Currently these words only evoke feelings associated with a nightmare.

Please find enclosed photographs taken one December morning late in 1995 when the USEPA arrived in our home to measure for mercury contamination. I was on my way out for work and my 8 month old son Ezra was eating breakfast. These photos call to mind a speech given by President Clinton during his reelection campaign which he vowed that no child should grow up with a hazardous waste site near his home. Well my son spent his first 8 months living right in the middle of one.

Please proceed with all due haste to the Record of Decision based upon Alternate 5 so my family and I may get on with our lives and allow this nightmare to become a distant memory.

Best Regards

August 30,1997

U.S. Environmental Protection Agency
290 Broadway, 19 th Floor
New York, New York 10007-1866

Attention: Mr. John Hansen, Remedial Project Manager

Reference: Grand St. Mercury Site, Hoboken, N.J.

Dear John,

I have reviewed: the Focused Feasibility Study, the Risk Assessment, the Proposed Plan, and the other supporting documentation made available to me at the Hoboken Library. I support the USEPA recommended Alternative 5, Demolition of the Building/Permanent Relocation of the Building Residents/Soil Sampling, Excavation, and Offsite Disposal/Groundwater Sampling and Analysis as the preferred method of dealing with this site.

As you are aware I am a former resident of 722 Grand Street. My wife and I have spent an extraordinary amount of time developing this building into a home for our family. We had planned to consolidate this space into a home with a artist's studio where we could raise our children while my wife could persue her carrer as a artist. Please be aware this was a long anticipated dream of ours not an idea that we came up with in 1993. My wife is a second generation artist, she has first hand knowledge of the dificulties encountered by a woman juggling the roles of wife, mother and artist.

For me the words "Grand Street" used to conjour up wonderful memories of my childhood spent at 129 Grand Street, New Milford, New Jersey. Currently these words only evoke feelings associated with a nightmare.

Please find enclosed photographs taken one December morning late in 1995 when the USEPA arrived in our home to measure for mercury contamination. I was on my way out for work and my 8 month old son Ezra was eating breakfast. These photos call to mind a speech given by President Clinton during his reelection campaign which he vowed that no child should grow up with a hazardous waste site near his home. Well my son spent his first 8 months living right in the middle of one.

Please proceed with all due haste to the Record of Decision based upon Alternate 5 so my family and I may get on with our lives and allow this nightmare to become a distant memory.

Best Regards

cc President William Clinton
Vice President Albert Gore

Mark Graham
1026 Hudson Street
Hoboken, NJ 07030
201-792-4037

John Hansen
Remedial Project Manager
U.S. EPA
290 Broadway, 19th Floor
New York, NY 10007-1866

September 1, 1997

RE: Public Comment
Grand Street Mercury Site, Hoboken, Nj

Dear John:

Please find enclosed comments on the EPA's proposal for the abovementioned site from my wife and myself, both former residents of this site.

Thanks for all your work.

encl.

Mark Graham
1026 Hudson Street
Hoboken, NJ 07030
201-792-4037

Statement on EPA's Recommendation for 722 Grand Street Mercury Site

I appreciate this opportunity to speak.

My wife and I were introduced to this project in October, 1992, and became actively involved in December of that year. It took the group of us another nine months to successfully purchase 722 Grand Street, and then another two and a half years to see completion on the horizon. It was at that point we discovered we might never reach that horizon, when we discovered that over half of the residents that had just turned themselves inside out on this project had elevated levels of mercury in their bodies.

We succeeded at Grand Street where other groups in the past, including professional developers, had failed: we took an empty building on a half-empty street in a relatively dead section of Hoboken, and self developed it into living units that were legally zoned for artists to work and live, the first, and still the only ones of their kind. Within one week after we received Final Site Plan Approval from the City of Hoboken, real estate signs reading "Lofts for Sale" and "Lofts for Rent" appeared on buildings across both streets from our building. We were the ground breakers in Hoboken, we did it totally on our own, with a tremendous amount of work and a tremendous amount of debt, and we have lost it all, except for the debt.

I have a sense of pride being part of a group that had the courage and the audacity to take on a challenge like this. In this national climate of worshipping the individual, the self-starters, the risk-takers, we are the quintessential group. We were also exceptionally cautious. We insisted on documentation assuring us of the safety of this building for residential use. When we received these written assurances, we felt we were safe. In a broader sense, that sense of safety is gone, forcefully replaced with an underlying distrust and constant stress droning within us. My wife has developed a cardiac arrhythmia, and ten months after the evacuation, I found myself in the hospital with chest pains and elevated blood pressure. My wife was over three months pregnant during the evacuation, and worry for the future of our son's health is relentless.

The reality that brings us here tonight never should have happened. With our caution during the pre-purchase environmental review of the building, this message of "Unfit for Human Habitation" was beyond comprehension. The resulting evacuation was absolutely surreal, nightmarish. To me, we appeared as zombies, dragging our two plastic bags of belongings down through the building, silent and numb with disbelief. I feel echoes of this disbelief within our group to this day.

With the emergence of this nightmare, the EPA appeared. As the group of us were in a highly agitated state, the EPA acted as a reference point of sanity and reassurance. If it were not for the information, assistance, and support the EPA provided, we would have been, in addition to everything else, homeless and bankrupt. I challenge any of the federal officials in Washington or any corporate entity involved in this situation who undertake to lecture on the extreme environmental positions, or the lack of importance, of the Environmental Protection Agency to be silent for just a brief time and open their eyes to the realities of the EPA's contributions to the group of us and to this community. They might learn that, if the EPA can be accused of having an agenda, it is essentially to protect the citizens from being poisoned and to help those who have already been poisoned.

The EPA has been meticulous and thorough in their handling of the research which results in this recommendation to demolish our homes. The realization of this termination creates an ache that will last a very long time. but it is the right thing to do, for us and for the surrounding community.

For my family and for the group of us, I thank the EPA for its intense efforts on our behalf. You have contributed to showing us that a sense of stability in our lives is coming in the future, so that we can move on from this suspended animation in which we find ourselves.

Myra Graham
1026 Hudson Street
Hoboken, NJ 07030
201-792-4037

RE: E.P.A.'s Recommendation to Demolish the Building at 722 Grand Street, Hoboken, NJ

For so long now I have felt as if I had been haunted by a pestilent ghost. In a fallacy of vision I could perceive that ghost to take the form of the building into which my husband and I put so much of ourselves. But, although our dream home is contaminated with vapors from, and the actual liquid mercury, it is not the building that has haunted me for this most difficult of time periods. I am haunted by the hateful greed that allowed someone to sell a building full of poison to a group of hard working well intended people. It is incomprehensible to me how any individual could act with such disregard for the welfare of innocent people, and it is despicable that anyone would allow mothers to take their babies into a place, with the intention to live there, where they were going to be poison. We were sold a building full of poison, and that sale was made with a smile on the face of that seller. The poison that is in the minds and hearts of a person who would be able to do such a thing is worse in effect and greater in quantity than that which sadly permeates my former home.

Why was that building so saturated with mercury? The question echoes in my mind, answerless. The uses of mercury are probably many. I would never discount its usefulness to our society. But the abuse of the privilege and responsibility to use a material that becomes a potentially life threatening substance is also in question.

For the past four plus years my husband and I have been involved in this building. We began the adventure with hopes and realistic concerns. We knew we would do 90% of the work ourselves. We knew it would be difficult to ask but we asked for some financial help from our family. We were realistic in our endeavor. We worked hard, really hard. Each stud was gratifying, each sanded and sealed floor board held mesmerizing beauty. We were exhausted at night, but filled with the anticipation of some day living with all the beauty that we ourselves were creating. It is very well documented the way that the mercury issue evolved. It still is so surreal. What happened should not have ever happened. And the fact that it happened should sit heavily on certain peoples minds. Contemplating what transpired, and what is continues is almost numbing. Maybe I wish I could numb out all that I feel from this travesty that consumes each and every one of my days. Perhaps then I would not have the heart palpitations that continue to scare me, perhaps I would not have had the eczema that flared up twice right below my eyes. Maybe if I could ignore the fears concerning my baby's well-being, my husband's health and my own I would no longer have the episodes of vertigo. Maybe if I had a sense of where I was going to finally create a home for my family the anxiety would lessen. But what do I do with the thought that plagues me that it could be because of all this worry fear sadness and anger that I was stressed to such an extent that I lost the baby I carried for three months. All of the fear, worry, anger, confusion that exists within my body every day of my life is a by product of what began as a dream that seemed as if it was going to come true. Now I live in a nightmare unending unknowns.

We need an end to this disaster. We need relief from the droning worries and the ever looming unknowns. Our community needs a safe solution to what I personally have been told worries many, especially those in the immediate neighborhood. Mothers and Fathers whose children play in the nearby park have expressed their worry and confusion. People simply walking by the building have questioned me a number of times about the dangers of the building. People are scared. And it just is not fair to try to ignore or steamroll these peoples' concerns.

We have been through a travesty that I would not wish on anyone. This turbulent time has gone on far too long. Although it is indescribably heart wrenching to think that our building should be demolished it is ultimately very clear that this is the only decision that ensures the safety of our community. I support the E.P.A.'s recommendation for that reason and I hope and pray that the simultaneous effect of removing the building from where it stands will remove the ghost of pestilent greed and irresponsibility from my immediate life.

Mr. Richard L. Caspe
United States Environmental
Protection Agency
Region II
290 Broadway
New York, NY 10007-1866

Dear Mr. Caspe:

Please be advised that I am writing this letter in support of the Hoboken City Council's resolution requesting that 720-722 Grand Street, Hoboken, New Jersey, be raised due to the imminent health hazard which is being caused because of the presence of elemental mercury.

I have personal first hand knowledge of many of the events that have taken place and had the unfortunate but necessary duty of ordering the aforementioned building deemed unfit for human habitation and summarily vacated.

Since the closure of the aforesaid building, I have had numerous queries with regard to the safety of 720-722 Grand Street. Questions from the general public such as, "is it safe to walk in front of the building?" have been raised many times.

Given the fact that the above building conversion was approved (industrial to residential use) by a government agency, public perception has eroded as to public trust regarding health and safety statements from my office.

Because of the above, I support the Mayor and the City Council's request for total demolition and removal of 720-722 Grand Street, Hoboken, New Jersey, and removal of all other ground contaminants.

If you have any further questions or concerns or would like to meet with me in person, please contact me at (201)420-2375, and I shall be more than happy to further assist you.

FSS/dd

cc. Mayor Anthony Russo
Director Robert K. Drasheff
Director George Crimmins

HUDSON REGIONAL HEALTH COMMISSION
MEADOWVIEW CAMPUS
595 COUNTY AVENUE, BUILDING 1, SECAUCUS, NEW JERSEY 07094
TEL. (201)223-1133 FAX (201)223-0122

Karen L. Comer. President

Robert Ferraiuolo, Director

September 2, 1997

John Hansen
Remedial Project Manager
U.S. Environmental Protection Agency
290 Broadway, 19th Floor
New York, New York, 10007-1866

Mr. Hansen,

The Hudson Regional Health Commission (HRHC) respectfully submits the following comments with regard to the Superfund Proposed Plan for the Grand Street Mercury Site. The remedial alternatives referenced are as described in the proposed plan dated July, 1997.

The HRHC can only support those remedial alternatives which in its view are fully protective of the environment, and the health of the building residents, the public and any future occupants. Since, the presence of a hazard within the building has been clearly demonstrated along with the existence of a potential health threat to the community, Alternative 1 is not supported by HRHC.

Alternatives 2 and 3, present the possibility of remediation of the building as means of ensuring the safety of future residential occupants. However, both options rely upon remediation to a specified level of mercury vapor in air, and imply that not all mercury can be removed from the building. The assumption that complete removal of mercury cannot be accomplished while leaving the existing building intact is reasonable based on the extent of saturation of building components with mercury which has been found at the site to date. Furthermore, the proposed remedy cannot offer any absolute degree of confidence that mercury vapors will remain below the remedial action objective in perpetuity. Since, exposure to mercury vapor, at any level, is not a usual occurrence in most households, and mercury vapor exposure is a documented health hazard, the HRHC cannot support any alternatives in which occupants of a residential building may be exposed to mercury vapor. Thus, the HRHC cannot support alternatives 2 or 3.

Alternative 4 proposes remedial measures similar to Alternatives 2 and 3 but would restrict occupancy to commercial or industrial. Under this scenario workers would be exposed to mercury vapor, presumably at levels well below the OSHA Permissible Exposure Limit (PEL). However, workers would still need to be informed of their exposure to mercury pursuant to the Hazard Communication Standard. There can be no guarantee that such notice would be made to workers by future occupants of the building. This may allow workers to unknowingly and possibly unwillingly be exposed to mercury vapor. Additionally, there would be no means to restrict future renovation which could conceivably damage controls which were put in place to control mercury vapor exposure. Thus, the HRHC does not support remedial alternative 4.

With regard to the issue of permanent relocation of the residents, the HRHC believes the residents should be recompensed for their actual monetary losses associated with their being unable to reside in the units which they constructed or purchased. The rationale for this is based on the belief that the buildings residents are "innocent parties" who were placed in substantial physical and monetary jeopardy due to mercury contamination within the building. The premise that the residents are "innocent parties" is based upon the fact that they used due diligence to a degree which would be expected of any individual. It was only through the lack of discovery or disclosure of the contamination at the site by parties who each individually should have either known of, discovered, or caused to be discovered the history of mercury use at the property that the residents are now damaged. These parties are the prior building owner who sold the property to the Grand Street Artists Partnership (GSAP): the environmental consultant for the buildings seller; the New Jersey

Department of Environmental Protection; and the environmental consultant for the GSAP. Had any one of these entities reported the use of mercury at the site to GSAP, the HRHC would not view the residents as "innocent parties". Furthermore, upon discovery of some mercury in the building, GSAP hired additional environmental consultants who they viewed as experts with regard to such contamination. These consultants allegedly assured them the contamination was not extensive and could be remediated. Presently the Commission knows of no evidence which demonstrates the members of GSAP were aware of the use of mercury within the building prior to its purchase by them. Thus, the HRHC can only consider supporting those options which offer recompense to the residents in the form of "permanent relocation".

HRHC believes alternative 6 is the remedy which will permanently eliminate all potential environmental and public health hazards associated with the site as well as recompense a small portion of the damages suffered by residents of the building.

If you have any questions in this regard please feel free to contact me.

Sincerely,

Gary Garetano, Assistant Director

c: Robert Ferraiuolo, Director
Frank Sasso, Health Officer

CITY CLERK'S OFFICE

CITY HALL

HOBOKEN, NEW JERSEY 07030-4585

RICHARD DEL BOCCIO

HOME: 798-1688

BUSINESS: 420-2342

City Council President

September 3, 1997

Mr. John Hansen
Project Manager
US Environmental Protection Agency
290 Broadway
New York, New York 10007

Dear Mr. Hansen:

On behalf of the Council of the City of Hoboken. I would like to strongly encourage the United States Environmental Agency to implement Alternative #5 regarding the disposition of contaminated property known as 722 Grand Street within the City of Hoboken.

After discussion among city officials and with representatives of the EPA, it is clear that Alternative #5 is the only solution that suits both the needs of the city and the residents of the affected area.

I hope that implementation of Alternative #5 can proceed in a timely fashion to resolve this long-standing, problem of contamination within the City of Hoboken.

Sincerely,

Richard Del Boccio
City Council President

September 3, 1997

Mr. John Hansen
Remedial Project Manager
U.S. Environmental Protection Agency
290 Broadway 19th floor
New York, New York 10007-1866

Re: Proposed Clean Up Plan for the Grand Street Mercury Site In Hoboken, NJ

Dear Mr. Hansen:

I am writing on behalf of the Grand Street Artists and each of its members to express our gratitude for the diligence and dedication with which the U.S. Environmental Protection Agency ("EPA") has examined and addressed the consequences of the mercury contamination at the Grand Street property. We are particularly gratified by the fact that the EPA has considered not only the technical aspects of the various remedial alternatives described in the Focused Feasibility Study, but the devastating impact which the mercury contamination has had on the lives of the families which sought to make this building their home. We are also writing to express our unqualified support for the proposed remediation Alternative #5 recommended by the EPA.

Many of the residents had the opportunity to speak at the public meeting and to describe, in very personal terms, the manner in which their lives and the lives of their children have been forever changed by the mercury contamination at the Brand Street property. In addition to the harsh realization that we will never be able to return to our homes, we must also try to cope with the stress, anxiety, fear and uncertainty which each of us faces on a daily basis. Although events of the last several years have affected us in many different ways, the one thought that is uppermost in the minds of each of the members of the Grand Street Artists is the compelling need which each of us has to be able to find homes for our families, to be able to plan for our futures and to begin to restore some sense of normalcy to our lives.

Although we understand the many technical requirements which must be met before a remedy can be determined and implemented, we remain anxious at the prospect of an administrative process over which we have no control but which will profoundly affect the lives of each of us. Although we are greatly appreciative of the speed with which the EPA has moved the process along, we are fearful that other interested parties will attempt to impede, hinder and delay the implementation of the remedy selected by the EPA and, in particular, the issuance of permanent relocation benefits. To that end, we urge that the EPA do everything within its power to issue the Record of Decision as soon as reasonably practicable and to implement the Proposed Plan with all deliberate speed so as to enable all of the former residents of the Grand Street property to find new homes for themselves and their families and to begin the hopeful process of rebuilding their lives.

September 5, 1997

VIA UPS NEXT DAY AIR

Mr. John Hansen
Remedial Project Manager
USEPA - Region II
290 Broadway, 19th Floor
New York, New York 10007-1866

Re: Response on Behalf of Anthony Mastromauro
Focused Feasibility Study by USEPA
722 Grand Street Superfund Site - Hoboken, N.J.
Our File-No. 1907.1000

Dear Mr. Hansen:

Please accept this letter on behalf of Mr. Anthony Mastromauro, a former resident of the 722 Grand Street Superfund Site. The purpose of this letter is to provide you with comments concerning the Focused Feasibility Study ("FFS") issued by the USEPA concerning this property.

Mr. Mastromauro is in full agreement with the conclusions reached in the FFS. As was stated at the public hearing conducted by the USEPA, Mr. Mastromauro has absolutely no intention of ever taking up residence in this building ever again. He has suffered both physical and psychological damages as a direct result of his exposure to the mercury contamination which permeates the premises.

We believe it is absolutely inconceivable that any party could actually advocate the idea of attempting to remediate this building to a level where it would be "safe" for residential use, or even for commercial purposes. Given the documented levels of mercury in the blood and urine samples of the residents, and the long recognized toxicity of mercury, it is untenable from any reasoned scientific standpoint for anyone to believe that this building could ever be occupied again for any type of use. It is worth noting that many of these persons had only a few months exposure, yet showed significant levels of mercury in their blood and urine.

One need not speculate very much to recognize the permanent physical and psychological damage which would have occurred to people like Mr. Mastromauro if this exposure had gone on for even a few more months. The recent report issued on June 30, 1997 by the USEPA concerning mercury emissions from the disposal of florescent lamps only highlights the environmental hazards posed by mercury. Unfortunately, we fully expect that General Electric, and possibly other PRP's, will ignore overwhelming evidence. We hope that the USEPA is fully prepared to address and rebut the onslaught of scientific gibberish that is to come to justify such an outrageous position.

As such, we strongly urge the USEPA to proceed with Alternative No. 5 in the FFS, which calls for permanent relocation and demolition of the building. The latter is the only way to insure that this threat is eradicated from the environment. It is also, in the long run, likely to be far more cost efficient than attempting to remediate the building interior. It does not appear to us to be economically justifiable to literally have to gut several floors, in an attempt to "save" the building, an activity which may not address, let alone remediate, all of the mercury contamination which permeates this structure.

While we can anticipate that there will be challenges to the Record of Decision ("ROD") and the finalization of the NPL listing of this Site, we hope that all of the parties interested in this matter do not lose sight of the human element involved. Unlike the typical Superfund Site, which is usually an abandoned industrial facility or a landfill, this building was the home, and center of both the professional and personal lives, of most of its residents. It is easy for lawyers and PRP's to "sit around the table" and argue over remediation strategies and which technology to use and the dollars at stake.

What is far more critical here is the cost in the ongoing disruption of the lives of the former residents such as Mr. Mastromauro, which has been an ongoing saga for nearly two years. While we recognize that the process used by the USEPA at this Site has been expedited to the extent possible under the NPL regulations, and we appreciate the efforts of all those involved in this effort, he, along with every other resident, is entitled to finality. The proposed Alternative No. 5 will bring that finality, and some sense of closure for all of the former residents. No one can truly make up for the tremendous disruption to the professional and personal lives of people like Mr. Mastromauro and the other former residents. However, it is time for this ongoing "Twilight Zone" existence for Mr. Mastromauro, as well as the other former residents, to come to an end.

We strongly urge the USEPA to move forward as quickly as possible with the issuance of the ROD, the NPL listing, and the processing of permanent relocation for Mr. Mastromauro. If you have any questions concerning this submission, please contact us at your convenience.

PJM/cm

cc: Anthony Mastromauro
Hon. Robert Menendez

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WRITER'S DIRECT LINE:

(609)989-5034

FILE #
50619-01

September 5, 1997

Via Federal Express

John Hansen, Remedial Project Manager
U.S. Environmental Protection Agency
290 Broadway - 19th Floor
New York, NY 10007-1866

Re: Grand Street Mercury Superfund Site
Hoboken, New Jersey

Dear Mr. Hansen:

John J. Pascale, Sr. ("John Pascale") submits these comments in response to the United States Environmental Protection Agency's ("EPA") July 9, 1997 Focused Feasibility Study concerning the property located at 720 and 722-32 Grand Street, Hoboken, New Jersey ("the site"). We request that these comments be added to the Administrative Record. We reserve our right to amend and/or supplement the Administrative Record in the future.

On March 28, 1997, John Pascale submitted comments in response to EPA's February 24, 1997 Unilateral Administrative Order ("UAO"), which included a detailed statement of relevant facts describing John Pascale's relationship to the site. We incorporate the statement of relevant facts set forth in the March 28, 1997 letter into these comments

Additionally, John Pascale requests that the following changes be made to the facts Set forth in the Focused Feasibility Study:

1. The Focused Feasibility Study states at page i and page 5 that mercury vapor lamps were manufactured at the site until 1965. According to Warren Millar, an owner and operator of the Cooper Hewitt Electric Company ("Cooper Hewitt"), Cooper Hewitt's operations ended in 1964. See pages 168 and 216 of Warren Millar's, March 6, 1997 deposition transcript, which are attached hereto. By including these excerpts from Warren Millar's deposition transcript, John Pascale has not accepted or acknowledged the accuracy of Mr. Millar's testimony.

2. Paragraph 2, page i, unnecessarily states what "the GSAP thought" when mercury was discovered on three occasions through 1995. The purpose of the Focused Feasibility Study is to assess site conditions and evaluate alternatives to the extent necessary to select a remedy. 40 C.F.R. §300.430. Thus, there is no reason for the Focused Feasibility Study to include what members of the GSAP allege they were thinking when they discovered mercury in the building. We agree that the Focused Feasibility Study should include background information regarding the discovery of mercury. However, this can be accomplished by describing how and when mercury was discovered.

3. The first sentence of Paragraph 2, page 5 states that John Pascale operated the Quality Tool and Die Company ("Quality") from 1940 to 1970. The reference to 1970 is incorrect; it should be changed to 1979.
4. The third sentence of Paragraph 2, page 5 is incorrect. Majoda did not move to 51 Market Street, Hoboken in 1963.
5. Paragraph 2, page 5 should include a statement indicating that Quality's operations did not involve the use of mercury.
6. The first sentence of paragraph 4, page 5 is incorrect, all stock in Mojada was given to David Pascals, not John J. Pascale, Jr.
7. EPA should identify the factual basis for the statements made in the section entitled "Site History," page 4 through paragraph 1 of page 7.
8. On page 8, paragraph 2, EPA states that the Hudson Regional Health Commission ("HRHC") became aware of the mercury remediation activities and visited the site in September 1995 to inspect the remediation activities. The Focused Feasibility Study should state how the HRHC was made aware of the mercury remediation activities.

John Pascale agrees with and hereby adopts the General Electric Company's ("GE") technical evaluation of the Focused Feasibility Study, which begins at Section III of GE's comments on the Focused Feasibility Study. Specifically, but not by way of limitation, John Pascale agrees with the following conclusions reached by GE:

- ! The action levels adopted by EPA are inappropriately extreme.
- ! EPA has conducted a risk assessment that is not based on actual, realistic exposure assumptions but, has based its decisions on implausible exposure scenarios.
- ! EPA should have applied the exposure standard set by the American Conference of Governmental Industrial Hygienists ("ACGIH"), 1996.
- ! The use of excessively high exposure standards and EPA's failure to explain why preexisting standards, we not appropriate constitute violations of the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP").
- ! EPA has incorrectly assumed and has failed to demonstrate that remediation to industrial standards is infeasible.
- ! EPA has failed to recognize that GE has significant experience in remediating mercury-contaminated buildings for industrial use and that the remedial methods used by GE at other facilities can be readily and successfully implemented at the site at much less cost than EPA's proposed remedy.
- ! EPA's risk assessment is incorrectly based upon inflated breathing rates for industrial workers and the presence of sensitive subpopulations.
- ! Remediation to accepted industrial and commercial standards is cost effective and pursuant to 40 C.F.R. §300.430(f)(ii)(D), should be selected as the appropriate remedy for the site.
- ! EPA's risk assessment has incorrectly assumed a residential exposure scenario. The property was improperly converted to residential use as a result of the Grand Street Artists Partnership's negligence and David Pascale's submissions pursuant to New Jersey's Environmental Cleanup Responsibility Act (N.J.S.A. 13.1K-6 et seq.). EPA's risk assessment should have been based on, the more reasonable assumption that the site will be used for industrial/commercial purposes.
- ! EPA's estimated costs for permanent relocation are unsupported and overstated. The NCP at 40 C.F.R. §300.160(a)(i) requires EPA to complete and maintain documentation supporting all actions taken under the NCP. Additionally, 40 C.F.R. §300.810 requires that the Administrative Record include those

documents that form the basis for EPA's response action. Contrary to these requirements, EPA has not documented the basis for its estimate regarding permanent relocation of the former residents.

- ! EPA has improperly failed to reduce the costs of permanent relocation by the amount of insurance coverage available to the former residents of the site. 44 C.F.R. §221.5 prohibits EPA from providing duplicative benefits to displaced persons.
- ! The Focused Feasibility Study provides cost estimates for remediating the site to residential standards that are inconsistent with the technical engineering report prepared by Levine-Fricke-Recon.
- ! For the reasons set forth in John Pascale's March 28, 1997 comments to EPA's UAO and GE's April 1, 1997 comments to EPA's UAO, it is unlawful and improper for EPA to pay relocation benefits to the prior residents, who are liable under CERCLA. Furthermore, for the reasons set forth in John Pascale's March 28, 1997 comments to EPA's UAO, John Pascale is not liable as a matter of law for relocation costs.

John Pascale also has the following questions regarding the Focused Feasibility Study.

1. Has EPA determined whether any employees of the companies that previously occupied the site have suffered from mercury inhalation? EPA should describe the efforts it has taken to determine whether employees of the former companies have suffered from mercury inhalation.
2. Does EPA agree that the answer to Question No. 1 above is relevant in deciding whether the building should be remediated to industrial standards? If no, please explain why.
3. Has EPA evaluated the effect of GSAP's renovation efforts on the release of mercury? If yes, explain the results of that evaluation.
4. Has EPA taken any groundwater samples at the site? If yes, provide the results of the samples taken. If no, when will EPA conduct groundwater sampling?

Very truly yours,

JFS: vkb

1 UNITED STATES DISTRICT COURT
2 DISTRICT OF NEW JERSEY
3 CIVIL ACTION NO. 96-3774 (DRD)

4 GRAND STREET ARTISTS, :
5 J. MATTHEW SCHLEY, BARBARA :
6 HENRY, HANK SCHLEY, by his :
7 Guardians ad litem J. MATTHEW :
8 SCHLEY and BARBARA HENRY :
9 CHINA MARKS, JOHN STEADWELL, :
10 MEREDITH LIPPMAN, NORA :
11 JACOBSON, DAVID FERM, STEPHEN :
12 KEOUGH, SERENA BOCCHINO, EZRA :
13 KEOUGH, by his Guardians :
14 ad litem STEPHEN KEOUGH and :
15 SERENA BOCCHINO, MICHAEL :
16 SOLTER, CORINNE MULRENAN, :
17 SULTAN CATTO, NESLIHAN CATTO, :
18 IMRE CATTO and KEREM CATTO, :
19 by their Guardians ad litem :
20 SULTAN CATTO and NESLIHAN :
21 CATTO, MARK GRAHAM, MYRA :
22 GRAHAM, EILEEN HOFFMAN, :
23 ROBERT VICHNIS, TOVA BECK :
24 FRIEDMAN, Y. ZAK FRIEDMAN, :
25 BARAK FRIEDMAN, CURTIS :
CRYSTAL, NANCY JESSUP, :
ROBERT SCHIFFMACHER, :
SHUN-YI CHEN and CHING-HUANG :
CHUNG :
Plaintiffs, : (Videotape)
Deposition of:
- against - : WARREN G. MILLAR
GENERAL ELECTRIC COMPANY, :
COOPER HEWITT ELECTRIC CO., :
INC., QUALITY TOOL & DIE :
CO., JOHN J. PASCALE, :
DAVID P. PASCALE, SHERRILL :
PASCALE, ROGERS :
ENVIRONMENTAL MANAGEMENT, :
INC., JENNY ENGINEERING :
CORPORATION, ENPAK SERVICES :
COMPANY, INC., ENVIRONMENTAL

1 WASTE MANAGEMENT ASSOCIATES, :
INC. and CHASAN, LEYNER,
2 TARRANT & LAMPARELLO, :
3 Defendants. :

4 :
PARKER, et al., :
5 :
Plaintiffs, :
6 :
- against - :
7 :
GENERAL ELECTRIC COMPANY,
8 et al., :
9 Defendants. :

10

11

12 TRANSCRIPT of testimony as taken by and
13 before ANNA I. CROUCH, a Shorthand Reporter and
14 Notary Public for the Commonwealth of Kentucky,
15 at the Commonwealth Hilton, 7373 Turfway Road,
16 Florence, Kentucky, on Thursday, March 6, 1997,
17 commencing at 10:10 in the forenoon.

18

19

20 A P P E A R A N C E S:

21

22 SIDLEY & AUSTIN
1722 Eye Street, N.W.
Washington, D.C. 20006
23 BY: LANGLEY R. SHOOK, ESQ.
For the Defendant, General Electric Company
24 (202) 736-8197

25

WAGA & SPINELLI (201) 992-4111

1 A P P E A R A N C E S: (Continued)

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3 New York, New York 10019
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(212) 977-6600

5
6 MEDVIN & ELBERG
One Gateway Center
Newark, New Jersey 07102
7 BY: PHILLIP S. ELBERG, ESQ.
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8 Gerald Norton, individually and as
Guardians ad litem, Janet Filomeno and
9 Louis Nel
(201) 642-1300

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11 STERNS & WEINROTH
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17 Tarrant & Lamparello
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21 Sherrill Pascale
(201) 621-9020

22
23 PITNEY, HARDIN, KIPP & SZUCH
Park Avenue at Morris County
Morristown, New Jersey 07962
24 BY: PETER J. HERZBERG, ESQ.
For the Defendant, Rogers Environmental
25 (201) 966-6300

WAGA & SPINELLI (201) 992-4111

Comments of the General Electric Company
on the Focused Feasibility Study
and Proposed Remedial Action Plan
for the Grand Street Mercury Site, Hoboken, New Jersey.

Submitted By:

The General Electric Company
3135 Easton Turnpike
Fairfield, CT 06431

September 8, 1997

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Comments of the General Electric Company on the Focused Feasibility Study and Proposed Remedial Action Plan for the Grand Street Mercury Site, Hoboken, New Jersey

September 8, 1997

The General Electric Company ("GE") submits then comments regarding the United States Environmental Protection Agency's ("EPA's") Focused Feasibility Study ("FFS") and Proposed Remedial Action Plan (TRAP") (July 9, 1997) and supporting Baseline Human Health Risk Assessment (Apr. 1997) concerning the Grand Street Mercury Site in Hoboken, New Jersey (the "Site") Pursuant to the extension of time provided by EPA in which to file these comments, GE is providing these comments by September 8, 1997 GE requests that these comments be included in the administrative record for the Site and reserves the right to provide additional comments and to supplement the administrative record in the future.

I. EXECUTIVE SUMMARY

From the first, when EPA began providing temporary relocation benefits to residents who had knowingly purchased units in the mercury-contaminated factory building at 722 Grand Street in Hoboken ("the Factory"), EPA has used the Superfund to profit a group of residents for the consequences of their own actions. On July 9, 1997, EPA took the latest significant step in that direction when it issued a plan to demolish the building and to buy new residences for the building owners.

EPA's decision to level the Factory is driven by the Agency's risk assessment and its conclusion that the building cannot be safely remediated for appropriate, non-residential use in fact, if one believes EPA's risk assessment, demolition is unavoidable because the Agency has proposed an exposure level for mercury so minute that no reasonable amount of remedial work could possibly meet it. But the risk assessment is not to be believed. Sweeping aside established, scientifically sound exposure standards developed through elaborate, independent, and peer reviewed procedures by U.S. and international agencies, EPA has come up with its own mercury exposure standard keyed to the politicized circumstances of the Hoboken Site. The result of this stretching exercise is a mercury standard two orders of magnitude less than the industrial standards set by more than a dozen developed countries in five continents and the World Health Organization. To get to this result, EPA has ignored current, scientifically sound workplace exposure standards set by the very agency charged with protecting worker health and safety -- the Occupational Safety and Health Administration ("OSHA") -- and by national standards organizations, such as the National Institute for Occupational Safety and Health ("NIOSH") and the American Conference of Governmental Industrial Hygienists ("ACGIH"), whose purpose is to evaluate occupational risks and develop exposure standards to address those risks. EPA has identified no site-specific features warranting its radical departure from such established exposure standards. Instead, in an apparent effort to create support for the Agency's preferred remedial alternative. EPA has chosen to rely upon a risk assessment that is flawed, unrealistic and based on incorrect principles and assumptions. The critical flaws in the risk assessment, and EPA's inappropriate departure from established, scientifically sound exposure standards, run to the heart of the selection of the proposed remedy, and demonstrate that EPA's proposal is arbitrary and capricious.

In addition, EPA ignores the basic facts -- that this property was historically used for industrial purposes and was unlawfully and improvidently converted to residential use. Thus, the Agency's reliance upon residential exposure assumptions as the underlying support for the PRAP is arbitrary and capricious. When an appropriate remediation standard is applied, it becomes clear that remediation of the Factory to commercial/industrial standards not only is protective and viable, but is by far the most cost-effective option. Thus, EPA is required by the criteria set out in the NCP to select remediation to commercial/industrial standards as the remedy for the Site.

In contrast, EPA's PRAP represents a giant step backwards in EPA's approach to Superfund sites. Contrary to EPA's policies that risk assessments should be grounded in reality, EPA here has developed an exposure standard that leaves reality behind. Contrary to EPA's policies of promoting the continued use of viable industrial property, EPA proposes just to tear down the still viable Factory. And, contrary to EPA's policies -- and its statutory mandate -- of promoting cost-effective remedial decision making, EPA has rejected a protective, viable, and cost-effective alternative of restoring the Factory to industrial use, in favor of the most expensive remedy under consideration -- leveling the Factory and buying new residences for

the current owners. The remedy not only is inconsistent with the remedy-selection criteria promulgated in the NCP, it inappropriately profits the owners of the Factory, compensating them for far more than their out-of-pocket costs in a situation where they knowingly purchased units in a building contaminated with mercury.

Finally, EPA has put forth a proposed remedy not supported by the administrative record. EPA refuses to divulge key aspects of the basis for the proposed remedy, including any of the analysis supporting the Agency's claim that it will cost nearly \$10 million to relocate the residents. EPA's failure to document the basis of its proposed decision denies GE the opportunity for meaningful comment and subverts the statutory and regulatory requirements applicable to CERCLA remedial decisionmaking.

GE's specific comments follow. To undemand the extent of the errors underlying the proposed plan, it is necessary to set out the facts surrounding the use of this property and the unlawful conversion to residential use. After summarizing that background, GE will analyze EPA's unsound risk assessment and demonstrate how under an appropriate risk assessment it is protective, feasible and cost-effective to return the Factory to industrial use. We will then discuss the inadequacies in the administrative record supporting the PRAP.

II. BACKGROUND

A. The Industrial History Of The Site

The Site is a former industrial plant located at 722 Grand Street, Hoboken, New Jersey, comprised of a five-story brick factory building and an adjoining four-story structure (collectively, "the Factory"). Beginning in approximately 1910, the Cooper Hewitt Electric Company ("Cooper Hewitt I") owned and operated the Factory to produce lighting equipment and other products, including Cooper Hewitt mercury vapor lamps. In approximately 1919, GE acquired an interest in Cooper Hewitt I. By approximately 1940, GE had acquired all of Cooper Hewitt I's business and had become the owner and operator of the Factory. During World War II, GE operated the Factory in support of the war effort.

Information presented in initial discovery in the private contribution actions and in EPA's administrative depositions demonstrates that during GE's involvement at the Factory operations were conducted safely and cleanly, and in accordance with the prevailing commercial practices of the time. Significantly, knowledgeable former employees recall no instances of employee health or safety problems because of exposure to mercury at the Factory. See Deposition Transcript of Warren Millar ("Millar Dep. Trans.") at 64-65, Deposition Transcript of John J Pascale ("Pascale Dep. Trans.") at 105-06; EPA Admin. Deposition Transcript of Francis Chenel at 30-31

In 1948, GE discontinued its operations in Hoboken and sold the Factory and associated property with full disclosures to a newly established corporation, which operated as Cooper Hewitt ("Cooper Hewitt II"). The new company, which had no connection to GE, manufactured Cooper Hewitt mercury vapor lamps and other lighting products at the Factory until approximately 1964, when it moved its operations to Kentucky. Although Cooper Hewitt II sold the Factory in 1955 to John Pascale, it continued to manufacture mercury vapor lamps at the Factory as a tenant until 1964. From 1948-1979, John Pascale operated a tool and die business, Quality Tool & Die Company ("Quality"), at the Factory.

In 1979, John Pascale transferred the Factory and the Quality business to his son, David Pascale. David Pascale continued to use the Factory for industrial purposes until a legal dispute with his father resulted in the temporary transfer of the property back to John Pascale. In 1988, John Pascale ceased operating the Quality business and sold off virtually all of its assets. David Pascale regained title to the Factory shortly thereafter. In August 1993, David Pascale sold the Factory to GSAP for conversion from industrial use to residential condominiums. Thus, from the beginning of the century, for at least eight decades, the Factory had been used continuously for industrial purposes.

B. This Unlawful Sale And Conversion Of The Factory To Residential Condominiums

Quality's industrial operations ceased in 1988 (Pascale Dep. Trans. at 102-04). That cessation of operations triggered New Jersey's Environmental Cleanup Responsibility Act ("ECRA"), N.J.S.A. 13:1K-6 et. seq. (currently known as the Industrial Site Recovery Act ("ISRA")). Under ECR-A, Quality had a duty to file an application to the New Jersey Department of Environmental Protection ("NJDEP") within 5 days of ceasing operations. However, it was not until 1990 that David Pascale filed an application under ECRA. As the current owners, David Pascale and Quality had a legal duty to comply with ECRA, including investigating the property and clearing up any contamination. Id. at 13:1K-9, -13.

Long before the ECRA process was completed -- if not from the very beginning - David Pascale specifically intended to sell the Factory. In the summer and fall of 1992, the founding partners of what eventually became GSAP. Robert Schiffmacher and Matthew Schley, saw a "For Sale" sign on the Factory, inspected the building, and began negotiations with David Pascale for the express purpose of purchasing and converting the Factory into residential condominiums. GSAP's Response at pp. 5-6 Nonetheless, David Pascale and Quality completed the ECRA process based on initial ECRA submissions to the NJDEP and a so-called Negative Declaration Affidavit, certified by David Pascale, that specified only "cessation of operations" as the ECRA trigger and did not disclose the planned conversion of the Factory for residential use. Significantly, the ECRA submissions and Negative Declaration Affidavit also failed to disclose that the Factory had been used to manufacture mercury vapor lamps and other products containing mercury or which used mercury during manufacture, stating merely that the Factory had been used only to manufacture "light bulbs." See David Pascale ECRA Filing.

On August 4, 1993, GSAP formally was created, and on the same day it purchased the Factory from David Pascale and his wife, Sherrill Pascale. In or about November 1994, the first residents began to move into their respective units under temporary certificates of occupancy.

GSAP partners have admitted to discovering mercury in the building as early as October 1993 and on several occasions thereafter in different locations within the building. GSAP Response at pp. 23-25. In January 1995, the renovation of a fifth floor unit revealed a "pool of mercury" in the Factory. GSAP Response at p. 24. On or about May 1, 1995, the owners discovered even greater amounts of mercury in that unit. Complaint of GSAP et al., **MM** 71-72. All of the current unit owners purchased their individual units from the Partnership after May 1, 1995.

2 A copy of this document was provided to EPA with GE's April 1, 1997, Comments to EPA's Unilateral Administrative Order for removal action at the Site ("UAO") GE hereby incorporates those comments by reference into this document, including the attachments to the comments to the UAO.

C. The Temporary Relocation

In November 1995, attorneys for a minority of the owners reported the presence of mercury in the Factory to the Hoboken Health Department ("HHD"). Letter from Steven R. Spector to Ira Karasick (Nov. 7, 1995). 3 In late December 1995, the HHD requested EPA assistance at the Factory, and on January 2, 1996, the NJDEP further requested that EPA conduct a removal action under Section 104(a) of CERCLA, 42 U.S.C. § 9604(a). On January 4, 1996, EPA began a removal action, and HHD ordered the residents to leave the Factory.

Coinciding with these events in Hoboken, the federal government was temporarily shut down due to a budget stalemate between Congress and the White House, while the East Coast was experiencing a record snow blizzard. On January 8, 1996, GSAP's attorneys first contacted GE regarding the mercury situation and the impending evacuation. In view of the unusual circumstances confronting EPA, GE temporarily set aside its serious reservations as to liability, and within two days offered emergency funds to the former residents so they could afford to vacate the building immediately. All of the residents took advantage of this offer and used up virtually all of the money, although not all of the funds were spent on emergency relocation.

On or about January 11, 1996, the last of the former residents left the Factory. Since then, with the initial, voluntary assistance from GE, EPA has managed the relocation and paid for the housing and related expenses ("temporary relocation") of these former residents EPA has done so without utilizing basic (and

legally required) cost and fiscal management controls, such as confirming the unit owners' compliance with their mortgage obligations, and has also provided "temporary relocation" to one couple who never even moved into their assigned unit or even purchased it. Letter from Jack Harmon, On-Scene Coordinator, EPA Region II, to Ching-Huang Chung & Sun-Yi Chen (Mar 19, 1996). 4 GE, pursuant to the terms of the modified UAO which became effective on May 9, 1997, has recently taken over the performance of certain removal activities at the site; however, EPA continues to pay temporary relocation benefits to the former residents. GE has maintained and continues to maintain that it is not liable for temporary relocation costs incurred in connection with the site.

D. The CERCLA Contribution Actions

On August 7, 1996, GSAP, its individual partners, and the owners of the Factory and former residents filed their tort and private CERCLA contribution actions against GE, John and David Pascale and other defendants, including GSAP's attorneys and environmental consultants who were retained in connection with the acquisition of the Factory. 5 The complaints in the consolidated private contribution actions seek, inter alia, a judgment declaring that the plaintiffs, including the current owners, are not liable under CERCLA and, alternatively, contribution under CERCLA from GE, John Pascale and other defendants. GE has counterclaimed against GSAP and the owners for a declaratory judgment that the Partnership and the current owners are liable under CERCLA and for contribution under CERCLA for any response costs incurred by GE. GE's Motion for Partial Judgment on Pleadings or, Alternatively, for Partial Summary Judgment currently is pending before the District Court. See Section V, *infra*.

E. EPA Enforcement Activities

On August 12, 1996, EPA issued General Notices of Potential Liability only to GE, John Pascale and David Pascale, naming, them as CERCLA potentially responsible parties ("PRPs") at the Site. EPA has steadfastly refused to name the Partnership or any of the current Site owners as PRPs. On February 24, 1997, EPA issued its UAO only to GE and John Pascale. EPA did not issue the UAO to either David Pascale, the Partnership or any of the partners or individual owners. EPA subsequently modified the UAO to delete all requirements pertaining to the temporary relocation of the former residents. This UAO, as modified, became effective on May 9, 1997.

The comments that follow must be considered against this unique and still-evolving factual background.

III. THE RISK ASSESSMENT AND EPA'S PROPOSED REMEDIAL ACTION ARE TECHNICALLY INFIRM AND DO NOT COMFORT WITH EPA REGULATIONS AND POLICY.

A. Overview

EPA has selected a proposed remedy that is first and foremost based on the Agency's evaluation of the potential risks of mercury exposure. The Agency's preferred alternative -- demolition of the Factory and permanent relocation of the residents -- is the most expensive remedial alternative considered by EPA in the PRAP. EPA concludes that there is no viable available technology that can remediate the building to the exposure standards that the Agency has selected, and therefore the valuable Factory building must be destroyed.

It may be that the Factory cannot feasibly be remediated to the action levels selected by EPA, but that is because the action levels adopted by the Agency are inappropriately extreme. To get to those extreme levels, EPA has conducted a risk assessment that is not based on actual, realistic exposure assumptions and risks but, instead, has predicated its decisions on implausible exposure scenarios chosen, it would appear, for the sole purpose of supporting EPA's pre-ordained remedial preference -- demolition of the Factory. This is a warping of the normal Superfund decisionmaking process, and a rush to judgment that has been unduly influenced by community pressure.

EPA relies on its risk assessment as the basis for rejecting other viable alternatives, including remediation of the Factory to current industrial standards. At bottom, however, because the risk assessment is fundamentally flawed, it cannot be used to support EPA's preferred remedial alternative.

EPA instead should have looked to respected existing exposure standards and guidance to derive an appropriate mercury exposure level. These standards and guidance have been developed by agencies whose mission it is to put forth exposure standards assuring the safety of workers -- standards that an appropriate remediation of the Factory can attain. GE's own evaluation of the most stringent of these standards -- the 25 Ig/m³ standard set by ACGIH - shows that it is conservatively supported by the literature examining the potential health effects attributable to mercury exposure. EPA offers no sound reason why these preexisting standards are not appropriate for the Factory. Instead, EPA sweeps them aside, essentially promulgating its own indoor exposure standards for mercury at levels so stringent that no workplace lawfully using mercury could hope to attain them, notwithstanding compliance with promulgated federal standards and existing guidance. The precedent and policy implications which would flow from EPA's approach here call for a full revisiting and revocation of this scientifically unfounded proposal.

B. The NCP, EPA Guidance Documents And EPA's Administrative Reforms Require That Risk Assessment Be "Grounded In Reality" And That Remedial Actions Be Sensible And Cost-Effective.

The NCP establishes a three-tiered approach for selecting remedies under CERCLA. 40 C.F.R. § 300.430(f). The first tier identifies the "threshold criteria" that a remedy must satisfy -- overall protection of human health and the environment and compliance with applicable or relevant and appropriate requirements. The second tier sets out "primary balancing criteria" (i.e., long-term effectiveness and permanence; reduction of toxicity, mobility, or volume through treatment, short-term effectiveness; implementability, and cost). The third and lowest-weighted tier of review allows EPA to consider State and community acceptance as "modifying criteria." *Id.*

Recently, EPA has explicitly stated, also as part of its Superfund reforms, that the Agency must "make smarter cleanup choices that protect the public at less cost." EPA Press Release, "Superfund Administrative Reforms" (Oct. 1995) at 1. In making this pronouncement, EPA has stressed:

Lowering the costs of cleanups makes both economic and environment sense for communities, state and local governments, and businesses involved in cleanup settlements. The new reforms will ensure consistency, streamline processes to save time and money; create new opportunities for choosing cost-effective cleanup options; and do more to protect public health and encourage economic redevelopment.

(Emphasis added). Further, the Agency has made it clear that where possible, remedial alternatives should be based on reasonably anticipated future land use, not on an unreasonable use for which the site was never and will likely never be appropriate. See "Land Use in the CERCLA Remedy Selection Process." OSWER Directive No. 9355 7-04 at 2 (May 25, 1995).

In addition to making "common sense" cleanup decisions, EPA has also supported state-led redevelopment programs aimed at bringing contaminated sites back into productive use through its brownfields funding initiative. See, e.g., Memorandum from S.D. Luftig (Director, EPA Office of Solid Waste and Emergency Response) and J. Clifford (Director, EPA Office of Site Remediation Enforcement) to Directors of EPA Regional Superfund Programs re: FY 1995 Superfund Reforms Semiannual Report, February-December 1995 (Mar. 13, 1996). Indeed, the Agency has stated its continuing commitment to "encourage the safe and sustainable reuse of idled and under used industrial and commercial facilities" through state-led brownfields redevelopment programs. *Id.* at 6. While it is true that many of the state-specific programs expressly exclude sites on the National Priorities List ("NPL") from participation, the focus of the programs and EPA's brownfields initiative is clear -- to return contaminated sites to economically viable use. New Jersey is one of the many states with a large number of industrial properties which, although contaminated from historic operations, could be restored and returned to productive industrial use. And New Jersey, like a significant number of other states, has recognized the importance of facilitating the reuse of formerly contaminated properties. See N.J. Stat. Ann. § 13: 1K-6 to 14; N.J. Admin. Code tit. 7, § 26C. GE is not presently suggesting that the Factory should be remediated under a brownfields program; rather, we point out EPA's strong preference, in both the Superfund context and the Agency's support of state brownfield programs, for returning industrial sites to productive commercial use.

Viewed against this background; EPA's risk assessment and its selected remedial action at the Site are

fundamentally flawed and overly conserative. The Agency cannot demonstrate that its risk assessment is "grounded in reality" or that the proposed remedial action is either necessary or appropriate. For instance, EPA's risk assessment exposure scenarios assume residential use of the property, though it is clear that the Factory was operated for industrial purposes for more than eighty years and was improperly and unlawfully converted to residential use. EPA's proposed remedy, including the building demolition, is equally suspect because the Agency fails even to consider future use of the Factory for industrial purposes, a purpose for which the Factory remains well-suited today. Moreover, EPA assumes, rather than demonstrates, that remediation to industrial standards is infeasible. As shown below, GE has significant experience in remediating mercury-contaminated buildings for industrial and commercial use, and the remedial methods used by GE at these other buildings can be readily and successfully implemented at the GSAP Site at much less cost than EPA's proposed remedy. For these reasons alone, EPA must revisit its risk assessment exposure assumptions and reconsider its proposed remedial action for the Hoboken Site.

C. EPA's Risk Assessment is Scientifically Unsupportable, and the Application of Appropriate, Risk-Based Exposure Standards Demonstrates that Remediating the Site for Industrial or Commercial Use is Protective of Human Health.

1. The Derivation of EPA's Stringent Mercury Cleanup Level for Industrial Exposure is Fundamentally Flawed.

EPA's proposed industrial exposure standard of 0.44 Ig/m^3 is based on bad science. The Agency employed an unusual and unnecessarily convoluted process that started with exposure levels for the entire population, including sensitive subgroups, and reverse-engineered that standard to derive an impractical workplace exposure number. This is an unconventional approach that was compounded by errors and implausible assumptions, all of which led to an unrealistic and unnecessarily strict standard.

EPA began its derivation of an industrial exposure standard by using the Reference Concentration ("RfC") for mercury, a highly conservative general population exposure standard EPA defines the RfC as:

an estimate (with uncertainty spanning perhaps an order of magnitude) of a daily inhalation exposure of the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime.

EPA IRIS Database. EPA's Office of Health and Environmental Assessment derived the RfC by taking the exposure level (25 Ig/m^3) at which the Agency considered that some adverse effect have been reported in workers, adjusted for occupational as against general population exposure (5/7 days/week, 10/20 m^3 air breathed/day), and divided by uncertainty factors (10x for assumed lowest observed adverse effects level ("LOAEL") to no observed adverse effects level ("NOAEL"), 3x for incomplete data set related to concerns about reproductive toxicity) (USEPA 1997). 7 This gave a concentration of:

This information is contained in EPA's Integrated Risk Information System ("IRIS"). EPA recognizes that "entry of a value in IRIS is not a rulemaking. Thus, the entry of a value on IRIS does not make the number legally binding (i.e., the value is not entitled to conclusive weight) for the purposes of Superfund risk assessments. When a toxicological value is questioned in a comment on the proposed plan, a written explanation for the value ultimately selected (whether it is the IRIS value or another number) must be included in the administrative record." OSWER Directive # 9285 7-16, "Use of IRIS Values in Superfund Risk Assessment," at 2 (Dec 21, 1993)

There are several basic flaws and a number of additional compounding errors in EPA's approach. First, the RfC is a general population exposure standard that should not be used as the basis for setting an occupational exposure level. The RfC is used by EPA to identify a level of continuous exposure (24 hours/day, 365 days/year, for a lifetime) that the Agency believes is safe for the entire population,

including sensitive subgroups, such as children and the elderly. Because of the conservative assumptions and uncertainty factors included in its derivation, however, it is not intended, and should not be used, as the basis of an occupational exposure standard where there is no basis to assume the presence of these sensitive subgroups.

Second, EPA has used an inappropriate inhalation rate for workers that is inconsistent with established approaches and normal physiology. EPA does not explain the basis for assuming a 20 m³/day inhalation rate other than to offer the conclusory statement that it was "in accordance with EPA guidance." Risk Assessment at 3-14. This is a gross exaggeration of any likely exposure since it appears to assume that either the worker is in the building 24 hours/day (20 m³ is the standard 24-hour inhalation volume generally used by EPA), or is engaged in non-stop heavy exercise for eight hours/day (based on inhalation rates reported by ICRP 1984). Even workers who do perform heavy exercise take breaks, with the result that their total air intake will be less than 20 m³/workday. Indeed, there is no reason to believe that future workers at this site will breathe any more during each workday than the workers in the studies that formed the basis of the RfC, while the procedure used by EPA assumes they will breathe twice as much EPA's assumption is also out of step with the assumptions used by OSHA and ACGIH, both of which are charged with developing standards for occupational risk assessments. These groups both assume an inhalation rate of 10 m³/day rate for workers.

Finally, EPA's starting point, the RfC for mercury, is itself based on the assumption that exposure to mercury at an air concentration of 25 $\mu\text{g}/\text{m}^3$ is associated with adverse health effects. In fact, 25 $\mu\text{g}/\text{m}^3$ is itself a protective occupational exposure level for mercury. That is the level adopted by ACGIH and numerous regulatory agencies around the world, see infra, Table 1, and GE's evaluation of available health-effects studies shows that the standard is grounded in good science, as the following discussion will show.

2. Existing Occupational Standards for Mercury Vapor Are Reasonable and Are Supported by the Scientific Literature.

EPA's proposed occupational exposure standard for mercury is grossly out of line with well-reasoned, existing domestic and international standards which were developed through elaborate, independent, and peer-reviewed procedures. GE's analysis of these standards and their underlying bases demonstrates that EPA should have adopted for the Factory a standard no lower than the broadly accepted 25 $\mu\text{g}/\text{m}^3$ standard developed by ACGIH.

U.S. Standards

The current U.S. Federal occupational standard for mercury vapor exposure is the Permissible Exposure Level ("PEL") of 100 $\mu\text{g}/\text{m}^3$ established by OSHA. OSHA had adopted a new standard of 50 $\mu\text{g}/\text{m}^3$ in 1989, but this standard was vacated in 1992 (along with more than 400 other standards adopted by OSHA in the same rulemaking) as a result of a ruling by the U.S. Court of Appeals for the Eleventh Circuit. *AFL-CIO v. OSHA*, 965 F.2d 962 (11th Cir. 1992).

The court concluded that OSHA had not followed the correct rulemaking process, but the decision did not address the scientific merits of OSHA's standard. Thus, the PEL of 100 $\mu\text{g}/\text{m}^3$ remains in effect as the only enforceable mercury exposure standard for industrial settings in this country, and it is the standard by which compliance is measured. EPA recognizes the OSHA PEL as an ARAR for the Factory. FFS at Table 4-1, p. 40.

In 1973, NIOSH established a Recommended Exposure Level ("REL") of 50 $\mu\text{g}/\text{m}^3$, identical to OSHA's 1989 PEL of 50 $\mu\text{g}/\text{m}^3$. Thus, both of the federal agencies tasked with setting safe occupational standards for mercury have concluded that a standard of 50 $\mu\text{g}/\text{m}^3$ is an appropriate, protective occupational standard for elemental mercury, even though OSHA's standard was subsequently vacated in the courts on other grounds.

The most widely followed standard for occupational exposure to mercury vapor is the current Threshold Limit Value ("TLV") established by ACGIH (1996). According to ACGIH, this TLV is "intended to minimize the potential risk of adverse health effects and to ensure that workers maintain their functional capacity."

This TLV was established in 1993 as a result of evaluation by ACGIH scientists of all available data on the

adverse effects of exposure to mercury. These data include several studies that ACGIH concluded suggest adverse effects at occupational exposure levels below the previous TLV of 50 $\mu\text{g}/\text{m}^3$. These studies, which also form the basis of EPA's RfC, are discussed briefly in Attachment 1.

Derivation of ACGIH TLV for Mercury

ACGIH developed its standard of 25 $\mu\text{g}/\text{m}^3$ after a careful review of the available toxicology, epidemiology, and clinical studies evaluating the relationship between exposure to mercury and adverse health effects. GE has reviewed the ACGIH standard and has analyzed the underlying studies. The results of GE's analysis are fully supportive of ACGIH's standard.

The data reviewed by ACGIH included most of the studies reviewed by EPA for its derivation of the RfC. ACGIH mentioned the studies of Fawer et al., and those of Piikivi and coworkers, but there was no explicit indication if (or how) they were considered in the derivation of the TLV, though in the case of the studies by Piikivi and coworkers, the ACGIH review emphasizes the study authors' own conclusions that these studies support an occupational exposure limit of 25 $\mu\text{g}/\text{m}^3$.

In addition to the studies briefly reviewed above, ACGIH cites a series of studies suggesting that there is a "threshold for preclinical changes of CNS (central nervous system) and kidney effects at 50 $\mu\text{g}/\text{g}$ creatinine" in the urine (ACGIH 1996). This concentration corresponds roughly to a concentration of 100 $\mu\text{g}/\text{liter}$ of urine. Data were also cited associating this level of urinary mercury excretion with an average airborne exposure level of about 41 $\mu\text{g}/\text{m}^3$.

ACGIH also cites several studies from the early 1970s that correlate neurologic effects and kidney damage with exposures resulting in urinary levels above 100 $\mu\text{g}/\text{liter}$ of urine, but notes that these studies did not use the most sensitive measures of effects, such as finger tremor (Smith et al. 1970; El-Sadik and El-Dakhkhny 1970; Vroom and Greer 1972).

Many subsequent studies, however, also support the suggestion that adverse effects occur only at mercury exposure levels resulting in urinary concentrations above 50 $\mu\text{g}/\text{g}$ creatinine or 100 $\mu\text{g}/\text{liter}$ of urine. (Lauwerys and Buchet 1973; Foa et al. 1976; Langolf et al. 1978, Levine et al. 1979. 1982, Buchet et al. 1980; Williamson et al 1982, Roels et al. 1982, 1995, 1987, 1999; Albers et al. 1982, 1988, Stonard 1993; Meyer et al. 1984; Roels et al. 1985, 1987, 1989; Bunn et al 1986; Rosenman et al. 1986; Barregard et al. 1988). One study by Verberk et al. (1986), not cited by EPA, reported an association between finger tremor and recent mercury exposure, as measured by urinary mercury concentration (in the range of about 10 to 50 $\mu\text{mol}/\text{mol}$ creatinine -- about 18 to 90 $\mu\text{g}/\text{g}$ creatinine) in 21 workers in a fluorescent lamp factory. The authors equated this level of exposure to an air level of 17 $\mu\text{g}/\text{m}^3$, but no air measurements were made. In fact, based on the relationship between air mercury level and urinary mercury level in the study of Fawer et al. (1983), the air level would have been about 50 $\mu\text{g}/\text{m}^3$. Furthermore, the study did not include a control group, the reported effect was slight ($r = 0.39$), and in contrast to other reports, the effect was reported to be most strongly associated with recent level of exposure rather than past exposure. It is not clear, therefore, that this study supports an association between exposure to mercury at less than 50 $\mu\text{g}/\text{m}^3$ and adverse health effects as the study authors suggest.

Based on its review of the entire body of scientific literature, ACGIH concluded that "to protect the CNS and kidneys, a TLV-TWA of 0.025 mg/m^3 is recommended." Moreover, it is significant that ACGIH's TLV, like the OSHA and NIOSH standards, carries a "skin" notation. Because there would be no opportunity for dermal contact with mercury at the Factory if it was appropriately remediated, this would yield an additional margin of safety compared to a workplace where the air level met the ACGIH TLV but additional skin contact (leading to a higher systemic dose) was possible. It is the systemic dose of mercury, not simply the air concentration, that is critical in determining whether adverse effects might be produced.

Other International Standards

The standard-setting organizations of a number of nations, as well as several international bodies, have established mercury exposure standards. Comparing these standards to the ACGIH TLV shows that ACGIH's standard is among the most protective of occupational standards for mercury in the world. In some instances,

these organizations have simply adopted ACGIH's standard of 25 ug/m³. In other cases, however, these organizations have conducted independent reviews of the scientific literature, leading them to a result consistent with ACGIH's standard. Not one of these organizations has suggested an industrial exposure level even approaching the stringency of EPA's proposed standard for the Hoboken site of 0.44 ug/m³.

Table 1 below lists various national and international occupational exposure levels for elemental mercury. Most of these values are as reported by ACGIH (1996). The procedures used to establish occupational exposure standards in different countries are described by Cook (1987). Many countries simply adopt ACGIH TLVs, or World Health Organization ("WHO") recommendations, in some cases after evaluation and endorsement by a national expert board. For example, the Australian National Occupational Health & Safety Commission ("NOHSC") has adopted the ACGIH TLV for mercury, but the exposure standard was modified as a result of the review of the Exposure Standards Expert Working Group (NOHSC World Wide Web site, August 1997).

Other countries, notably the U.K., Australia, and Germany, have entirely independent groups that establish their own occupational limits based on expert review of the relevant data (Cook 1987). In the U.K., for example, the Working Group on the Assessment of Toxic Chemicals ("WATCH"), a group of experts in chemical safety, examines the toxicological, epidemiological and other data relating to exposure to a substance and makes recommendations and forwards them to the Health and Safety Commission which also reviews them and, after public consultation, establishes an appropriate, health-protective occupational exposure limit. In the case of mercury, WATCH identified a threshold for toxic effects of mercury corresponding to a urinary concentration of 20 μmol/mol creatine or more, and equated this urinary concentration to an airborne level of 25 μg/m³. That airborne level was adopted as an 8-hour TWA occupational exposure standard ("OES") for elemental and divalent (inorganic) mercury.

Australia has a similar procedure, with review of data by a nine-member Exposure Standards Working Group who are nominated on the basis of their expertise in specific occupational health and safety areas. The recommendations of the Exposure Standards Working Group are subsequently reviewed by the tripartite Standards Recommendation Standing Committee and the National Commission. In the case of mercury, the Exposure Standards Working Group reviewed and adopted the ACGIH TLV, with the exception that they recommended deletion of the "skin" notation because they did not consider skin absorption of mercury vapor to represent a significant hazard (they did not address skin absorption due to direct contact with liquid mercury).

The German Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area is an expert group composed of 35 members elected for terms of three years by the German Senate, plus four permanent guest members. The Commission has five working groups with the following respective responsibilities: (1) establishment of Maximum Allowable Concentration ("MAC") values; (2) analytical chemistry; (3) evaluation of particulate matter; (4) occupational cancer; and (5) dermal lesions. The Commission's recommended occupational exposure limits (MAC values) are published in the official bulletin of the Ministry of Labor, and thus become mandatory. For each chemical (including mercury), the Commission publishes a monograph that describes the derivation of the MAC value and the human and animal data on which it is based. As with ACGIH TLV values, notice is given one year in advance of proposed changes in MAC values.

Importantly, many of the standards set by other nations, like those of ACGIH, NIOSH, and OSHA, have a "skin" notation indicating the potential for a substantial additional dose of mercury as a result of skin contact with mercury liquid or vapor. As noted earlier, there will be no potential for dermal contact with mercury after renovation at the Factory. Thus, these standards are overly conservative as applied to post-remediation exposure in the Factory.

TABLE 1

National and International Occupational Standards for Elemental Mercury

Standards Organization	Mercury Air Standard - 8 Hr TWA ($\mu\text{g}/\text{m}^3$)
ACGIH (US)	23 (skin)
NIOSH (US)	50 (skin)
OSHA (US)	100 [50 (skin) struck down, 1992]
Australia	50 (skin)
Belgium	100 (skin)
Canada	50
China	20
Egypt	50
Finland	50
France	50 (skin)
Germany	100 (skin)
Hungary	20 ("Target")
India	50
Mexico	50
Poland	50
Sweden	50 (skin)
Switzerland	50 (skin)
Turkey	100 (skin)
UK	25 (recently revised down from 50)
WHO	25

3. Conclusion

Several compelling conclusions result from this analysis. First, the risk assessment employed by EPA to develop the extremely stringent industrial exposure standard was critically flawed. From a scientific perspective, the Agency's analysis used an unconventional and faulty approach in which numbers initially derived for residential exposure, which were based on assumptions not applicable to an industrial setting, were modified to attempt to derive an industrial exposure standard. In addition, demonstrably incorrect assumptions, such as the inflated breathing rate for an industrial worker and the presence of sensitive subpopulations, skewed the Agency's risk assessment. Moreover, the overly conservative assumptions used in the risk analysis are unsupported and at odds with current EPA policy initiatives directing the use of more realistic exposure assumptions.

It is hardly surprising, therefore, that the result of this slanted analysis is to produce an exposure standard that is not only unattainable and excessively stringent, but is grossly out of line with the considered analysis of every standard-setting organization in the world that has developed mercury exposure standards for industrial settings. The proposed industrial standard of 0.44 Ig/m^3 derived from the risk assessment is over 200 times more stringent than the legally enforceable OSHA standard, and over 50 times more stringent than the standard adopted by ACGIH and regulatory agencies in more than a dozen developed countries across five continents. GE's analysis shows that the TLV put forth by ACGIH is protective in an industrial setting, and indeed that its application to the Factory would provide an additional margin of safety because the remediated building would present no opportunity for dermal contact with free mercury.

Moreover, EPA has not identified any unique factors at the Factory that justify departing from established national and international standards. That is, there is nothing in the possible exposure scenario in the Factory to distinguish it from any other commercial or industrial setting in a way that warrants adopting a more stringent standard. To the contrary, the only distinguishing factor cuts the other way: the absence of the potential for dermal contact in the Factory (post-remediation) provides an additional margin of safety when those standards are applied to the Factory.

In short, EPA should have adopted an industrial exposure standard equivalent to the ACGIH standard of 25 Ig/m^3 to consider whether remediating the Factory for industrial or commercial use is protective and achievable. Having established that such a standard is protective, we now examine GE's successful remediation efforts at other locations, which demonstrate that a standard of 25 Ig/m^3 is achievable at the Factory.

D. GE Has Had Considerable Experience And Success In Industrial Mercury Remediation.

In contrast to the Agency's unsupported conclusions regarding technical infeasibility, GE has had considerable experience and success in remediating former industrial facilities to current industrial standards which are protective of human health and the environment. Specifically, GE has remediated three former mercury-contaminated lamp plants, all of which currently satisfy applicable standards governing worker health and safety in a fully operational facility: (1) the Jackson, Mississippi, Lamp and Glass Plant; (2) the Newark, New Jersey, Lamp Plant, and (3) the Cuyahoga, Ohio, Lamp Plant.

In 1995-86, GE successfully completed a remediation of its former Jackson Lamp and Glass Plant. This plant, located in Jackson, Mississippi, was operated by GE from 1940-1985. There were two parts to the plant -- a fluorescent lamp assembly operation and an adjoining glass tube facility. The plant, which is no longer owned by GE, is predominantly single-floored with a second floor lamp assembly operation. The first floor is concrete, and the second floor is made of wood. The primary contaminants of concern at the facility were mercury, cadmium, beryllium and arsenic. Prior to remediation, the mercury levels at Jackson were in the range of 70 Ig/m^3 . In the course of the remediation, GE removed the second floor of the plant, power washed the walls and ceiling and acid etched the concrete floor and ceramic tile using a 20% nitric acid solution. At the conclusion of this encapsulation project, the facility satisfied not only mandatory OSHA standards but also the recommended standards set by NIOSH and ACGIH. The facility is currently used by an electrical contractor and an automobile parts operation.

GE has had similar success in remediating its formerly owned Newark Lamp Plant, located in Newark, New

Jersey. This plant, which operated from 1907-1984, was previously an incandescent lamp assembly facility which used mercury vacuum pumps as part of the production equipment. The primary constituents of concern at this plant were mercury, polychlorinated biphenyls ("PCBs") and oils. The remedial project at this facility consisted of the following: (1) removal of process equipment, partitions, floor tile and some sections of the wood floor; (2) sanding some sections of wood flooring; (3) power washing certain other sections of wood floors and all walls and ceilings; (4) encapsulation of the wood flooring; and (5) acid etching the concrete flooring. Like the Jackson plant, at the time of remedy completion, the Newark plant met or exceeded OSHA regulatory thresholds and the NIOSH and ACGIH standards. This facility is presently used as a small business center.

Most significantly, GE has safely and effectively remediated its Cuyahoga Lamp Plant, a facility similar in structure to the Hoboken Factory, to satisfy current industrial standards. This facility, located in Cleveland, Ohio, operated as a lamp assembly plant from 1921-1985. Mercury lamps were among the types of lamps assembled at the Cuyahoga facility. This plant, like the Hoboken Factory, is a multi-storied, brick building with wooden floors and concrete and tile in the basement, and wood beams and floors overhead. The primary constituents of concern at the facility were mercury, cadmium, thorium and asbestos. Mercury levels prior to remediation ranged as high as 35 Ig/m³.

Beginning in 1988, GE undertook the following remedial measures (1) removal of process equipment and partitions; (2) vacuuming of remaining surfaces; (3) encapsulation of wood floors and covering them with plywood and carpeting; (4) painting of walls; (5) installation of vinyl wall coverings in some locations; and (6) installation of drop ceilings. Despite these substantial remedial measures, GE was able to preserve the historical structure and features of the building, including the arched windows, wood post and beam supports and the brick and masonry. This building, which is listed in the National Register of Historic Places and is still owned and operated by GE, currently houses office space, a fitness center and a small machine shop. At the conclusion of remedial efforts, it too satisfied both legal and recommended workplace exposure standards for mercury, including the ACGIH standard of 25 Ig/m³. The facility continues to meet those standards today.

The remedial measures implemented by GE at these three facilities are easily transferable to the Hoboken Factory. GE has unequivocally demonstrated the technical feasibility of remediating mercury contaminated industrial facilities, as well as the ability of remediating facilities to satisfy the federally enforceable workplace exposure standard for mercury set by OSHA, and the more conservative standards established by NIOSH and ACGIH. Furthermore, because the Hoboken Factory is similar in structure and age to the Cuyahoga Lamp Plant, at which an industrial remediation has been successfully completed, the techniques previously used by GE are readily transferable. In short, EPA erred in dismissing remediation to current industrial standards as a technically impracticable alternative and must reconsider its analysis of this alternative in light of the information provided above.

E. Remediation of the Factory to Industrial/Commercial Standards is Cost-Effective, and Should Have Been Selected by EPA as the Appropriate Remedial Action.

We have demonstrated that remediating the Factory to comply with established workplace standards of 25 Ig/m³ is protective, and based on GE's experience at similar facilities we know it is readily achievable. The costs of remediating the Factory to these levels is significantly less than the costs of demolition. As a result, remediation to industrial/commercial standards is the most cost-effective option that assures protection of human health and the environment, and this course should be selected by EPA as the appropriate remedy for the Factory.

The NCP and EPA guidance specifically require EPA to select a remedy that is cost-effective. As indicated above, 40 C.F.R. § 300.430(f) governs remedy selection at a Superfund site. Subsection 300.430(f)(ii)(D) of the provision states, in relevant part, that:

Each remedial action selected shall be cost-effective Cost-effectiveness is determined by evaluating [three criteria] to determine overall effectiveness: long-term effectiveness and permanence, reduction of toxicity and mobility, or volume through treatment, and short-term effectiveness. Overall effectiveness is then compared to cost to ensure that the remedy is

cost-effective. A remedy shall be cost-effective if its costs are proportional to its overall effectiveness.

(Emphasis added). During the feasibility study process, a remedial alternative must be screened out where (1) it provides effectiveness and implementability similar to another alternative but at greater cost or (2) the costs associated with the alternative are "grossly excessive compared to its overall effectiveness." 40 C.F.R. § 300.430(e)(7)(iii); see also "The Role of Cost in the Superfund Remedy Selection Process," OSWER Quick Reference Fact Sheet at 4 (Sept. 1996). EPA has recently reiterated the importance of cost in the selection of a preferred remedial action.

Cost is a critical factor in the process of identifying a preferred remedy. In fact, CERCLA and the NCP require that every remedy selected must be cost-effective. OSWER Quick Reference Fact Sheet at 5 (underscoring in original). Thus, EPA is obligated to evaluate the costs associated with remedial alternatives thoroughly and accurately and to select the most cost-effective alternative. Failure to do so may be considered arbitrary and capricious action inconsistent with the NCP. Cf. *United States v Ward*, 618 F. Supp. 884 (E.D.N.C. 1985) (defendant may seek to show that Agency failed to comply with NCP requirement regarding cost-effectiveness but must also demonstrate that such failure constitutes arbitrary and capricious action).

GE estimates the cost of remediating the Hoboken Factory for continued commercial/industrial use at \$2,276,400. See Attachment 2. Moreover, GE estimates the cost of demolishing the building to be \$4,614,000. *Id.* 10 Thus, the cost of remediating the building to commercial/industrial standards is \$2.36 million -- a full 50% -- less than the expense of demolishing the building. Moreover, EPA estimates the residual value of the commercial building to be \$1.8 million, which further offsets the remedial costs. 11 Thus, taking into account both the anticipated residual value of the structure and GE's estimates of the different remediation costs, remediating the building to commercial/industrial standards would result in more than \$2.5 million of expected cost savings. Finally, and importantly, at the end of renovation to commercial/industrial standards, there will be left standing a usable structure. This is consistent with EPA's current brownfields initiatives to return Superfund sites to productive industrial use.

Because remediating the Factory for commercial/industrial use is protective, is achievable, and is significantly less costly than demolition, it is cost-effective and under the NCP EPA is required to select remediation for commercial/industrial use as the appropriate remedy for the Factory.

F. EPA Inappropriately Employed a Residential Exposure Scenario in the Risk Assessment.

EPA is required by the NCP to conduct a risk assessment that is appropriate for the site. Residential exposure scenarios are not required, but are appropriate only when that is a realistic future use of the property. Here, EPA has assumed the Factory is appropriate for residential use and has conducted a risk assessment to fit that assumption. There is no justification for the Agency's approach, however, because it was only through an unlawful process that this longstanding industrial property was converted for residential use in the first place.

The NCP directs the Agency to conduct a baseline risk assessment for use in selecting remedial alternatives. 40 C.F.R. § 300.430(d)(4). The explicit language of the NCP requires a site-specific risk assessment. Notably absent from the NCP is any requirement that the Agency assume a residential exposure scenario, particularly where an industrial exposure scenario is more appropriate for the site at issue. EPA has acknowledged that the NCP does not mandate an assumption of future residential land use. 55 Fed. Reg. 8666, 8710-11 (Mar. 8, 1990) (preamble to NCP revisions). In fact, the Agency has expressly stated:

The assumption of residential land use is not a requirement of the program but rather is an assumption that may be made, based on conservative but realistic exposures, to ensure that remedies that are ultimately selected for the site will be protective. An assumption of future residential land use may not be justifiable if the probability that the site will support residential use in the future is small.

Id. (emphasis added); see also Risk Assessment Guidance for Superfund, Human Health Evaluation Manual, Part

A, Interim Final at 6-7 (July 1989).

Assuming arguendo that the NCP and the 1990 preamble were ambiguous on this point, recent Superfund administrative reforms confirm that risk assessments must be based on realistic exposure scenarios. Beginning in early 1995, EPA Administrator Carol Browner announced a series of Superfund administrative reforms. One of the key areas covered by the reforms includes implementation of measures for making smarter cleanup choices that protect the public and the environment at less cost. EPA Press Release, "Superfund Administrative Reforms" (Oct. 1995). The Agency further stated that it planned to achieve this result, in part, by ensuring that all risk assessments are "grounded in reality" and make "good use of 'real world' information about the site and site inhabitants." Id.

As part of these ongoing reforms, the Agency's Office of Solid Waste and Emergency Response has issued a directive regarding "Land Use in the CERCLA Remedy Selection Process," OSWER Directive No. 9355.7-04 at 2 (May 25, 1995), acknowledging frequent criticism of EPA's preference for residential exposure assumptions. The directive is aimed, in large measure, at eliminating that criticism by instituting a process to ensure that assumptions regarding future land use are "reasonable." The directive states, inter alia: "For example, future industrial use is likely to be a reasonable assumption where a site is currently used for industrial purposes, is located in an area where the surroundings are zoned for industrial use, and the comprehensive plan predicts the site will continue to be used for industrial purposes." Id. at 8.

Although the City of Hoboken did grant site plan approval for use of the Factory as residential property -- in effect, a variance from the preexisting industrial use zoning -- that approval was predicated on the incorrect premise that the property was in compliance with all applicable environmental laws. Failure to satisfy a pre-condition to site plan approval such as compliance with state environmental laws warrants a nullification of the site plan approval.

In fact, the property was not in compliance with environmental laws at the time of its sale. NJDEP had cleared the site under ECRA based on the misrepresentations of David Pascale, and it is clear that the Department's permission never would have been forthcoming had the parties involved adhered to the ECRA process, and had NJDEP been informed from the outset that the Factory had been used for the production of mercury vapor lamps and was to be converted for residential use. 13 Indeed, by letter dated December 20, 1996, NJDEP revoked its previous ECRA negative declaration approval, based on the contamination now known to exist at the Site.

Nullification of the site plan approval causes the property to revert to its pre-existing industrial use. Since the industrial use of the property was lawfully existing at the time the R-2 zoning district was established in 1979, the property may continue to be used for industrial purposes. See Hoboken Ordinance ° 196-50. Other permitted uses in the R-2 district include a variety of commercial uses. If the presence of mercury had been disclosed prior to the Planning Board's review of the site plan application, the Planning Board would not have approved the conversion of the property for residential use and the factory would have remained as an industrial property.

G. EPA Miscalculated The Soil Exposure Risks: Soil Remediation At The Site Is Not Necessary.

EPA has also miscalculated the soil exposure risks associated with the Hoboken Factory. EPA inappropriately relied on residential exposure assumptions in the first instance, rejecting more realistic and more relevant worker exposure scenarios. Even if it were appropriate to rely upon residential exposure assumptions, here too EPA has erred by overestimating soil ingestion risks.

As with EPA's derivation of a clean-up level for the interior of the building, the Agency has improperly based its proposed soil remediation on assumed residential use of the Site, with exposure of resident children to the soil under the parking lot. As discussed above, residential use of the Site is and has been for nearly 100 years inappropriate, and the soil remediation calculations based on such a use are needlessly conservative. The risk assessment document used to support the proposed soil remediation also contains more appropriate, but still very conservative, calculations based on potential worker exposure related to industrial usage of the Site (Risk Assessment at 3-12 and 5-5). Even these calculations are excessively conservative because they assume that workers ingest 50 mg of soil from the site each work day, despite the

fact that the soil in question is underneath an asphalt parking lot. Even with these very conservative assumptions, however, the calculated hazard quotient for worker exposure to site soil is 0.08 (Risk Assessment at 5-5). Because this value is much less than 1.0, it demonstrates that remediation of site soil is not necessary to ensure health protection under appropriate conditions of future use of the Site, i.e., non-residential use.

Assuming that EPA may appropriately consider residential exposure scenarios for this Site, the Agency is legally obligated to ensure that its assumptions are technically sound and reflect reality. This the Agency has failed to do. In the risk assessment EPA assumes, for instance, that 100 percent of the elemental mercury ingested would be absorbed through the gastrointestinal ("GI") tract. This assumption overstates the bioavailability of elemental mercury. A recent publication by EPA's Science Advisory Board indicates that mercury is poorly absorbed through the GI tract and that only as much as 20 percent of the ingested mercury would actually be absorbed. Mercury Study Report to Congress, Vol. I, Executive Summary, EPA SAB Review Draft, EPA-452/R-96-001a (1996). Correction for this lower bioavailability would reduce risk estimates by a factor of five.

EPA has also used its default residential soil ingestion rates of 200 and 100 mg/day for children and adults, respectively, to evaluate potential exposures via this pathway. These soil EPA has faced similar criticisms for its incorrect assumptions that lead is readily bioavailable, including lead compounds found in Superfund mining sites. The Agency has, under criticism, belatedly revised its lead exposure assumptions.

Ingestion rates are based on findings of tracer element studies, which did not account for dietary contributions of the tracer elements, such as mercury. Binder et al. 1986; Clausing et al. 1987. More recent studies have evaluated soil ingestion by children aged 1 to 4 years and adults using a mass-balance methodology. Stanek et al. 1992. These studies indicate soil ingestion rates for children ranging from 5 to 200 mg/day with a mean of 50 mg/day and a median of 39 mg/day. Id. Similarly, studies of adults indicate that mean adult soil ingestion rates are considerably lower than EPA default values and are on the order of 10 mg/day. Calabrese et al. 1996. Use of these lower and more scientifically supportable soil ingestion rates would further lower estimated risks due to this exposure pathway.

IV. EPA'S ESTIMATED REMEDIAL COSTS ARE NOT ADEQUATELY SUPPORTED BY THE ADMINISTRATIVE RECORD AND ARE OVERSTATED.

A. EPA's Estimated Costs Of Permanent Relocation Are Suspect and Overstated.

EPA's costs for its preferred remedial alternative are inflated and unsupported in the administrative record. Accordingly, EPA has failed to comply with the administrative record requirements of CERCLA and the NCP and has frustrated the ability of GE and other interested parties to comment meaningfully on those cost estimates.

In the FFS, EPA states that the estimated costs associated with the permanent relocation of the former residents (excluding moving expenses) are \$9,915,600. See FFS at, e.g. Tables 6-4 and 6-5. EPA has provided no analysis in the administrative record to support this estimate, and thus GE commissioned an appraisal of the property. That report, Attachment 4, estimates the current resale value of the condominium units, without contamination, to be between \$5,791,432 and \$6,295,577. 16 The report does not include an estimated value for the townhouse. Assuming a value of \$400,000 for that building, the total value would be approximately \$6.2 million to \$6.5 million -- only two-thirds of EPA's inflated (and undocumented) cost estimate.

In fact, even a \$6 million value substantially overstates the fair market value of the condominium units. First, American Appraisal Associates assumed that the units had been fully renovated, although the various units actually were in different stages of renovation when abandoned, reducing their value.

Moreover, EPA's estimate of the value of the units is more than two times the value of the units as evaluated by the owners themselves in 1995. At that time, the Grand Street Artists Condominium Association secured insurance on the property in the total amount of \$3,990,000. Insurance in roughly the same amount was

carried forward as late as November 2, 1996. See Attachment 5.

Thus, upon initial review, EPA's cost estimates for permanent relocation appear grossly overstated and point toward conferring a windfall on the condominium owners. However, EPA's failure to reveal the underlying analysis or assumptions makes it impossible for GE to evaluate the nature and full extent of EPA's error.

To ensure constitutional due process, CERCLA, like the Administrative Procedure Act ("APA"), requires EPA to provide affected parties with notice and a meaningful opportunity to comment on EPA's proposed remedial actions. See CERCLA Section 113(k)(2), 42 U.S.C. § 9613(k)(2) (establishing public participation procedures); 40 C.F.R. § 300.430(f)(2) (NCP provision requiring EPA to provide its rationale for preferred remedial action and afford interested parties an opportunity to comment); see also 5 U.S.C. § 553 (notice and comment requirements for legislative rulemaking). Despite these clear legal obligations, the FFS is remarkably devoid of any discussion of the underlying assumptions used to develop the Agency's cost estimate for permanent relocation with EPA making only passing reference to "confidential appraisals conducted in July 1996." FFS at 118 and 123-24. Moreover, support for EPA's cost estimates do not appear elsewhere in the publicly available administrative record.

On June 30, 1997, GE submitted a Freedom of Information Act ("FOIA") request to EPA, pursuant to 5 U.S.C. § 552, seeking to obtain information regarding appraisals of the Site prepared by or on behalf of EPA. By letter dated August 7, 1997, EPA Region II denied GE's request purportedly on the grounds that such information is exempt as enforcement sensitive and/or interagency memoranda. GE has appealed that decision. Attachment 6 is GE's appeal letter, and we incorporate those arguments into these comments. Rather than repeat the extensive arguments presented in that letter brief here, we simply note that the NCP does not allow EPA to hide behind the cloak of these exemptions to exclude material information from the administrative record.

EPA has promulgated as part of the NCP regulations commanding that all documents which "form the basis" for EPA's selection of a response action be included in the "full" administrative record. 40 C.F.R. § 300.810. This includes draft documents, internal memoranda and the day-to-day notes of staff where such documents contain information that was considered by the Agency and that information is not included in any other document in the administrative record. 40 C.F.R. § 300.810(b). Moreover, although EPA claims that certain documents, such as "privileged" and "confidential" information, may be excluded from the administrative record, EPA must summarize disclosable portions of such documents to the extent feasible. 40 C.F.R. §§ 300.810(c) and (d). The Agency itself has recognized that the language presently contained in the NCP is not intended:

to exclude from the record all documents containing information which the Agency considered in choosing the response action but did not rely on. Rather, EPA intends that the "form the basis for selection" language embody general principles of administrative law concerning compilation of administrative records for agency decisions.

58 Fed. Reg. 53688, 53692-93 (Oct. 18, 1993).

EPA's unilateral abrogation of these basic procedural protections prevents GE and other commentors from fully evaluating EPA's cost assumptions and, consequently, constitutes arbitrary and capricious agency action on behalf of the Agency subject to judicial scrutiny under CERCLA Sections 113(h) and (j), 42 U.S.C. §§ 9613(h) and (j). If EPA does not cure this serious deficiency in the FFS and PRAP, it will not be able to recover response costs for at least this portion of its preferred remedy nor successfully seek to compel others to bear those costs in the first instance under CERCLA Section 106.

Despite this fundamental flaw, GE observes three deficiencies in the cost estimate. First, EPA's cost estimate grossly overstates the actual out-of-pocket expenses of the owners. The Partnership initially purchased the Site for \$1.2 million. Although they invested some amounts toward renovations, the total of the initial investment plus the costs of renovation is clearly much less than the nearly \$10 million that EPA proposes to pay to the owners. EPA has based its estimate not on the relatively modest investments made by the former residents, but on the costs of purchasing new properties. In essence, EPA proposes to pay to a

group of speculative real estate investors -- persons who at the very least made a demonstrably bad investment and, in fact, purchased their condominium units with specific knowledge of mercury contamination at the Site -- for the lost profits of their enterprise. That is completely inappropriate and a misuse of public funds.

Second, EPA has apparently not reduced the cost of permanent relocation to take into account the amount of insurance coverage available to the displaced former residents. Any permanent relocation effort undertaken by EPA is governed by the Uniform Relocation Assistance Regulations, 49 C.F.R. Part 24, and the Federal Emergency Management Agency ("FEMA") regulations, 44 C.F.R. Part 211, which must be read in concert with EPA's CERCLA remedial authority. FEMA regulations require an agency to reduce relocation benefits by the amount of available insurance, and expressly forbid an agency from providing duplicative benefits (either from other governmental entities or private sources) to displaced persons. 44 C.F.R. §§ 220.4, 221.5. Because the FFS and PRAP do not indicate whether EPA has considered the availability of other benefits and taken such "duplicative" benefits into account, it is impossible to evaluate the propriety of EPA's estimate for permanent relocation costs.

The third flaw in EPA's cost estimate is that it assumes, without explanation, that the residual value of the land after demolition (estimated by EPA to be \$1,568,000) will be available to offset response costs. Under Section 104(j) of CERCLA 42 U.S.C. § 9604(j), when EPA "takes" property for remedial action, the State, in this case New Jersey, must agree to take title to the property following remediation. The FFS and the PRAP do not indicate how the residual value of the land will be returned to the Fund to offset response costs if the State takes title to the land. It would be inappropriate for the State to get a windfall in excess of \$1.5 million, with none of the money going back into the Fund to offset the costs of permanent relocation, and if that happened, then EPA's cost estimate, which assumes the money will go back to the Fund, is simply wrong. This mistake is repeated throughout EPA's analysis of remedial alternatives in both the FFS and PRAP.

In sum, EPA must provide additional information regarding the assumptions used to estimate the cost of permanent relocation forming the core of its preferred remedial alternative, including the specific appraisals undertaken by the Agency or its contractors. At a minimum, EPA must offset its estimate by the amount of insurance or other monies available to the former residents and provide information regarding how the residual value of the land will be credited to the Superfund or otherwise used to offset response costs.

B. Because Soil Remediation Is Unnecessary, Supra, EPA Should Not Consider The Costs of Soil Remediation.

EPA estimates the costs of soil remediation to be \$138,000 if the Factory is remediated to industrial standards and \$219,000 if the Factory is remediated to residential standards. For the reasons set out above in Section III.G, EPA has relied on insupportable soil ingestion exposure assumptions that result in the Agency's arbitrary and capricious selection of soil remediation for the site. If appropriate worker exposure scenarios are used, soil remediation of the site is unnecessary and, thus, the costs associated with that remediation should be deleted from the costs of remediating the Factory to current industrial standards. Even if EPA ultimately selects its preferred remedy for the site -- remediation to residential standards -- the Agency must reevaluate the level of soil remediation required, if any, taking into consideration prevailing scientific risk assumptions, rather than the Agency's outdated, default assumptions regarding mercury ingestion of soils.

C. EPA Has Also Overstated The Costs Of Remediating The Building For Residential Reoccupancy.

The arbitrary and capricious nature of EPA's preferred remedy for the Site is further highlighted by the Agency's apparent attempt to inflate the costs of alternative remedial options to make its preferred remedy appear more reasonable and cost-effective. In addition to the serious deficiencies in the risk assessment and PRAP delineated above, EPA has significantly overstated the costs of remediating the building for residential reoccupancy. For example, EPA asserts in the FFS and the PRAP that remediation to residential standards would cost approximately \$4,368,000 (including renovations). This number is inconsistent with the estimate of \$33,245,000 (including renovations) provided to and at the request of the Agency in the Technical Engineering Report prepared by Levine-Fricke-Recon only six months ago. See Technical Engineering Report at Table 4. EPA explains the 33 percent increase in the cost estimate set out in the FFS and PRAP as the cost associated with "several steps" necessary to remediate the building. FFS at 104-105. Notably, the

"additional steps" deemed necessary by the Agency (e.g., washing all remaining interior surfaces, including wooden floor joists and support beams and posts, and brick walls, etc., with a tri-sodium phosphate solution to remove dirt and grime) are specifically rejected in the Technical Engineering Report as being inappropriate for the very surfaces for which EPA now suggests they should be used. EPA further states that etching masonry surfaces with acid or abrasives would be required to remove mercury to the greatest extent possible. FFS at 64. Yet, nowhere in the Technical Engineering Report does EPA's contractor identify etching the masonry as a viable remediation technology. These additional defects in EPA's cost estimates serve to elucidate the fundamental problems in the FFS and PRAP, rendering them legally and technically suspect.

V. LIABILITY ISSUES.

GE has previously demonstrated that the current owners of the Factory and GSAP are liable under CERCLA. See GE's Motion for Partial Judgment on Pleadings or, Alternatively, for Partial Summary Judgment and supporting Brief (filed Sept. 2, 1997), and GE's April 1, 1997 Comments to EPA's UAO. As a result, GE has argued that it is unlawful and improper for EPA to use Fund monies to pay relocation benefits to liable parties. *Id.* Those same liability issues apply to the permanent relocation benefits now proposed by EPA. Moreover, GE has explained that it cannot be held liable for response costs attributable to the intervening acts or omissions of other parties which have occurred in the half century since GE sold the Factory. For these reasons, as well, EPA's proposed relocation remedy is arbitrary, capricious, and not in accordance with law.

VI. CONCLUSION

Both the statutory language of CERCLA and the implementing language of the NCP are straightforward -- EPA is legally required to undertake a risk assessment which is grounded in reality, select a remedy which is cost-effective and makes common sense, and afford interested parties the opportunity to participate meaningfully in the remedy selection process. In this case, EPA has failed to comply with these legal obligations in its attempt to ensure the selection of an expedient remedy -- demolition of the Factory and relocation of the residents. As demonstrated above, the risk assessment and the FFS which ostensibly form the basis for EPA's preferred remedy are so fraught with error and so out of line with the reality of this case and internationally accepted scientific principles and regulatory standards that the PRAP cannot withstand scrutiny. Accordingly, EPA must correct the serious deficiencies in both the risk assessment and the FFS before it can appropriately and fairly evaluate remedial options for the Site. An appropriate comparison of alternatives, based on a realistic risk assessment and the application of a proper exposure standard, demonstrates that renovating the Factory to commercial/industrial standards is protective, is viable, and is cost-effective.

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Summary of Studies Suggesting Effects of Mercury Exposure At <50 Ig/m3

! Fawer et al. (1993)

Fawer et al. (1983) reported an increase in subtle hand tremor (most noticeable when under load -- with a 1.25 kg weight attached to the wrist) in 26 workers exposed to mercury at levels measured as averaging 26 Ig/m3 at the time of the study. The workers included seven glass blowers from a fluorescent lamp factory, 12 workers in a chlor-alkali plant, and seven workers from an acetaldehyde production facility. A group of 25 workers from the same factories, but never occupationally exposed to mercury, served as controls. Although the concentration of mercury in the air averaged 26 Ig/m3 at the time of the study, the authors note that the workers were exposed to higher concentrations in the past, and the clearest predictor of an effect was duration of exposure, not intensity of current exposure (as measured by blood mercury). This suggests that previous higher exposures may be the real cause of the subtle effects seen.

The authors concluded that "these findings might provide some evidence for the necessity for improved working conditions." The "working conditions" the authors were referring to relate to the then-current TLV of 50 Ig/m3.

This study, like the others discussed here, does not take into consideration the contribution of dermal exposure to mercury that may have occurred, particularly in the past. It is thus likely that all of the workers studied were exposed to a higher cumulative mercury burden than is indicated by the 26 Ig/m3 air level measured at the time of the study.

! Piikivi and coworkers

These authors studied EEG (Piikivi and Tolonen 1989), cardiovascular reflex (Piikivi 1989), and subjective symptoms and psychological performance (Piikivi and Hanninen 1989) in Finnish chlor-alkali workers and compared them to matched (by age and sex) control workers. Most showed no effects, but some subtle effects on EEG, cardiovascular reflexes and subjective memory disturbances were reported to be more prevalent among workers than among matched controls. Air mercury levels were not measured; but average exposure levels (25-30 Ig/m3) were inferred from blood and urine mercury levels.

The conclusions that can be drawn from these three studies are limited. Piikivi and Tolonen (1989) note that "no suggestion of a dose effect relation was found in this study," and since exposure was likely higher in the past, as in the Fawer et al. study, any effects seen may have been due to earlier higher exposure.

Piikivi (1989) concludes that "long-term exposure to an average Hg concentration of 30 Ig/m3 of air apparently does not cause notable adverse effects on the autonomic nervous system. The results of the present study reinforce the validity of the atmospheric and biological threshold limit values proposed previously" (referring to the WHO recommended value of 25 Ig/m3). Similarly, Piikivi and Hanninen (1989) conclude that "no significant adverse effects were produced by the long-term exposure to mercury vapor at an average mercury concentration of 25 Ig/m3 of air."

! Ngim et al. (1992)

Ngim et al. (1992) report poorer performance on several aspects of a neurobehavioral test battery among Singapore dentists exposed to mercury than among a control group (university staff). The air mercury level (measured using diffusive personal sampling badges) was reported to average 16.7 Ig/m3 of air. The accuracy of this value is doubtful, however, because diffusive monitoring badges are only semi-quantitative, and the reported value is low compared to the measured mean blood mercury level of 12.3 Ig/l. By comparison, in the Fawer et al. study, the average blood mercury level (associated with a measured air level of 26 Ig/m3) was only 8.3 Ig/l. This suggests that the true average mercury exposure level in the Ngim et al. study was more like $26 \times 12.3 / 8.3 = 39$ Ig/m3 of air (and/or there was substantial mercury exposure not measured by air monitoring, such as dermal absorption due to handling mercury, or inhalation of aerosolized amalgam particulate generated by dental drilling/polishing).

Also, when the subjects were subdivided according to duration and intensity of exposure, only those with the

longest (mean 13.4 yr) and highest (mean blood mercury 18.6 $\mu\text{g/l}$) exposure showed significant effects. By comparison to the measured values in the Fawer et al. study, the high exposure subgroup would have received average exposure equivalent to: $26 \times 18.6/8.3 = 58 \mu\text{g/m}^3$ of air.

This study was not cited in the ACGIH (1996) review, but given the significant questions raised here, it cannot be considered as supporting an occupational exposure standard for elemental mercury of less than 25 $\mu\text{g/m}^3$ of air.

! Liang et al. (1993)

These authors evaluated psychological effects of mercury exposure in 88 workers (19 male, 69 female) in a Chinese fluorescent lamp factory compared to 97 controls from an embroidery factory using a computer-administered, neurobehavioral evaluation system. Airborne mercury exposure levels in the exposed group showed a wide range (5 to 190 $\mu\text{g/m}^3$, mean 33 $\mu\text{g/m}^3$). Significant differences between the exposed and control groups were seen in several neurobehavioral measures (particularly mental arithmetic, two-digit search, and three measures of psychomotor performance: visual choice reaction time, switching attention, and finger tapping). The influence of intensity of exposure (air concentration) was not evaluated, but a relation was seen between neurobehavioral test performance and duration of exposure to mercury (adjusted for chronological age). The lack of analysis of the influence of intensity of exposure limits the conclusions that can be drawn, but the fact that some of the measured air concentrations were very high (up to 190 $\mu\text{g/m}^3$), and the reported relation between duration of exposure and neurobehavioral test performance suggest that current or previous high exposure may be influencing the results.

This study was also not cited in the ACGIH (1996) review, but given the significant questions raised here, it likewise cannot be considered as supporting an occupational exposure standard for elemental mercury of less than 25 $\mu\text{g/m}^3$ of air.

The studies discussed above are summarized in the following table.

Parameters of Mercury Exposure in Studies of Low-level Exposure to Mercury (<50 Ig/m3) a

Study	n	Age (yr)		Duration of Exposure (yr)		Air HG (Ig/m3)		Blood HG (Ig/l)		Urine HG (Ig/g creatinine)	
		Mean (sem)	Range	Mean (sem)	Range	Mean (sem)	Range	Mean (sem)	Range	Mean (sem)	Range
Fawer et al. (1983)	26	44.0 (2.3)	NR	15.3 (2.6)	1-41	26.0 (4.0)	NR	8.28 (0.70)	NR	20.0 (2.1)	NR
Piikivi and Tolonen (1989)	41	38.1	28-56 (1.0)	15.6	5-27 (1.4)	ND	ND	11.6 (0.82)	5.0-30.1	20.6 (2.1)	3.7-55.3
Piikivi and Hanninen (1989)	60	38.0 (0.9)	26-56	13.7 (0.7)	5-28	ND	ND	10.4 (0.64)	3.0-30.1	17.9 (1.6)	3.4-55.3
Piikivi (1989)	41	38.1 (1.0)	28-56	15.6 (1.4)	5-27	25.0 b (ND)	ND	11.6 (0.82)	5.0-30.1	20.6 (2.1)	3.7-55.3
Ngim et al. (1992)	98	32.0 (NR)	24-49	7.4 (0.5)	0.7-24	16.7 (1.0)	0.7-42	12.3 (0-81)	0.63-57.3	ND	ND
Liang et al. (1993)	88	34.2 (0.7)	NR	10.4 (NR)	NR	33.0 (NR)	5-190	ND	ND	ND	ND

a Some values have been converted from the originally reported units (e.g., Imol/mol creatinine) to the units shown here for consistency.

b Mean level during examination period of study; long-term average reported to be 30 Ig/m3.

n = number of individuals in the study; sem = standard error of the mean; ND = no data; NR = not reported.

Project Administration/Management		\$250,500.00
- Project Development	\$20,000.00	
- Staffing Requirements	\$5,000.00	
- Insurance	\$80,000.00	
- Permits	\$5,000.00	
- Project Coordination	\$115,000.00	
- Mobilization/Demobilization	\$25,500.00	

Equipment and Supplies		\$63,500.00
- Office/Supply Trailer	\$2,500.00	
- Decontamination Trailer	\$6,500.00	
- Personal Protective Equipment (Level C)	\$19,500.00	
- Mercon Products	\$11,800.00	
- Toilet Facilities	\$1,000.00	
- Small Hand Tools and Machines	\$3,000.00	
- Drums/Containers	\$3,000.00	
- Polysheeting	\$2,200.00	
- Air Monitoring/Sampling Equipment	\$6,000.00	
- Vacuum Systems (HepaFiltration)	\$8,000.00	

Health and Safety		\$117,000.00
- HASP& QA/QC Plan	\$5,000.00	
- Medical Monitoring	\$3,000.00	
- Health and Safety Officer	\$69,000.00	
- Health and Safety Monitor	\$40,000.00	

Remediation/Dismantling		\$1,175,000.00
- Installation of a Negative Air System	\$117,500.00	
- Removal of Miscellaneous Furniture & Appliance	\$141,000.00	
- Removal of Interior Walls (NEW)	\$129,250.00	
- Removal of Interior Walls Against Brick	\$70,500.00	
- Removal of Finished Flooring	\$35,250.00	
- Construction of a loading area & chute system	\$122,250.00	
- Vacuuming of visible elemental mercury	\$110,500.00	
- Application of Mercon products to floors, walls, etc.	\$38,750.00	
- Removal of each layer of subflooring	\$321,050.00	
- Construction of temporary flooring	\$58,750.00	
- Segregation of waste streams	\$30,200.00	

Waste Sampling & Analytical Analysis		\$6,200.00
- Interior walls, partitions, framing		
- Wood floors, subfloors, insulation & ceiling		
- Wood Members		
- Brick Walls		
- Concrete floor		
- Draeger Tube analysis		

Powerwashing with Tri-sodium Phosphate (2 Applications)		\$198,000.00
First Application		
Set-up scaffolding, safety	\$19,400.00	
Equipment (purchase)	\$12,000.00	
Material & supplies	\$6,000.00	

Labor - 3 men x 40 hrs. x \$40 = \$4,800.00	\$82,600.00	
1/2 man x 40 hrs x \$55 = \$1,100.00 (supervisor)	\$120,000.00	
\$5,900 units x 14 units		
Second Application		
Labor less 10%	\$74,000.00	
Materials & Supplies	\$4,000.00	
	\$78,000.00	
Reporting		\$10,000.00
- Maintenance of Daily Logs/Reports	\$2,500.00	
- Draft Report/Final Report	\$7,500.00	
Transportation & Disposal		\$391,500.00
- Interior walls, partitions, framing & insulation (expected to be clean)	\$18,000.00	
Estimated 300 tons x \$60/ton		
- Wood floor, subfloor, insulation and ceiling (expected to be contaminated with mercury > 260 ppm)	\$252,000.00	
Estimated 700 tons x \$360/ton		
- Elemental mercury (vacuumed waste) - Non Recoverable	\$1,500.00	
- Waste water (from Powerwashing)	\$50,000.00	
Estimated 100,000 gallons x \$50/gal.		
- PPE	\$30,000.00	
- Asbestos contained materials	\$40,000.00	
Total Estimate for Selective Remediation for Commercial Use - Main Building (Estimated with a 25% Contingency)		\$2,211,700.00
Townhouse		
- Remove walls, floors partitions, furniture, vacuum, application of Mercon (similar to main building)	\$63,500.00	
- Transportation & Disposal walls, floors, partitions (expected to be clean) Estimated at 20 tons x \$60/ton	\$1,200.00	
Total Estimate for Selective Remediation for Commercial use - Townhouse (Estimated with a 25% contingency)		\$64,700.00

COST ESTIMATE FOR SELECTIVE REMEDIATION FOR DEMOLITION

Project Administration/Management		\$225,000.00
- Project Development	\$17,000.00	
- Staffing Requirements	\$3,000.00	
- Insurance	\$85,000.00	
- Permits	\$5,000.00	
- Project Coordination	\$95,000.00	
- Mobilization/Demobilization	\$20,000.00	

Equipment & Supplies		\$49,000.00
- Office/Supply Trailer	\$2,000.00	
- Decontamination Trailer	\$5,500.00	
- Personal Protective Equipment (Level C)	\$16,000.00	
- Mercon Products	\$8,500.00	
- Toilet Facilities	\$1,000.00	
- Small hand tools and machines	\$2,000.00	
- Drums/Containers	\$3,000.00	
- Polysheeting	\$2,000.00	
- Air Monitoring/Sampling Equipment	\$4,000.00	
- Vacuum Systems (Hepa-Filtration)	\$5,000.00	

Health & Safety		\$98,000.00
- HASP & QA/QC Plan	\$5,000.00	
- Medical Monitoring	\$2,000.00	
- Health and Safety Officer	\$59,000.00	
- Health and Safety Monitor	\$32,000.00	

Remediation/Dismantling		\$2,050,000.00
- Installation of a Negative Air System	\$117,500.00	
- Removal of Miscellaneous Furniture/Appliances	\$141,000.00	
- Removal of Interior Walls (New)	\$129,250.00	
- Removal of Interior Walls Against Brick	\$70,500.00	

COST ESTIMATE FOR SELECTIVE REMEDIATION FOR DEMOLITION (CONTINUED)

- Removal of Finished Flooring	\$35,250.00
- Construction of a loading area & chute system	\$122,250.00
- Vacuuming of visible elemental mercury	\$110,500.00
- Application of Mercon products to flooring, walls, etc.	\$38,750.00
- Removal of each layer of subflooring	\$321,050.00
- Construction of temporary flooring	\$58,750.00
- Segregation of waste streams	\$30,200.00
- Demolition 2/3 by hand, 1/3 conventional	\$715,000.00
- Demolition basement slab (foundation)	\$160,000.00

Waste Sampling & Analytical Analysis		\$9,000.00
- Interior walls, partitions, framing		
- Wood floors, subfloors, insulation & ceiling		
- Wood Members		
- Brick Walls		
- Concrete floor		
- Draeger Tube analysis		

Powerwashing with Tri-Sodium Phosphate		\$120,000.00
First Application		
Set-up scaffolding, safety	\$19,400.00	
	\$12,000.00	

Equipment (Purchase)		
Materials & Supplies	\$6,000.00	
Labor - 3 men x 40 hrs x \$40 = \$4,800.00	\$82,600.00	
1/2 man x 40 hrs. x \$55 = \$1,100.00 (Supervisor)	\$120,000.00	
\$5,900 unit x 14 units		

Reporting		\$10,000.00
- Maintenance of Daily Logs/Reports	\$2,500.00	
- Draft Report/Final Report	\$7,500.00	

COST ESTIMATE FOR SELECTIVE REMEDIATION FOR DEMOLITION (CONTINUED)

TOWNHOUSE

- Remove walls, floors, partitions, furniture, vacuum, application of Mecon (Similar to main building)	\$63,500.00	
- Shoring and demolition (we believe that the townhouse shares a common wall with the adjacent private building. Entire building will have to be done by hand or small machine.	\$150,000.00	
- Transportation and Disposal	\$1,200.00	
- Walls, floors, partitions, etc. (expected to be clean) estimated 20 tons @ \$60.00 per ton.		
- Brick (Expected to be contaminated with Mercury <260 ppm) estimated 287 tons @ \$240 per ton	\$68,880.00	
- Concrete (expected to be contaminated with Mercury <260 ppm) estimated 83 tons @ \$240 per ton.	\$19,920.00	
 Total estimate for Selective Remediation for Disposal - Townhouse (estimated with 25% contingency)		 \$303,500.00

COST ESTIMATE FOR SELECTIVE REMEDIATION FOR DEMOLITION (CONTINUED)

Transportation & Disposal		\$1,749,500.00
- Interior walls, partitions, framing & insulation (expected to be clean) Estimated 300 tons x \$60/ton	\$18,000.00	
- Wood Floor, sub floor, insulation and ceiling (expected to be contaminated with mercury >260 ppm) Estimated 700 Tons x \$360/Ton	\$252,000.00	
- Elemental mercury (vacuumed waste) - Non Recoverable	\$1,500.00	
- Waste Water (from Powerwashing) Estimated 50,000 gallons x \$0.50/gal.	\$25,000.00	
- Bricks (Expected to be contaminated with mercury < 260 ppm) Estimated 4,500 tons x \$240/Ton	\$1,080,000.00	
- PPE	\$45,000.00	
- Concrete (Expected to be contaminated with mercury <260 ppm) Estimated 1200 tons x \$240/Ton	\$288,000.00	
- Asbestos containing material	\$40,000.00	
 Total Estimate for Selective Remediation For Demolition - Main building (Estimated with a 25% Contingency)		 \$4,310,500.00

GSAP Meeting
GSA #30746 8/15/95

TAPE BEGINS WITH MEETING IN PROGRESS

KEOUGH: "We can then come to a mutual agreement on a unit price basis for the extra work. Okay. And then an officer of the company signed the proposal, okay, and (Tape Interference).. however, Apex chose to fill it out on their own...did not sign to the scope of work. They didn't say they're going to do ... of what our wishes are. They just filled this out; they put hours; they put the prices down; and they kind of did their own thing. A new officer--a district manager [of the] company signs their documents. Okay So this is, you know I--I think this is worthless in terms of something you want to hang your hat on. Even though it is a low bid. I called this gentleman and explained to him that we...this format...meeting tonight which we would decide." (Tape Interference)... for reasons that are unknown to me....So any other questions? No? Okay. Let me just go over some information I found out. I have summed it up in a letter to Ira. Okay. First of all, there comes a point of...you may or may not know this, but Ira sent a letter to this gal's attorney notifying her of the work we've done. ...essentially...we found mercury, and we've got problems, and they may be responsible. Okay. We never got a response to that. Okay. The other day when I was wading through, entering into the townhouse, I found tons of letters and stuff. Okay. A lot of it was your stuff, and a lot of Bobs and stuff. But I found a letter addressed to Cooper Hewitt Electric Company, and I remember Cooper Hewitt Electric Company was listed in the title search done when we bought the property two years ago. John Pascale bought it from Cooper Hewitt Electric Company back in the sixties. So I went into our office, we have a register of companies in the states, and I found them in Kentucky. Talked to a woman--it's all kind of explained here, that worked for the company at that location for about thirty years, and she immediately remembered that they made mercury vapor tubes here in this building. The proper--the factory in Hoboken. You know. And so we now have a reason why we're finding it at this property."

MALE VOICE: "And was it once part of GE?"

KEOUGH: "Cooper Hewitt back in the forties had evolved as a GE operating company. You know."

MALE VOICE: "We know we're going to have to go after somebody it's going to [have to be them]."

KEOUGH: "This is the same--this is Cooper Hewitt Museum too. It's the same people. So I have contacted today, because of this woman, Elaine [Schrier], told me that somebody, she wasn't sure of the author or the title, wrote a paper on the relationship between GE and Cooper Hewitt Electric Company, and some of the work that was done here in Hoboken. There's some type of--and she recalled it, but she said I don't know, and she suggested I call the museum and ask the library to do a search. And I called up, and their doing a search of--a quick search didn't reveal anything, but.."

MALE VOICE: "How about the library?"

KEOUGH: "It's the Cooper Hewitt Museum's library which is part of the Smithsonian, and her terminal is linked to the Smithsonian's complete data base on literature. So her quick search with regards to anything regarding Cooper Hewitt Electric Company as a title, or it was a Sperry or something Faraday, uh Sperdi. Sperdi Faraday was the company that did manufacture of these sun lamps, okay, which I think is what evolved from the mercury vapor tubes. Okay. So she says it's gonna--we may find something out in a couple of weeks. She's gonna to keep looking. Her quick search didn't reveal anything. She couldn't hang out on the phone with me. Jerry, Ira's been put on notice. I want him to immediately send off a letter to Pascale and his attorney, and we may possibly then also send a letter to our insurance company and the various environmental companies involved with this project. Not only Pascale's environmental company, but REM Associates. For all this kind of work, you know, it takes money. Okay; and we gotta basically now come to a decision like on awarding this contract and projecting how much money we're going to need to do this work."

MALE VOICE: "For clarity sake the on the bid, as I have read through so to be clear, that does not include the cost of putting down the plywood floor."

KEOUGH: "Correct. Correct."

MALE VOICE: "Which we have elected to subcontract on..."

KEOUGH: "That's right. Because it's been determined that at that point in time when they removed the encapsulation and abatement was done, the room will be essentially clean. Okay, so a conventional carpenter can come in and do this work. You don't need an environmental company to do the work. Okay, thereby we can save some money."

MALE VOICE: "Right, but that will be an additional expense."

KEOUGH: "Right. Another additional expense is--I put into this document that we, at our own choosing, may have the low bidder or the bidder who we award this to bonded. That will be an expense we must bear, okay. And that could be a couple thousand or two more, I'm not quite sure. I don't have....It's usually about three

IMG SRC 97166ST>

Sidley & Austin
Washington, D.C.

RE: Appraisal of 16 Condominium Units
722 Grand Street
Hoboken, New Jersey
Assessor's ID: Block 85, Lots 14 and 15.1

At the request of counsel for the General Electric Company, we have completed a limited appraisal on the above-captioned properties. The information contained in this report is based on more complete data, analyses and conclusions retained in our office file.

Nature of the Assignment

American Appraisal Associates has been requested by counsel for General Electric Company to estimate the market value of the fee simple interests in the appraised properties.

Purpose and Intended Use of the Report

In accordance with the client's request, this report has been prepared to assist with certain decisions being made in connection with a proceeding before the United States EPA (Region II). It is entirely inappropriate to use this report for any purpose other than the one stated.

Effective Date of the Appraisal

The effective valuation dates of the appraisal are January 1, 1996, and July 1, 1997.

Effective Date of the Report

The effective date of this report is September 5, 1997.

Inspection Date

The exterior of the properties was inspected on July 1, 1997. No interior inspections of the subject units were performed at that time because the owners would not permit access.

Appraisal Development and Reporting Process

This restricted appraisal report complies with the reporting requirements as set forth under Standards Rule 2-2(c) of the Uniform Standards of Professional Appraisal Practice (USPAP) for a Restricted Appraisal Report. As such, it does not present any discussion of the data, reasoning and analyses that were used in the appraisal process to develop the appraiser's opinion of value. Supporting documentation concerning the data, reasoning and analyses is retained in the appraiser's file. The depth of discussion contained in this report is specific to the client's needs and for the intended use as stated. American Appraisal Associates is not responsible for any unauthorized use of this report.

Furthermore, in accordance with a prior agreement between the client and American Appraisal Associates, this report is the result of a limited appraisal process in that certain allowable departures from specific USPAP guidelines were invoked. The intended user of this report is notified that the reliability of the value conclusion provided may be impacted to the degree of departure from specific USPAP guidelines. Specifically, to the extent no interior inspection was made of the subject condominium units, the appraisal process involved a departure from Standards Rule 1.

The research tasks performed to estimate the value, as defined herein, involved a thorough search for sales of comparable residential condominium units in the subject market area. Comparable data were researched by

investigations of public records, the multiple listing service and discussions with local appraisers, brokers and tax assessors. The data were verified, in some cases, with other real estate professionals and/or the grantor, grantee or their representatives.

Definition of Value and Property Interest Appraised

The value results reported herein reflect a range of market values for the subject condominium units.

Market Value can be defined as the most probable price a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

- (1) Buyer and seller are typically motivated;
- (2) Both parties are well informed or well advised, and acting in what they consider their best interests;
- (3) A reasonable time is allowed for exposure in the open market;
- (4) Payment is made in term of cash in U.S. dollars or in terms of financial arrangements comparable thereto; and
- (5) The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

The subject units were valued as if offered in the open market for a reasonable period of time in which to find a buyer. We appraised the fee simple interests in the properties as residential condominiums, free and clear of all liens and encumbrances.

Fee Simple Estate is defined as the absolute ownership unencumbered by any other interest or estate, subject only to the limitations imposed by the governmental powers of taxation, eminent domain, police power and escheat.

Special Assumptions

The subject units have been vacated due to the existence of environmental contamination. For the purpose of this appraisal, it is assumed that no contamination exists at the property and the units are available for sale and immediate occupancy. Were the contamination to be considered in this appraisal, the values reported herein would need to be adjusted downward. Also, we have assumed that all the condominium units have been completely renovated for residential use. If those renovations are not complete, a downward adjustment to the market value would be required; at a minimum, this adjustment would be the amount of the cost to complete the renovations.

No interior inspection of the subject units has been made. Information regarding the general condition, level of finish and quantity and quality of the fixtures was provided by representatives of General Electric. It is assumed that the information provided is accurate. If this information were found to be inaccurate, the values reported herein would be subject to revision.

Area/Neighborhood Summary

The City of Hoboken is situated within Hudson County, New Jersey, approximately 2 miles west of downtown Manhattan (New York City). The subject is in an urban, mostly built-up area

Area/Neighborhood Summary

The City of Hoboken is situated within Hudson County, New Jersey, approximately 2 miles west of downtown

Manhattan (New York City). The subject is in an urban, mostly built-up area. Little vacant land remains available for additional development in the subject's immediate neighborhood. The economic outlook for both the immediate and long-term future of the subject area is continued stability.

The subject's neighborhood is developed predominately with older industrial and residential properties. Portions of Hoboken have recently been revitalized and some older industrial buildings have been renovated/converted to residential use. The demand for residential property in the area is substantial due to its proximity to New York City.

The market for residential condominiums has improved following a period of stability from 1994 to 1996. Local brokers indicate that values increased from 1996 to midyear 1997 by approximately 10% to 15%. According to local brokers, there is strong to moderate demand for new residential construction in the area. Additionally, minimal vacant residential land is available for such construction. The preceding factors should have a positive impact on the marketability of the subject properties.

Property Review

A brief exterior inspection was made of the subject building, which is a former manufacturing facility converted to large residential "loft" units. Descriptions of the subject building are based on information provided by the client representatives (General Electric).

The five-story brick structure's first floor/basement is unfinished. The second through fifth floors each have four residential units. The subject units range in size from 2,572 to 2,736 square feet and each has a different floor plan. Parking is available on the northwest side of the building. The area and quality of the units are summarized on the following chart:

Unit	Gross Area Sq. Ft.	Interior Quality*
2A	2,736	Low
2B	2,603	Low
2C	2,592	Average
2D	2,676	Average
3A	2,572	High
3B	2,756	Average
3C	2,592	Average
3D	2,634	Average
4A	2,572	Average
4B	2,722	High
4C	2,592	High
4D	2,634	High
5A	2,572	High
5B	2,722	Average
5C	2,572	High
5D	2,634	Average

*Based on information provided by client

Constructed in the early 1900s, the building was formerly used to manufacture mercury vapor lamps and other products containing mercury. It is noted that the subject building is reported to have mercury contamination. For the purpose of our study, no contamination or its possible effects on market value have been considered.

Property History

The subject building was converted to residential units in 1994. Most of the 16 units were sold for about \$80,000 per unit during 1995 as raw loft space. The purchasers then designed their own floor plans and had their interior finish constructed. Unit 2C was the only unit to be sold after having some interior finish constructed. This unit sold on March 30, 1995, for a reported sale price of \$287,000.

Highest and Best Use

For the purpose of this report, we have assumed that the highest and best use of the subject building was for residential use. We have not made a specific determination of this fact.

Valuation Process

In the appraisal of the subject properties, the sales comparison approach was considered the only meaningful method of valuation. To determine an applicable range of values for the subject units, discussions with local brokers and comparable sales and listings were considered. The sales, although not exactly comparable due to the unique nature of the subject units, are believed to be the best available for use in this analysis. These comparables are summarized on the following chart:

Comparable Condominium Sales Summary

Sale #	Location	Unit #	Unit Size Sq. Ft.	Sale Date	Sale Price \$	Price per Sq. Ft. \$	Comments
1	456 9th St. Hoboken	43	1588	Nov-95	210,000	132.24	2 bed/1 bath Townhouse style 1 block from subject
2	72 Park Ave. Hoboken	7-C	1777	Jul-96	285,000	160.38	2 bed/2 bath Penthouse unit with high ceiling & NYC view
3	98 Park Ave. Hoboken	2-A	1160	Mar-96	195,000	168.10	2 bed/2 bath loft unit
4	98 Park Ave, Hoboken	2-B	1647	Mar-96	310,000	188.22	2 bed/2 bath loft unit with high ceilings
5	98 Park Ave. Hoboken	3-A	1150	Sep-96	212,000	184.35	2 bed/2 bath loft unit with high ceilings
6	98 Park Ave. Hoboken	PH	3000	Feb-97	469,000	156.33	Penthouse unit with 2 beds/ 2 baths, newly renovated
7	205 Park Ave. Hoboken	10	1650	Mar-96	280,000	169.70	2 bed/2 bath loft unit with high ceilings
8	113 Grand St. Hoboken	1	2250	Asking	425,000	188.89	Open Floor plan loft with 1 full bath, 13' ceilings
9	222 Grand St. Hoboken	2-E	1500	Asking	335,000	223.33	2 bed/2 bath unit with high ceilings
10	722 Grand St. Jersey City	2-C	2592	Mar-95	287,000	110.73	Subject Bldg., 2nd floor loft, 3 beds/2 baths, avg. finish
11	1021 Grand St. Hoboken	1-E	1131	Sep-95	193,591	171.17	2 bed/2 bath unit with upgraded fixtures
12	1021 Grand St. Hoboken	PH-E	1459	May-95	225,000	154.22	2 bed/2 bath Penthouse close to subject
13	1101 Bloomfield Jersey City	A	2680	Jan-95	475,000	177.24	Renovated loft unit with 3 beds/2 baths, 15' ceiling
14	1101 Bloomfield Hoboken	A	2680	Asking	479,900	179.07	Renovated loft unit with 2 beds/2 baths, 20' ceiling
15	1101 Bloomfield Hoboken	C	2410	Feb-95	285,000	118.26	Unfinished loft unit
16	1101 Bloomfield Hoboken	D	2300	Under Contract	425,000	184.78	Loft unit, 2 bed/2 bath with 15' ceiling/open floor plan
17	1248 Bloomfield Hoboken	1	1650	Oct-95	235,000	142.42	3 bed/1.5 bath duplex unit in nice brownstone bldg

The preceding sales and listings reflect a rule of sale prices from approximately \$111 to \$223 per square foot. Excluding the upper and lower extreme unit values, as is customary, narrows the preceding range to \$132 to \$189 per square foot. These sales were adjusted as of January 1996 on the basis of information provided by representatives of General Electric with regard to the interior of a typical unit. The adjustments were based on a typical unit and did not include an adjustment for interior quality which will be considered subsequent to this analysis. An adjustment grid is contained within Exhibit A of this report.

After adjustment, the sales reflect a range of unit values for a typical unit from \$116 to \$167 per square foot. Based on a review of the preceding transactions and discussions with local real estate professionals (summarized in Exhibit B), it is concluded that the subject units with a low quality of finish would fall at the low end or below the adjusted range and the high-quality units would fall at the upper end of the range.

Following is a summary of the concluded value ranges for the subject units as of January 1, 1996:

Price Range Summary as of January 1996

Unit #	Total Area Sq. Ft	Overall Rating	Estimated \$/Sq. Ft	Range \$	Low Range \$	High Range \$
2-A	2,736	Low	105	115	287,280	314,640
2-B	2,603	Low	105	115	273,315	299,345
2-C	2,592	Average	125	135	324,000	349,920
2-D	2,676	Average	125	135	334,500	361,260
3-A	2,572	High	135	145	347,220	372,940
3-B	2,756	Average	125	135	344,500	372,060
3-C	2,592	Average	125	135	324,000	349,920
3-D	2,634	Average	125	135	329,250	355,590
4-A	2,572	Average	125	135	321,500	347,220
4-B	2,722	High	135	145	367,470	394,690
4-C	2,592	High	140	145	362,880	375,840
4-D	2,634	High	140	145	368,760	381,930
5-A	2,572	High	140	150	360,080	385,800
5-B	2,722	Average	125	135	340,250	367,470
5-C	2,572	High	135	145	347,220	372,940
5-D	2,634	Average	125	135	329,250	355,590
Total for Low and High Range					5,361,475	5,757,155

As stated previously, the values of residential condominiums within the subject market have increased over the period from 1996 to midyear 1997 by approximately 10% to 15%. Considering the size and unique nature of the subject units and because of comments made by brokers in discussions concerning the property, a 10% upward time adjustment was determined to be most reasonable and was applied to the 1996 values to estimate the values as of July 1, 1997. These values are summarized as follows:

Price Range Summary as of July 1997

Unit #	Total Area Sq. Ft	Overall Rating	Estimated \$/Sq. Ft	Range \$	Low Range \$	High Range \$
2-A	2,736	Low	116	127	316,008	346,104
2-B	2,603	Low	116	127	300,647	329,280
2-C	2,592	Average	138	149	356,400	384,912
2-D	2,676	Average	138	149	367,950	397,386
3-A	2,572	High	135	145	347,220	372,940
3-B	2,756	Average	138	149	378,950	409,266
3-C	2,592	Average	138	149	356,400	384,912

3-D	2,634	Average	138	149	362,175	391,149
4-A	2,572	Average	138	149	353,650	381,942
4-B	2,722	High	135	160	367,470	434,159
4-C	2,592	High	154	160	399,168	413,424
4-D	2,634	High	154	160	405,636	420,123
5-A	2,572	High	154	165	396,088	424,380
5-B	2,722	Average	138	149	374,275	404,217
5-C	2,572	High	135	160	347,220	410,234
5-D	2,634	Average	138	149	362,175	391,149
Total for Low and High Range					5,791,432	6,295,577

Reconciliation

Based upon the analyses referenced herein, the estimated Market Value Ranges of the fee simple interests in the properties appraised as of January 1, 1996, are as follows:

Unit #	Value Range \$	Unit #	Value Range \$
2A	287,000 to 315,000	4A	322,000 to 347,000
2B	273,000 to 299,000	4B	367,000 to 395,000
2C	324,000 to 350,000	4C	363,000 to 376,000
2D	335,000 to 361,000	4D	369,000 to 382,000
3A	347,000 to 373,000	5A	360,000 to 386,000
3B	345,000 to 372,000	5B	340,000 to 367,000
3C	324,000 to 350,000	5C	347,000 to 373,000
3D	329,000 to 356,000	5D	329,000 to 356,000

Furthermore, the Market Value Ranges of the units as of July 1, 1997, are as follows:

Unit #	Value Range \$	Unit #	Value Range \$
2A	316,000 to 346,000	4A	354,000 to 382,000
2B	301,000 to 329,000	4B	367,000 to 434,000
2C	356,000 to 385,000	4C	399,000 to 413,000
2D	368,000 to 397,000	4D	406,000 to 420,000
3A	347,000 to 373,000	5A	396,000 to 424,000
3B	379,000 to 409,000	5B	374,000 to 404,000
3C	356,000 to 385,000	5C	347,000 to 410,000
3D	362,000 to 391,000	5D	362,000 to 391,000

This is a limited appraisal because no interior inspection of the subject units was performed. Should additional information about the subject units be made available, the values reported herein would be subject to adjustment.

Special Assumptions

The following special assumptions pertain to this appraisal:

The subject units have been vacated due to the existence of environmental contamination. For the purpose of this appraisal, it is assumed that no contamination exists at the property and the units are available for sale and immediate occupancy. Were the contamination to be considered in this appraisal, the values reported herein would need to be adjusted downward. Also, we have assumed that all the condominium units have been completely renovated for residential use. If assumed that all the condominium units have been completely renovated for residential use. If those renovations are not complete, a downward adjustment to the market value would be required; at a minimum, this adjustment would be the amount of the cost to complete the

renovations.

No interior inspection of the subject units has been made. Information regarding the general condition, level of finish and quantity and quality of the fixtures was provided by representatives of General Electric. It is assumed that the information provided is accurate. If this information were found to be inaccurate, the values reported herein would be subject to revision.

This report was prepared in accordance with, and is subject to, our Assumptions and Limiting Conditions and General Service Conditions, which are attached to and form an integral part of this report.

No investigation was made of the title to or any liabilities against the property appraised.

Exhibit A
Adjustment Grid
(2 Pages)

Exhibit B
Broker/Investor Survey Notes
(3 Pages)

Broker/Investor Survey Notes
16 Condominium Loft Units
722 Grand Street
Hoboken, New Jersey
Survey Date: July 1997

Contact
Norma De Ruggiero - Sales
Associate at Riverside Realty
(201)-653-3933

Comments
Knows the subject units very well. Very unique units, not much in the way of comps. Sent data sheet on her new listing at 113 Grand Street. She said each of subject units is different. She feels value of a unit today is in the \$350,000 to \$400,000 range.

Condominium market is now best it has been in years. Stable values from 1994 to 1995. Values have increased from 10% to 15% from mid 1996 to the present. This spring-summer is very busy.

Bob De Ruggiero - Local
Investor/Developer
(201)-617-7111

Has listings on several industrial buildings in subject neighborhood. He feels the way to value subject units is on \$/sq. ft. basis. Condominiums typically trade in the \$160 to \$190 per sq. ft. range. Subject units would be on lower end of range due to large size and inferior location. Knows the subject units very well. Not much in the way of comps.

Jerry Losquadro - Sales
Associate at Murphy Realty -
Better Homes & Gardens
(201)-798-3300

Knows the subject units very well. Very unique units, no real comps, but said use upper end condo sales-large units. Jersey City has the Wells Fargo Building. MLS had a sale and one listing but they were very low. Jersey City is far more inferior in comparison with Hoboken. He feels value today is in the \$350,000 to \$450,000 range, assuming nice finish, 2 bedroom/2 bath units with good kitchen.

Condo market is now best it has been in years. Stable prices from 1994 to 1996. 1997 has seen big increase. Values are up from 10% to 15% from late 1996 to the present. This spring summer is very busy.

Dave Bagott - Sales Associate
at ReMax-Gold Coast Realty

Knows the subject units very well. Artists bought raw space for \$80,000 range and spent from \$100,000 to \$200,000 to finish them. Some are very plain, some are spectacular. He said he would list a 2,600 sq. ft. unit there with good finish for \$300,000 to \$350,000. He feels over \$350,000 to \$400,000 is a hard sell due to competition with Brownstone rowhouses. Subject neighborhood is not as good as hot area to the south and east of subject. No real comps unless one goes to NYC (Soho/Chelsea/the Village/Tribecka). He said use upper end condo sales-large units.

Values are up from 10% to 15% from mid 1996 to the present. This spring-summer is very busy.

Marta Logusz - Sales
Associate at Hudson Harbor
Realty
(201)-420-1200

Knows the subject units very well. Artists/jewelry designers bought raw space. She said newer condos sell for \$170 to \$220 per sq. ft. Most condos sell in the \$150 to \$190 per sq. ft. range. Some of the subject units are amazing and could be worth \$400,000 or more. No real comps unless one goes to NYC (Soho/Chelsea/the Village/Tribecka). Use Wells Fargo Building in Jersey City sales and upper end condo sales-large units.

Values are up around 10% from mid 1996 to the present. They are very busy.

Pam Weiner - Sales Associate
at Court St. Realty
(2004)-210-6656

She and husband owned Subject Unit 2-C, the only unit that was finished and sold before the mercury contamination in the building became public information. They bought it with intention of renting it out, which they did. The tenant bought the unit from them. She felt it was a fair price, but that the market has improved since then. She would put that unit on the market now for around \$350,000. She said her unit was not one of the nicer ones - second floor facing street. Finish was nice, but not elaborate.

Very unique units, not much in the way of comps. She provided data on a new sale she sold at 1101 Bloomfield Avenue. "The Columbia." She feels this building is far superior in design/location to the subject building. She said the best units in the subject building today are worth in the \$350,000 to \$400,000 range. She would list them for under \$400,000.

She agrees that the condo market is now best it has been in years. Stable prices from 1994 to 1995. Values have increased from 10% to 15% from 1996 to present. This summer has been busy

Nancy Wykstra - Sales
Associate at Burgdorff Realty
(201)-963-4400

She knows of the subject units. She said subject neighborhood is not the best. It is mixed industrial and next to the high school. She feels units are worth less than \$400,000. She said \$350,000 to \$390,000 sounds more reasonable. She said "The Columbia" at 1101 Bloomfield Avenue is a renovated lodge house that has very large units and would have the best comps, but they are superior units in a better building and location.

Marie - Manager at
Burgdorff Realty
(201)-963-4400

She knows of the subject units. She said subject neighborhood is not as good as other areas to the east and south. She would list the subject units for under \$400,000. She said "The Columbia" at 1101 Bloomfield Avenue is a much better building.

Daniel DePalma - Sales
Associate at Riverside Realty
(201)-653-3933

He said there are no good comps, but said \$140 to \$160/sq. ft. sounded reasonable.

Debrah Murtaugh - Sales
Associate at Murphy Realty
(201)-798-3300

She has seen the subject units. She feels they would be worth low to mid \$300K range.

She said unlike surrounding area, there was no decline in sale prices from 1994 to 1995. Stable prices from 1994 to 1995. Values have increased from 10% to 15% from 1996 to present. This summer has been very busy.

Hugh MaGuire - Local
Appraiser and Assessor for
Hoboken

He said the only real comparable units are in New York City but use big units, upper end of sales range. He agreed that most condominiums sell for \$150 to \$180 per sq. ft. He also agreed the subject units should be at lower end of this range. He felt that values in the mid \$300K range sounded reasonable.

Exhibit C
Assumptions and Limiting Conditions
(4 Pages)

Assumptions and Limiting Conditions

Every attempt has been made to prepare this appraisal report in conformance with the current regulations set forth by the Uniform Standards of Professional Appraisal Practice of The Appraisal Foundation ("USPAP").

We have provided a Restricted Appraisal Report, intended to comply with the reporting requirements set forth by the Uniform Standards of Professional Appraisal Practice ("USPAP") for a Restricted Appraisal Report. As such, the report presents only summary discussions of the data, reasoning, and analyses used in the appraisal process to develop American Appraisal's opinion of value. Supporting documentation concerning the data, reasoning, and analyses has been retained as part of our work papers. The depth of discussion contained in the report is specific to your needs as the client and for the intended use stated. American Appraisal is not responsible for unauthorized use of its report.

As agreed upon with the client prior to the preparation of the appraisal, this is a Limited Appraisal because it invokes the Departure Provision of the Uniform Standards of Professional Appraisal Practice. As such, information pertinent to the valuation has not been considered and/or the full valuation process has not been applied. Depending on the type and degree of limitations, the reliability of the value conclusion provided herein may be reduced. Specifically, at the request of the client, the content of this appraisal report has been limited to those data presented herein. As such, it represents something less than a full and complete appraisal report. However, the substance of the appraisal investigation meets all of the requirements of a full and complete appraisal assignment and a complete record of all analyses and conclusions leading to the opinion of value stated herein has been retained in the appraiser's files.

No responsibility is assumed for matters legal in nature. No investigation has been made of the title to or any liabilities against the property appraised. In this appraisal, it is presumed that, unless otherwise noted, the owner's claim is valid, the property rights are good and marketable, and there are no encumbrances which cannot be cleared through normal processes.

To the best of our knowledge, all data set forth in this report are true and accurate. Although gathered from reliable sources, no guarantee is made nor liability assumed for the accuracy of any data, opinions, or estimates identified as being furnished by others which have been used in formulating this analysis.

Land areas and descriptions used in this appraisal were obtained from surveys or public records and have not been verified by legal counsel or a licensed surveyor.

No soil analysis or geological studies were ordered or made in conjunction with this report, nor were any water, oil, gas, or other subsurface mineral and use rights or conditions investigated.

Substances such as asbestos, urea-formaldehyde foam insulation, other chemicals, toxic wastes, or other potentially hazardous materials could, if present, adversely affect the value of the property. Unless otherwise stated in this report, the existence of hazardous substance, which may or may not be present on or in the property, was not considered by the appraiser in the development of the conclusion of value. The stated value estimate is predicated on the assumption that there is no material on or in the property that would cause such a loss in value. No responsibility is assumed for any such conditions, and the client has been advised that the appraiser is not qualified to detect such substances, quantify the impact on values, or develop the remedial cost.

No environmental impact study has been ordered or made. Full compliance with applicable federal, state, and local environmental regulations and laws is assumed unless otherwise stated, defined, and considered in the report. It is also assumed that all required licenses, consents, or other legislative or administrative authority from any local, state, or national government or private entity organization either have been or can be obtained or renewed for any use which the report covers.

It is assumed that all applicable zoning and use regulations and restrictions have been complied with unless a nonconformity has been stated, defined, and considered in the appraisal report. Further, it is assumed that the utilization of the land and improvements is within the boundaries of the property described and that no encroachment or trespass exists unless noted in the report.

The Americans with Disabilities Act (ADA) became effective January 26, 1992. We have not made a specific compliance survey and analysis of this property to determine whether or not it is in conformity with the various detailed requirements of the ADA. It is possible that a compliance survey of the property together with a detailed analysis of the requirements of the ADA could reveal that the property is not in compliance with one or more of the requirements of the act. If so, this fact could have a negative effect on the value of the property. Since we have no direct evidence relating to this issue, we did not consider the possible noncompliance with the requirements of ADA in estimating the value of the property.

We have made a physical inspection of the exterior of the property and noted visible physical defects, if any, in our report. This inspection was made by individuals generally familiar with real estate and building construction. However, these individuals are not architectural or structural engineers who would have detailed knowledge of building design and structural integrity. Accordingly, we do not opine on, nor are we responsible for, the structural integrity of the property including its conformity to specific governmental code requirements, such as fire, building and safety, earthquake, and occupancy, or any physical defects which were not readily apparent to the appraisers during their inspection.

The value or values presented in this report are based upon the premises outlined herein and are valid only for the purpose or purposes stated.

The date of value to which the conclusions and opinions expressed apply is set forth in this report. Unless otherwise noted, this date represents the last date of our physical inspection of the property. The value opinion herein rendered is based on the status of the national business economy and the purchasing power of the U.S. dollar as of that date.

The following special assumptions pertain to this appraisal:

The subject units have been vacated due to the existence of environmental contamination. For the purpose of this appraisal, it is assumed that no contamination exists at the property and that the units are available for sale and immediate occupancy. Were the contamination to be considered in this appraisal, the values reported herein would need to be adjusted downward. Also, we have assumed that all the condominium units have been completely renovated for residential use. If those renovations are not complete, a downward adjustment to the market value would be required; at a minimum, this adjustment would be the amount of the cost to complete the renovations.

No interior inspection of the subject units has been made. Information regarding the general condition, level of finish and quantity and quality of the fixtures was provided by representatives of General Electric. It is assumed that the information provided is accurate. If this information were found to be inaccurate, the values reported herein would be subject to revision.

Testimony, or attendance in court or at any other hearing is not required by reason of this appraisal unless arrangements are previously made within a reasonable time in advance therefor.

One or more of the signatories of this appraisal report is a member or candidate of the Appraisal Institute. The Bylaws and Regulations of the Institute require each member and candidate to control the use and distribution of each appraisal report signed by them.

Possession of this report or any copy thereof does not carry with it the right of publication. No portion of this report (especially any conclusion to use, the identity of the appraiser or the firm with which the appraiser is connected, or any reference to the American Society of Appraisers, or the designation awarded by this organization) shall be disseminated to the public through prospectus, advertising, public relations, news, or any other means of communication without the written consent and approval of American Appraisal Associates, Inc.

Exhibit D
Certificate of Appraiser
(1 Page)

Certificate of Appraiser

I certify that, to the best of my knowledge and belief:

The statements of fact contained in this report are true and correct.

The appraisal contained in this report was made by Christopher D. Murphy, a subcontractor; American Appraisal Associates, Inc., is, however, solely responsible for the analyses, opinions and conclusions contained in this report.

The reported analyses, opinions and conclusions are limited only by the reported assumptions and limiting conditions.

Neither Christopher D. Murphy nor American Appraisal Associates, Inc., has a present or prospective interest in the property that is the subject of this report, and neither has a personal interest or bias with respect to the parties involved.

Compensation for Christopher D. Murphy and American Appraisal Associates, Inc., is not contingent on any action or event resulting from the analyses, opinions or conclusions in, or the use of, this report.

The analyses, opinions and conclusions were developed, and this report has been prepared, in conformity with the requirements of the Uniform Standards of Professional Appraisal Practice of The Appraisal Foundation.

I have made a personal cursory exterior inspection of the exterior of the property that is the subject of this report.

Exhibit E
Qualifications of Appraisers
(3 Pages)

Anthony J. Wells, ASA
Vice President

Position Anthony J. Wells serves as a Vice President for the Milwaukee Real Estate Advisory Group of American Appraisal Associates, Inc. ("AAA").

Experience
Business

Mr. Wells joined the Regulated Industries Group in 1966. After a two-year term of active duty in the U.S. Army, he rejoined AAA as office production manager, maintaining the real estate data base. In 1972, he was promoted to real estate appraiser. After transferring to the Industrial Valuation Group for two years of cross-training, he returned to Real Estate, Valuation Group as a senior appraiser. He advanced to engagement manager status in 1980. Mr. Wells assumed management responsibilities in 1987, was named a principal in 1993 and Assistant Vice President in 1994, and was appointed to his current position in 1995.

Mr. Wells is one of the country's leading appraisers in industrial/commercial real estate valuation. He has served as project manager on several major engagements providing valuation services to corporate clients nationwide, in Mexico, and the Philippines. Mr. Wells has appraised a wide variety of property associated with, but not limited to, the following industries: steel mills, railroads, oil companies, aircraft engine/assembly plants, electric power, metal fabrication, and consumer products. His experience in unique properties includes movie studios, television/radio stations, large hotels, and airport properties.

Mr. Wells has given deposition and testimony concerning the valuation of large industrial facilities and airlines:

General Motors Corporation - May/June 1991
Continental Airlines - October 1991
Security Pacific National Bank - April 1992
American Airlines - April 1992
Ladish Corp. - April 1993

University of Wisconsin - Milwaukee
Bachelor of Business Administration-Finance

State Certifications Certified General Real Estate Appraiser, State of Arizona,
 #30660
 Certified General Real Estate Appraiser, State of California
 #AG017048
 Certified Appraiser, State of Colorado, #CG01316669
 General Certified Appraiser, State of Connecticut, #CG0838
 Certified Appraiser, State of Michigan #1201002253
 Certified General Real Property Appraiser, State of Minnesota,
 #4001728
 Real Estate General Appraiser, State of New York,
 #46000010337
 Certified General Appraiser, State of Wisconsin, #188

Professional Affiliations American Society of Appraisers, Senior Member
 ASA Designation - Urban Real Property
 President, Wisconsin Chapter, 1990-1991; Vice President,
 Wisconsin Chapter, 1989-1990; Secretary, Wisconsin Chapter,
 1988-1989; Treasurer, Wisconsin Chapter, 1987-1988
 Industrial Development Research Council, Professional Associate

Valuation and
 Special Courses American Society of Appraisers
 Completed all courses and exams required for ASA designation
 Appraisal Institute
 Basic Appraisal Principles, Course IA
 Capitalization Theory and Techniques, Course IB
 Case Study - Urban Properties, Course 2
 Condemnation, Course 4
 Real Estate Appraisal Principles, Course 1A1
 Standards of Professional Practice

Publications "Appraisal of an Industrial Land Development," Real Estate
 Valuation Guide, E.H. Boeckh
 "The Black Art of Appraisal" Credit Union Executive Society

Speeches Mr. Wells has spoken to the Appraisal Institute's Wisconsin
 Chapter on large plant depreciation, the Industrial Development
 Research Council on the development of a valuation curve to
 monitor ad valorem taxes and industrial real estate valuation, and
 before tax managers of major corporations in the St. Louis area
 concerning industrial property valuation. He met with the Henley
 Group's international real estate managers to discuss valuation of
 real estate in foreign lands; in October 1989 he spoke to the Credit
 Union Executive Society on "The Black Art of Appraisal." He
 has spoken before the Institute of Property Taxation concerning
 differentiation of real and personal property.

 Mr. Wells has spoken to the Institute of Property Taxation and to
 the American Bar Association on the valuation of large industrial
 places.

Christopher D. Murphy

Professional Qualifications

Education

University of Miami, Coral Gables, Florida
B.B.A.-Finance

Appraisal Institute Courses

Real Estate Appraisal Principles	Basic Valuation Procedures
Capitalization Theory and Techniques	Capitalization Theory and Techniques
Advanced Income Capitalization	Standards of Professional Practice A and B

Professional Experience

Murphy Appraisal, Mt. Laurel, New Jersey

Involved in the appraisal of a broad range of commercial and industrial properties throughout the northeastern United States. Involved in the analysis of properties for the purpose of sale, purchase, financing, and corporate planning

American Appraisal Associates, Princeton, New Jersey

Valuation Consultant, involved in the preparation of narrative and summary appraisal reports covering a broad range of commercial, industrial, and multi-family residential properties throughout the United States. Involved in analysis for sale, financing, corporate planning, and allocation.

Professional Licenses and Certifications

State of New Jersey

Certified General Appraiser Number RG-01289
Licensed Real Estate Salesperson

State of Pennsylvania

Certified General Appraiser Number GA-001212-R

State of Ohio

Certified General Appraiser Number 407575

Professional Affiliations

Appraisal Institute
Associate Member

American Appraisal Associates

General Service Conditions

The services provided by American Appraisal Associates, Inc., have been performed in accordance with professional appraisal Standards. Our compensation was not contingent in any way upon our conclusions of value. We assumed, without independent verification the accuracy of all data provided to us. We have acted as an independent contractor and reserved the right to use subcontractors. All files, workpapers or documents developed by us during the course of the engagement are our property subject to attorney work product protection as provided by law. We will retain this data for at least five years.

Our report is to be used only for the specific purposes stated herein and any other use is invalid. You may show our report in its entirety to those third parties who need to review the information contained herein. No one should rely on our report as a substitute for their own due diligence. No reference to our name or our report, in whole or in part, in any document you prepare and/or distribute to third parties, may be made without our prior written consent.

We reserve the right to include your company/firm name in our client list, but we will maintain the confidentiality of all conversations, documents provided to us and the contents of our reports, subject to legal or administrative process or proceedings. These conditions can only be modified by written documents executed by both parties.

American Appraisal Associates, Inc., is an equal opportunity employer.

August 20, 1997

Ms. Jeralene Green
Freedom of Information Office
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

Re: Freedom of Information Act Appeal: 02-RIN-1543-97

Dear Ms. Green:

Pursuant to 5 U.S.C. § 552(a)(6) and 40 C.F.R. § 2.114, General Electric Company ("GE") hereby appeals the denial of its Freedom of Information Act ("FOIA") request, 02-RIN-1543-97. Anne Cromwell of GE submitted this FOIA request to the Environmental Protection Agency, Region II ("EPA") on June 30, 1997, which requested "a January 1996 technical report prepared by the EPA Region 2 office that includes an appraisal of the property at 722 Grand Street, Hoboken, NJ" (Attachment 1). By letter dated August 6, 1997, Walter E. Mugden, Regional Counsel EPA Region II, notified GE that EPA did in fact have appraisal reports dated July 1996 but was withholding the requested records on the basis they are purportedly "exempt from mandatory disclosure by virtue of the 5 U.S.C. 552(b)(5), (7)(A) and (7)(C) exemptions" ("Denial") (Attachment 2). GE received the Denial on August 7, 1997, and accordingly, this appeal is timely. For the reasons described below, the Region's initial determination should be overturned and the withheld documents provided to GE.

Specifically, GE requests the release of all three documents in the itemized list of records being withheld, plus other relevant records EPA apparently has failed to identify. EPA has withheld the records claiming that they are (1) "inter-agency or intra-agency memorandums or letters which would not be available by law to a party ... in litigation with the agency." 5 U.S.C. § 552(b)(5); and (2) "records or information compiled for law enforcement purpose" that (a) "could reasonably be expected to interfere with law enforcement proceedings," id. § 552(b)(7)(A), or (b) "could reasonably be expected to constitute an unwarranted invasion of personal privacy." Id. § 552(b)(7)(C). Based on EPA's limited description of the withheld records and on its admission that these documents do contain real estate appraisals for the Grand Street property, GE believes that these documents are not exempt from disclosure, and, even assuming the overall document falls within the claimed exemptions, that EPA must at least disclose the actual appraisals themselves as segregable portions of these records. Withholding these records serves no legally cognizable purpose, whereas the release of these records would be in the public interest and in accord with governmental regulations and policy directives.

Although EPA has 20 working days from receipt of this appeal to make a final determination, 40 C.F.R. § 2.117(b), GE respectfully requests that this appeal be expedited. As more fully explained below, EPA has issued a proposed remedial action plan ("PRAP") for the Grand Street Artists Site ("Site"), which has been proposed for listing on the National Priorities List ("NPL"), under the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9601 et seq. GE believes that the release of these records will provide information necessary, and indeed crucial to evaluate and comment upon EPA's PRAP. Because GE must shortly submit comments on the PRAP, an immediate and timely resolution of this appeal is requested.

Background

Some background regarding the Site and the PRAP is necessary to place the Denial in context. In 1996, EPA, with the assistance of the Army Corps of Engineers ("ACOE") temporarily relocated the former residents of the Site. Contemplating an ultimate permanent relocation of the former residents, in early 1997, EPA proposed to list the Site on the NPL so that EPA could use its remedial authority for permanent relocation. Most recently, EPA issued a Focused Feasibility Study ("FFS") and the PRAP, which proposes demolition of the building and permanent relocation of the former residents. In the FFS, EPA estimates the cost of permanent relocation to be approximately \$10 million. EPA has provided no support for this cost estimate, but states in a footnote that the estimate was based on "April 1996, EPA appraisals not reflective of appraisals to be conducted concurrent to remedial design."

The \$10 million estimate is inconsistent with the very limited information regarding appraisals that EPA has placed in the administrative record for this Site. The only information in the record that purports to support EPA's estimate of permanent relocation costs is a memorandum dated September 6, 1996, from Thomas J. Geronikos, Army Corps of Engineers ("ACOE"), to the Chief of the Real Estate Section of the East Brunswick, New Jersey Field Office of EPA (Attachment 3). This memorandum supposedly transmitted two competing appraisal reports, which are not included in the administrative record, plus a unit-by-unit comparison of the two reports, which is included. Both appraisals estimate the total value of all units plus the Townhouse unit to be substantially less than \$6 million. Even taking into account the purchase of the adjacent parking lot and other expenses associated with permanent relocation, the \$10 million figure is unsupported by the materials in the record.

In light of the limited and contradictory information placed in the administrative record, GE submits that EPA is improperly withholding records crucial to justifying the expenditure of public funds. First, as stated, EPA has provided no support for its \$10 million estimate of the cost of permanent relocation and must do so under CERCLA and the National Contingency Plan, especially in the face of inconsistent data in the administrative record. Second, the FFS cites April 1996 appraisals as support for the \$10 million figure, whereas EPA claims in the Denial that the only existing appraisals are dated July 1996. These glaring inconsistencies suggest that EPA is cloaking relevant records. Third, EPA's invocation here of blanket FOIA exemptions to avoid public scrutiny of its PRAP serves only to cast further doubt on the Region's proper and legal administration of the Site. Against this background, and coupled with the legal arguments below, GE is entitled to access to these records.

Argument

The FOIA's purpose is to provide full disclosure of government records to the public. *United States Department of Justice v. Tax Analysts*, 492 U.S. 136, 141-43 (1989); *Department of the Air Force v. Rose* 425 U.S. 352, 361 (1976). Because "public disclosure is not always in the public interest," *Baldrige v. Shapiro* 455 U.S. 345, 352 (1982), however, Congress created a limited number of exemptions from disclosure that must be narrowly construed. *Rose*, 425 U.S. at 361. In addition, these exemptions are only permissive, and agencies are expected to disclose technically exempt records when "no important purpose would be served by withholding the records." 40 C.F.R. § 2.119(a); see *id.* (disclosure is "encouraged"); *Chrysler Corp. v. Brown* 441 U.S. 281, 290-94 (1979). Even when an exemption does apply, however, the statute directs agencies to disclose "[a]ny reasonably segregable portion of a record ... after deletion of the portions which are exempt under [section (b)(1)-(9)]." 5 U.S.C. § 552(b).

In this case, EPA has withheld purely factual reports submitted to the ACOE by outside commercial contractors concerning real estate appraisals needed to justify EPA's expenditure of public funds. EPA has withheld these records in their entirety and without any effort to comply with federal policy of maximum disclosure under FOIA. GE believes that EPA must disclose these records because they are not exempt under FOIA. At a minimum, however, EPA must release any and all segregable portions of the records to GE.

A. The Letters Are Not Exempt from Disclosure Under Exemption 5.

EPA appears to allege that the withheld documents fall within the so-called "deliberative process" privilege under 5 U.S.C. § 552(b)(5). As a general matter, the privilege permits an agency to refuse disclosure where the documents "reflect recommendations and deliberations comprising [the] process by which governmental decisions and policies are formulated." *NLRB v. Sears Roebuck & Co.*, 421 U.S. 132, 150 (1975) (internal quotations and citation omitted). In addition, the privilege only permits nondisclosure where disclosure would inhibit candor in the decision-making process. *Army Times Publishing Co. v. Department of Air Force* 998 F.2d 1067,1070 (D.C. Cir. 1993).

These records are clearly not exempt. First, this exemption, by its terms, applies only to "inter-agency or intra-agency" documents. *Federal Open Market Comm. v. Merrill* 443 U.S. 340, 352 (1979). Here, the withheld records are not inter-agency or intra-agency memoranda or letters, but are merely reports prepared by outside consultants and transmitted to the ACOE. Such records do not merit protection because disclosure would not inhibit the outsiders' candor. *American Soc'y of Pension Actuaries v. Pension Benefit Guar. Corp.*, No. 82-2806, slip op. at 3 (D.D.C. July 22, 1983); see *Knight v. DOD*, No. 87-480, slip op. at 2-3 (D.D.C. Dec. 7,

1987) (correspondence with contractors not intra-agency). The appraisal of property is a common occurrence in the commercial world. It is inconceivable that disclosing the steps in what should be a rote process would inhibit the candor of a commercial contractor retained to provide this essentially factual information.

Second, there is nothing "deliberative" about these documents. These are purely factual reports prepared by real estate appraisers. To be "deliberative," records must not only be pre-decisional, but also must "express[] opinions on legal or policy matters." *Vaughn v. Rosen* 523 F.2d 1136, 1143-44 (D.C. Cir. 1975). These records do not express opinions at all, but merely provide cost appraisals for real estate - analyses routinely done thousands of times every year by non-legal and non-government professionals that have neither legal nor policy components. Such purely factual material is not deliberative and would "generally be available discovery." *EPA v. Mink*, 410 U.S. 73, 87-88 (1973); see also *Assembly of Cal. v. United States for Department of Commerce*, 968 F.2d 916, 921-22 (9th Cir. 1992) (holding adjusted census figures to be factual and therefore not exempt).

Third, even if the reports were considered "deliberative," disclosure would not inhibit candor in the decisionmaking process. Federal policy requires agencies faced with technical exemption to determine whether disclosure of the records "foreseeably harms" some governmental interest. *Army Times Publishing*, 998 F.2d at 1072; see Attorney General's Memorandum for Heads of Departments and Agencies Regarding Freedom of Information Act, at 4-5 (Oct. 4, 1993). In this case, the role of the real estate appraiser should be completely objective. There would be no incentive for the appraiser to falsify or amplify the appraisals of real estate, and no benefit would inure to EPA in so doing. Thus, these records cannot properly be withheld.

Finally, even if the reports qualified for this exemption. EPA has effectively waived the deliberative process privilege with respect to any appraisals. As with any privilege, the deliberative process privilege can be waived through the authorized disclosure to a non-federal party. *North Dakota v. Andrus* 581 F.2d 177, 179 (8th Cir. 1978); *Mead Data Central, Inc. v. Department of Air Force* 566 F.2d 242, 253-54 (D.C. Cir. 1977). Here, EPA has released the one record related to these appraisals the is arguably "deliberative"--the ACOE September 1996 memorandum to EPA transmitting and comparing the appraisal reports and recommending to EPA one over the other. As discussed above, this document is in the public administrative record. By releasing this record to the public, EPA has waived the privilege with respect to any underlying appraisal reports.

EPA has also waived the privilege by expressly referring to and incorporating real estate appraisals in the FFS. A deliberative record may lose its protection if a final decision maker adopts or incorporates by reference the otherwise exempt record. In particular, implicit incorporation or adoption may be found where a decisionmaker accepts a recommendation without providing a basis for that decision. *American Soc'y of Pension Actuaries v. IRS*, 746 F. Supp. 188, 191 (D.D.C. 1990). Here, EPA expressly adopted as the basis for its permanent relocation cost estimate "April 1996" appraisals, without providing the actual appraisal figures or an explanation of the reliability of those figures. Because EPA expressly incorporated by reference appraisals conducted in 1996, EPA has waived any privilege with respect to those appraisals.

Because these letters are not exempt from disclosure, EPA must release them to GE.

B. The Letters Are Not Exempt From Disclosure Under Exemption 7.

The requested appraisal reports are not exempt either from disclosure by 5 U.S.C. § 552(b)(7)(A) or (7)(C). In order to be exempt under section 552(b)(7), records must contain "information compiled for law enforcement purposes." *Id.* These appraisals do not relate in any way to "law enforcement." They provide EPA with factual information which is being used by EPA in carrying out an essential administrative function -- selection of a Superfund remedy that EPA has proposed will provide for the provision of permanent relocation. Not only is the Superfund remedy selection process an essentially public process, but EPA is required by the statute and its own regulations to establish a public record supporting its choice of remedy and to demonstrate the cost-effectiveness of its proposed remedy.

Even assuming these records were "compiled for law enforcement purposes," EPA cannot categorically withhold them. Under section 552(b)(7), as with section 552(b)(5), EPA may withhold such records only if disclosure could result in some "foreseeable harm." Attorney General's Memorandum at 4-5 (Oct. 4, 1993). Subsection

(b)(7) delineates the types of foreseeable harm that may justify withholding enforcement-related records. 5 U.S.C. § 552 (b)(7)(A)-(F). In this case, EPA alleges disclosure "could reasonably be expected to interfere with enforcement proceedings" and could reasonably be expected to constitute an unwarranted invasion of personal privacy." Id. § 552(b)(7)(A), (C). Neither harm foreseeably exists in this case.

First, as discussed above, there are no "enforcement proceedings" with which disclosure of the real estate appraisals could interfere. The appraisals are related to EPA's proposed provision of permanent relocation to displaced individuals. Selection of a remedy under CERCLA is an administrative function, not "law enforcement." Under Section 121 (a) of CERCLA, EPA is required to select a remedy that provides for "cost-effective" response, and is required to "evaluat[e] the cost effectiveness of proposed alternative remedial actions." This is essentially a comparative analysis and, critically, it must be fully exposed to public scrutiny. Under section 113(k)(1) of CERCLA, EPA is required to establish an administrative record supporting the selection of a response action. EPA is required to provide for public participation in the remedy selection process, CERCLA section 113(k)(1)(B), including providing public notice "accompanied by a brief analysis of the [proposed] plan." CERCLA section 113(k)(1)(B)(i). The analysis of costs is particularly important when EPA proposes permanent relocation, because permanent relocation is authorized only when it is "more cost-effective than and environmentally preferable" to other remedial alternatives, or may otherwise be necessary to protect the public health or welfare...." CERCLA section 101(24) (emphasis added). In short, EPA can only select a remedy -- and permanent relocation in particular -- after engaging in a public administrative process that includes justification of the Agency's cost estimates.

The National Contingency Plan ("NCP") promulgated to implement these statutory authorities makes clear EPA's obligation to expose its cost estimates to public critique. Under the NCP, cost is one of the "primary balancing criteria" that EPA uses to evaluate alternative remedies. 40 C.F.R. § 300.430(f). EPA is required further to "establish an administrative record that contains the documents that form the basis for the selection of a response action." 40 C.F.R. § 300.800(a). That record should include "[d]ocuments containing factual information, data and analysis of the factual information, and data that may form a basis for the selection of a response action." 40 C.F.R. § 300.810(a)(1). Since costs are a critical component of the remedy-selection process, particularly when permanent relocation is proposed, there is no way that EPA can satisfy its administrative record obligations without providing to the public the basic information supporting its choice of the remedy. In this case, the appraisals are critical to EPA's proposed remedial action, particularly since the only information that EPA has placed in the record is millions of dollars apart from the cost figure announced in the PRAP. In short, the remedy selection process is an essentially public, administrative process, not a law enforcement process, and EPA is bound by statute and its own regulations to divulge just the type of information it is attempting to shield in this instance.

Second, no conceivable "harm" could flow from the disclosure of these appraisals. The only potential result of disclosure -- the one EPA is dearly and improperly trying to avoid -- is a challenge to EPA's PRAP. Inasmuch as EPA will be spending public monies, however, such a result is the necessary and indeed desired result in a democratic and open government. Even if EPA believes, looking toward some future action to recover the cost of permanent relocation, that disclosure might harm such proceedings, the only "harm" again would be scrutiny of EPA's action and EPA in no event would be justified in withholding data that would form the basis of its cost-recovery claims against private parties.

Finally, disclosure of the appraisal reports could not "constitute an unwarranted invasion of personal privacy." The fair market value of real estate is a matter of public information. The public has ready access to similar information through public real estate records, including property deeds and tax appraisals. Moreover, the information was not obtained from a private source, but was objectively determined by an impartial third party. Thus, there can be no reasonable expectation of privacy for this information. It cannot be the type of personal information that FOIA was intended to protect.

Even if the information were deemed to implicate a privacy interest, EPA must determine whether a disclosure of personal information is otherwise warranted. In so doing, EPA must conduct a balancing of the private and public interests involved. *Massey v. FBI*, 3 F.3d 620, 624-25 (2d Cir. 1993). In this case, disclosure serves the public interest of "'open[ing] agency action to the light of public scrutiny." *Nation Magazine v. U.S. Customs Serv.*, 71 F.3d 885, 894 (D.C. Cir. 1995) (quoting *Rose* 425 U.S. at 372); see *U.S. Dep't of Justice v. Reporters Comm. for Freedom of Press* 489 U.S. 749, 773 (1989) ("Official information that sheds

light on an agency's performance of its statutory duties falls squarely within (FOIA's] statutory purpose"). Here, the public interest in scrutinizing EPA's use of public money and performance of its administrative functions outweighs any private interests implicated by disclosure of the requested appraisal reports. The open decision-making required under CERCLA mandates disclosure of this information.

Thus, the withheld appraisal reports are not exempt from disclosure, and EPA should release them to GE.

C. At a Minimum EPA Must Disclose Segregable Portions of the Requested Correspondence.

The mere fact that a record contains exempt information does not authorize EPA to withhold the entire record. FOIA mandates disclosure of "[a]ny reasonably segregable portion of a record ... after deletion of the portions which are exempt." 5 U.S.C. § 552(b). EPA has withheld entire documents on the grounds they contain exempt information. Even assuming the correctness of EPA's determination that the exemptions cited apply (which GE maintains is not correct), EPA must redact only such information as is exempt and then provide GE with the remaining portions of the appraisal reports. Proper redaction of the records would provide GE with the factual information necessary to evaluate EPA's proposed expenditure of public funds, and would better permit GE to understand EPA's basis for withholding certain portions. EPA has improperly withheld entire records and should, at a minimum, release segregable portions of those records.

D. The Public Interest Favors Disclosure

Finally, the FOIA exemptions are not mandatory, and even if a record falls within an exemption, it can be disclosed at the Agency's discretion if "no important purpose would be served by withholding the records." 40 C.F.R. § 2.119(a); Chrysler Corp. 441 U.S. at 290-94. The President and the Attorney General have established an express policy under FOIA of "maximum responsible disclosure of government information." Attorney General's Memorandum at 4-5; see President's Memorandum for Heads of Departments and Agencies Regarding Freedom of Information Act (Oct. 4, 1993). To that end, the Attorney General, applying a "presumption of disclosure," will no longer defend in district court agency nondisclosures based solely on a "substantial legal basis," and encourages discretionary disclosures of exempt records whenever possible. Attorney General's Memorandum at 4.

In the Denial, EPA has not even attempted to justify withholding the appraisal reports. Indeed, no important purpose would be served by withholding them and, conversely, the public interest would be greatly served by their disclosure. EPA Region II's proper use of public monies in the provision of permanent relocation compels the disclosure of these records.

Relief Requested

For the foregoing reasons, GE respectfully requests that the records listed in the appendix to the Denial be released in their entirety.

Please feel free to contact me should you need additional information. Thank you for your prompt attention to this appeal.

Enclosures

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Anne E. Cromwell, Paralegal Consultant
General Electric Company
3135 Easton Turnpike, W1-L8
Fairfield, Connecticut 06431

Re: Freedom of Information Request, RIN # 02-RIN-1543-97

Dear Ms. Cromwell:

This is in response to your second Freedom of Information Act ("FOIA") request regarding 722 Grand Street Mercury site, Hoboken, New Jersey dated June 30, 1997. The United States Environmental Protection Agency, Region II ("EPA") does not have any appraisals for the Grand Street Mercury Site ("Site") dated January 1996. However, EPA does have appraisals for the Site dated July 1996, and EPA therefore assume that you are seeking the July 1996 appraisals.

We are unable to provide you with the requested records because they are exempt from mandatory disclosure by virtue of the 5 U.S.C. 552(b)(5), (7)(A) and (7)(C) exemptions. An itemized list of the records which are being withheld, along with the basis for withholding is provided in the enclosure to this letter.

You may appeal this denial by addressing, within 30 days of your receipt of this letter, your written appeal to Freedom of Information Officer (A-101), United States Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460. Your appeal should refer to the RIN number listed above, the date of this determination, and my name, title and address.

Please contact Catherine Garypie at (212) 637-3138, should you have any questions concerning this matter.

Sincerely yours,

Walter R. Mugdan
Regional Counsel

Enclosures: Index of withheld documents

ATTACHMENT 4

Administrative Record Index

REMOVAL ACTION BRANCH

ADMINISTRATIVE RECORD

GRAND STREET SITE

HOBOKEN, HUDSON COUNTY, NEW JERSEY

Prepared for:

Jack Harmon, On-Scene Coordinator
U. S. EPA Region II
Removal Action Branch
Edison, New Jersey 08837

Prepared by:

Region II Superfund Technical Assessment and Response Team
Roy F. Weston, Inc
Federal Programs Division
Edison, New Jersey 08837

DCN #: START-02-F-00134

TDD #: 02-95-12-0009

March 1996

GRAND STREET SITE

ADMINISTRATIVE RECORD FILE

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REMOVAL RESPONSE	SECTION 2.0
HEALTH ASSESSMENTS	SECTION 3.0
PUBLIC PARTICIPATION	SECTION 4.0
TECHNICAL SOURCES AND GUIDANCE DOCUMENTS	SECTION 5.0
ENFORCEMENT	SECTION 6.0

FEBRUARY 12, 1997 - REVISIONi

GRAND STREET MERCURY SITE
ADMINISTRATIVE RECORD FILE
INDEX OF DOCUMENTS

1.0 SITE IDENTIFICATION

1.1 Background - RCRA and other information

- P. 100001- Instructions for the Installation of Cooper Hewitt
100005 Electric Lamps, Type Double P, For Direct Current
Circuits, Cooper Hewitt Electric Company, Eighth
and Grand Streets, Hoboken, N.J., undated.
- P. 100006- Installation and operation of Direct Current
100007 Uviarc Laboratory Outfits and Uviarc Test
Cabinets, Cooper Hewitt Electric Company, Hoboken,
N.J., a General Electric organization, undated.
- P. 100018- Instruction Book, Cooper Hewitt Lamps, Type P -
100023 Straight Tubes, Type P - U-Shaped Tubes, and Type
P - M-Shaped Tubes, Cooper Hewitt Electric
Company, Hoboken, N.J., undated.
- P. 100024- A Complete Treatise on Industrial Illumination
100256 with Mercury Vapor Lamps, by Mr. George J. Taylor,
B.S., S.M., E.E., Commercial Engineering
Department, General Electric Vapor Lamp Company,
Hoboken, N.J., undated.
- P. 100257- Figure 3 - Quality Tool & Die Proposed Sample
100258 Location Map, prepared by Jenny Engineering
Corporation, undated.
- P. 100259- Quality Tool & Die Case Summary, undated.
100260 (Attachment: Letter to Mr. David Pascale, Quality
Tool & Die, Inc., from Mr. Kenneth T. Hart,
Assistant Director, Industrial Site Evaluation
Element, New Jersey Department of Environmental
Protection and Energy (NJDEPE), re: Negative
Declaration by operator dated December 4, 1992,
February 8, 1993.)
- P. 100261- Quality Tool & Die Case Summary, undated.
100262
- P. 100263- Pages from the Sampling and Testing Plan, undated.
100266
- P. 100267- Production Facilities List, prepared by Quality
100273 Tool & Die Co., Inc., undated.
- P. 100274- Certificate of Incorporation of Quality Tool & Die
100289 Co., Inc., prepared by Roger R. Sciorsci, Esq.,
February 24, 1940. (Attachments: (1) Annual Report
by a Domestic Corporation, Quality Tool & Die Co.,

Inc., March 15, 1940, (2) Notice to file an Annual Report, Quality Tool & Die Co., Inc., August 21, 1959, (3) Certificate of Change of Agent of Quality Tool & Die Co., Inc., July 1, 1963, (4) Form 12 - Certificate of Change of Location of the Principal Office of the Quality Tool & Die Co., Inc., June 1, 1966, (5) Form 11 - Certificate of Change of Agent, Quality Tool & Die Co., Inc., June 1, 1966, and, (6) Certificate of Change of Registered Office or Registered Agent, or both, Quality Tool & Die Co., Inc., undated.)

- P. 100290- Amended Certificate of Incorporation Before
100315 Payment of Capital Stock of Excelsior Tool & Die Co., Inc., and Certificate of Incorporation of Majoda Tool & Manufacturing Corp., January 29, 1952. (Attachments: (1) Notice to file Annual Report, Majoda Tool & Manufacturing Corp., August 31, 1959, (2) Certificate of Change of Agent and Location of Principal Office of Majoda Tool & Manufacturing Corp., December 2, 1963, (3) Form 12 - Certificate of Change of Location of the Principal Office of The Majoda Tool & Manufacturing Corp., June 17, 1963, (4) Form 11 - Certificate of Change of Agent, June 17, 1963, (5) Form 12 - Certificate of Change of Location of the Principal Office of The Majoda Tool & Manufacturing Corp., November 18, 1966, (6) Form 11 - Certificate of Change of Agent, November 18, 1966, (7) Certificate of Change of Registered Office or Registered Agent, or Both, June 19, 1974, (8) Certificate of Change of Registered Office or Registered Agent, or Both, July 18, 1979.)
- P. 100316- Report of Examination of Title: Title Vested in
100323 Fee Simple in John J. Pascale and Quality Tool & Die Co., Inc., prepared by Law Office of S. Paul Epstein, December 7, 1973. (Note: This document is CONFIDENTIAL. It can be located in the Superfund Record Center at 290 Broadway - 18th Floor, N.Y., N.Y., 10007.)
- P. 100324- Indenture between Ms. Marie Pascale, divorced and
100328 Mr. John Pascale, Sr., divorced, of Plots 14 and 15A City Block 85, and by street address 720 to 732 Grand Street, and 727 to 733 Adams Street, Hoboken, New Jersey, January 30, 1974. (Attachments: Deed and State of New Jersey Affidavit of Consideration.) (Note: This document is CONFIDENTIAL. It can be located in the Superfund Record Center at 290 Broadway - 18th Floor, N.Y., N.Y., 10007.)
- P. 100329- Deed (w/ attachments) between Grantor, Mr. John
100334 J. Pascale and Quality Tool & Die Co., Inc., and Grantee, Mr. David P. Pascale, for Parcel 1: 720

- 732 Grand Street, and Parcel 2: 727 -733 Adams Street, Hoboken, New Jersey, May 24, 1979. (Note: This document is CONFIDENTIAL. It can be located in the Superfund Record Center at 290 Broadway - 18th Floor, N.Y., N.Y., 10007.)

- P. 100335-
100335 Summary Notice, Quality Tool & Die Co., Inc., July 2, 1990.
- P. 100336-
100337 Environmental Update to Clients, Co-Counsel, and Friends, from Mr. Edward A. Hogan, Chairman, Department of Environmental Law, Porzio, Bromberg, & Newman, re: New ECRA Policy for Decontamination/Decommissioning of Building Interiors, January 8, 1993.
- P. 100338-
100339 Letter to Mr. Robert Schiffmacher, and Mr. Matthew Schley, c/o Robert Kaye, Esq., Chasan, Leyner, et al., from Mr. James A. Rogers, President, Rogers Environmental Management, re: Quality Tool & Die Co., Inc., Due Diligence/Pre-Purchase Review, January 12, 1993.
- P. 100340-
10034 Letter to Mr. Robert Schiffmacher, c/o Robert Kaye, Esq., Chasan, Leyner, et al., from Mr. James A. Rogers, President, Rogers Environmental Management, re: Quality Tool & Die Co.; Hoboken, N.J., Due Diligence/Pre-Purchase Review, January 19, 1993.
- P. 100342-
100371 Letter to Mr. Robert Schiffmacher, c/o Robert Kaye, Esq., Chasan, Leyner, et al., from Mr. Alfred LoPilato, Health and Safety manager, Rogers Environmental Management, Inc., re: Quality Tool and Die Co.; Hoboken, N.J., February 9, 1993. (Attachments: (1) Letter to Mr. David Pascale, Quality Tool & Die Co., Inc., from Mr. Maurice Migliarino, Section Supervisor, Bureau of Environmental Evaluation and Cleanup Responsibility Assessment, NJDEPE, re: Quality Tool & Die Co., Inc., September 22, 1992, (2) Letter (w/ attachments) to Mr. Michael Buriani, Case Manager, NJDEPE, from Mr. Michael Edelson, Scarpone & Edelson, re: Quality Tool & Die Co., Inc., December 15, 1992, and, (3) Letter (w/ attachments) to Mr. Michael Buriani, Case Manager, NJDEPE, from Mr. Michael Edelson, Scarpone & Edelson, re: Quality Tool & Die Co., Inc., December 10, 1992.)
- P. 100372-
100376 Facsimile transmittal page to Mr. Alfred LoPilato, Rogers Environmental Management, Inc., from Mr. Jonathan B. James, Chasan, Leyner, Tarrant & Lamparello, re: attached letter, February 11, 1993. (Attachment: Letter (w/ attachments) to Jonathan B. James, Esq., Chasan, Leyner, Tarrant & Lamparello, from Mr. Val Mandel, Scarpone &

Edelson, re: Sale of Commercial Real Estate in Hoboken by David P. Pascale, February 10, 1993.)

- P. 100377-
100403 Letter to Mr. Michael Buriani, Division of Responsible Party Site Remediation, NJDEPE, from Ms. Rose M. Mehrtens, Project Manager, Rogers Environmental Management, Inc., re: Former ECRA Case #90362, February 4, 1994. (Attachments: (1) Letter to Ms. Rose Mehrtens, Rogers Environmental Management, Inc., from Mr. Maurice Migliarino, Section Supervisor, Bureau of Environmental Evaluation and Cleanup Responsibility Assessment, NJDEPE, re: Quality Tool & Die Co., Inc., February 17, 1994, (2) Letter to Mr. David Pascale, Quality Tool & Die Co., Inc., from Mr. Kenneth T. Hart, Assistant Director, Industrial Site Evaluation Element, NJDEPE, re: Negative Declaration by operator dated December 4, 1992, February 8, 1993, (3) Letter (w/attachments) to Mr. Michael Buriani, Case Manager, NJDEPE, from Mr. Michael Edelson, Scarpone & Edelson, re: Quality Tool & Die Co., Inc., January 28, 1993, (4) Industrial Site Evaluation Element, Bureau of Environmental Evaluation and Cleanup Responsibility Assessment, Report of Inspection, prepared by Mr. Michael Buriani, July 17, 1990.)
- P. 100404-
100405 Letter to Mr. Steven Keough, Grand Street Artist Partnership, from Mr. Christopher Kirby, Project Manager, Environmental Waste Management Associates, Inc., re: Proposal for Professional Services, 722 Grand Street, Hoboken, N.J., May 24, 1995.
- P. 100406-
100411 Handwritten letter to all partners, from Shun-Yi Chen and Ching-Huang Chung, re: Cleaning process at 722 Grand Street, October 26, 1995.
- P. 100412-
100412 Letter to Mr. Steve Keough, Grand Street Artist Partnership, from Mr. David W. Williamson, President, D.W.W. Enterprises, Inc., re: Completion of services, October 30, 1995.
- P. 100413-
100414 Letter to Mr. Steven Keough, Grand Street Artist Partnership, from Mr. John Szalkowski, Senior Environmental Scientist, Environmental Waste Management Associates, Inc., re: Progress Report, 722 Grand Street, Hoboken, N.J., November 1, 1995.
- P. 100415-
100433 Facsimile transmission form to Mr. Stephen R. Spector, Spector & Dimin, P.A., from Mr. Stephen A. Jaraczewski, Detail Associates, Inc., re: Enclosed draft report for the airborne determination of mercury vapor presence, November 13, 1995. (Attachment: Report: Mercury Vapor Survey, 722 Grand Street, Hoboken, N.J., prepared by Detail Associates, Inc., November 8, 1995.)

- P. 100434- Letter to Mr. John Szalkowski, Environmental Waste
100434 Management Associates, Inc., from Mr. David W. Williamson, President, D.W.W. Enterprises, Inc., re: Mercury Remediation, Apartment 4A, 722 Grand Street, Hoboken, N.J., November 16, 1995.
- P. 100435- Letter to Mr. Stephen Keough, Grand Street
100439 Partnership, from Mr. John Szalkowski, Senior Environmental Scientist, Environmental Waste Management Associates, Inc., re: Mercury Contamination, 722 Grand Street, Hoboken, N.J., November 20, 1995.
- P. 100440- Handwritten memo on Communications Center
100440 Notification Report, to Mr. Jim Dalon, from Mr. Stan Delikat, re: Request for Assistance, December 22, 1995.
- P. 100441- Letter to Virginia Curry, Esq., U.S. EPA, Region
100616I I, from Ms. Jane W. Gardner, Counsel-Remediation Programs, General Electric, re: Hoboken--Request for Newark Lamp Plant Cleanup Plan, February 21, 1996. (Attachment: Report: Newark Cleanup Plan for the Newark Plant. Newark, New Jersey, (Appendix Q - Site Drawings Missing) prepared by GE Company, prepared for State of New Jersey Department of Environmental Protection, April 30, 1985.)

2.0 REMOVAL RESPONSE

2.1 Sampling and Analysis Plans

- P. 200001- Plan:Quality Assurance Sampling Plan for Sub-
200139 Surface Soil, undated. (Attachments: (1) Figure 1 - Preliminary Site Locations, Grand Street Mercury Site, Hoboken, N.J., prepared by U.S. EPA Environmental Response Team, March 27, 1996, (2) Table 1 - Field Sampling Summary, undated, and, (3) Appendix A - Superfund Program Representative Sampling Guidance, Volume 1: Soil, Interim Final, Quality Assurance Sampling Plan, prepared by The U.S. EPA Committee on Representative Sampling for the Removal Program, prepared for the Environmental Response Branch, U.S. EPA, Headquarters, March 1996.)
- P. 200140- Mercury Abatement/Encapsulation Specifications,
200142 Grand Street Artist Partnership, 722 Grand Street, Hoboken, N.J., prepared by Environmental Waste Management Associates, Inc., undated.
- P. 200143- Arizona Instrument, Certificate of Instrument
200143 Calibration (w/ attachment), inspected by D. Carmen, December 29, 1995.
- P. 200144- Arizona Instrument, Certificate of Instrument
200145 Calibration (w/ attachment), inspected by D.

Carmen, January 12, 1996.

- P. 200146- Arizona Instrument, Certificate of Instrument
200147 Calibration (w/ attachment), inspected by D. Hunt,
January 30, 1997.
- P. 200148- Mercury Abatement/Encapsulation Specifications,
200171 Apartments 5A & 5D, 722 Grand Street, Hoboken,
N.J., prepared by Environmental Waste Management
Associates, Inc., prepared for Grand Street Artist
Partnership, August 25, 1997.

2.2 Sampling and Analysis Data/Chain of Custody Forms

- P. 200172- Urine Mercury Testing, 722 Grand Street, Hoboken,
200176 N.J., December 29, 1995.
- P. 200177- Memorandum Report to Mr. Rodney Turpin, U.S.
200182 EPA/ERT Work Assignment Manager, through Mr. Vinod
Kansal, REAC Analytical Section Leader, from Mr.
Michael Morganti, REAC Task Leader, re: Executive
Summary Report Volume 1-Grand Street Mercury
Site, Hoboken, N.J., February 13, 1996.
- P. 200183- Memorandum Report to Mr. Rodney Turpin, U.S.
200259 EPA/ERT Work Assignment Manager, through Mr. Vinod
Kansal, REAC Analytical Section Leader, from Mr.
Michael Morganti, REAC Task Leader, re: Phase 1
Air Monitoring and Sampling. Volume 2 - Trip
Report, Grand Street Mercury-Site, Hoboken, N.J.,
February 14, 1996.
- P. 200260- Report: Volume 3, Final Report, Grand Street
200418 Mercury Site. Phase II - Air Sampling, 722 Grand
Street, Hoboken, N.J., prepared by Roy F. Weston,
Inc., prepared for U.S. EPA/ERT, February 1996.
- P. 200419- Report: Sampling Trip Report, Grand Street
200425 Mercury Site, prepared by Mr. Thomas O'Neill, Roy
F. Weston, Inc., prepared for U.S. EPA, Region II,
April 8, 1996.
- P. 200426- Report: Analytical Report, Grand Street Mercury
200435 Site, Hoboken, N.J., prepared by Roy F. Weston,
Inc., prepared for U.S. EPA-ERT, May 1996.
- P. 200436- Chain of Custody Record, Roy F. Weston, Inc., U.S.
200437 EPA, Region II START, July 23, 1996.
- P. 200438- GE/EPA Meeting, GE Mercury Remediation Projects,
200450 GE Demolition Cost Estimate for Grand Street Site,
Hoboken, N.J., February 6, 1997. (Attachments: (1)
GE Lighting, Mercury Encapsulation Projects,
Jackson Lamp and Glass Plants, Newark Lamp Plant,
Cuyahoga Lamp Plant, February 6, 1997, and, (2)
Directions to Grand Street Mercury Site, undated.)

P. 200451- Letter to Mr. Jack Harmon, Task Monitor, Removal
200597 Action Branch, U.S. EPA, Region II, from Mr.
Thomas O'Neill, Roy F. Weston, Inc., re: Grand
Street Site Air Monitoring Data Sheets, May 12,
1997.

2.7 Correspondence

P. 200598- Letter to Mr. Mike Salter, Grand Street Artist
200623 Partnership, from Mr. Gary Annibal, CIH, Enpak
Services Company, Inc., re: Mercury Sampling in
Hoboken, N.J., March 28, 1995. (Attachment: An
Industrial Hygiene Survey of Mercury Levels
conducted at 720-732 Grand Street, Hoboken, N.J.,
March 11, 1995).

P. 200624- Memorandum to Ms. Janet Smolenski, Bureau of Field
200629 Operations, Case Assignment Section, from Mr. J.
Doyle, re: Quality Tool and Die, Urinalysis
Testing of Residents for Accelerated Levels of
Mercury Poisoning, undated. (Attachments: (1)
NJDEP, Communications Center Notification Report,
December 22, 1995, (2) Newspaper article, "Mayor
wants to probe into contaminated condos", from the
Trenton Times, December 31, 1995, and, (3) Case
Assignment Tracking List, Quality Tool and Die
Co., Inc., April 24, 1990.)

P. 200630- Memorandum to Mr. Stephen D. Luftig, Director,
200631 Office of Emergency and Remedial Response, U.S.
EPA, Region II, from Ms. Kathleen Callahan,
Director, Emergency and Remedial Response, U.S.
EPA, Region II, re: Request for Concurrence in a
Nationally Significant Removal Action at the Grand
Street Mercury Site in Hoboken, New Jersey,
December 29, 1995.

P. 200632- Letter to Mr. Jeff Bechtel, OSC, Response and
200649 Prevention Branch, U.S. EPA, Region II, from Mr.
Tom O'Neill, START, Project Manager, Roy F.
Weston, Inc., re: Grand Street Site, Mercury Vapor
Monitoring Survey, January 2, 1996. (Attachments:
(1) Attachment A - Mercury Vapor Survey Results,
undated, and, (2) Attachment B - Photographs from
December 27, 1995, Mercury Vapor Survey, undated.)

P. 200650- Memorandum to Ms. Kathleen Callahan, Director,
200651 Emergency & Remedial Response Division, U.S. EPA,
Region II, from Mr. Stephen D. Luftig, Director,
Office of Emergency and Remedial Response, U.S. EPA,
Region II, re: Concurrence on a Nationally
Significant Removal Action at the Grand Street
Mercury Site, Hoboken, NJ, January 4, 1996.

P. 200652- Letter to the Residents of 722 Grand Street,
200653 Hoboken, from Ms. Kathleen Callahan, Director,
Emergency Response and Remedial Division, U.S.

EPA, Region II, re: Relocation Assistance, January 11, 1996. (Attachment: Notice to Grand Street Partnership Properties, Hoboken, New Jersey, January 9, 1996.)

- P. 200654-
200660 Memorandum to Mr. Elliot Laws, Assistant Administrator, Office of Solid Waste and Emergency Response, U.S. EPA, Region II, from Ms. Kathleen Callahan, Director, Emergency and Remedial Response Division, U.S. EPA, Region II, re: Removal Action at 722 Grand Street, Hoboken, New Jersey, January 12, 1996. (Attachments: (1) Memorandum to Mr. William J. Muszynski, P.E., Acting Regional Administrator, U.S. EPA, Region II, from Ms. Kathleen Callahan, Emergency and Remedial Response Division, U.S. EPA, Region II, re: Temporary Relocation Expenses for Certain Residents of 722 Grand Street, Hoboken, New Jersey, undated; (2) Letter to Ms. Janet Filameno, from Mr. William J. Muszynski, Acting Regional Administrator, U.S. EPA, Region II, re: the U.S. EPA's commitment to assist with temporary relocation required as a result of the mercury contamination at 722 Grand Street, Hoboken NJ, January 12, 1996; (3) Letter to Ms. China Marks, from Mr. William J. Muszynski, Acting Regional Administrator, U.S. EPA, Region II, re: the U.S. EPA's commitment to assist with temporary relocation required as a result of the mercury contamination at 722 Grand Street, Hoboken, January 12, 1996; (4) Letter to Ms. Meredith Lippman and Mr. John Steadwell, from Mr. William J. Muszynski, Acting Regional Administrator, U.S. EPA, Region II, re: the U.S. EPA's commitment to assist with temporary relocation required as a result of the mercury contamination at 722 Grand Street, Hoboken, January 12, 1996; and (5) Letter to Mr. David Greisbauer, from Mr. William J. Muszynski, Acting Regional Administrator, U.S. EPA, Region II, re: the U.S. EPA's commitment to assist with temporary relocation required as a result of the mercury contamination at 722 Grand Street, Hoboken, January 12, 1996.)
- P. 200661-
200673 Letter to Mr. Jeff Bechtel, OSC, Response and Prevention Branch, U.S. EPA, Region II, from Mr. Tom O'Neill, Superfund Technical Assessment and Response Team (START) Project Manager, Roy F. Weston, Inc., re: Grand Street Site, Sampling Trip Report, January 5, 1996, January 15, 1996. (Attachment: Report: Sampling Trip Report, 722 Grand Street, prepared by Mr. Thomas O'Neill, Roy F. Weston, Inc., prepared for U.S. EPA, Region II January 5, 1996)
- P. 200674-
200688 Memorandum to Mr. Rajeshmal Singhvi, U.S. EPA/ERT, through Mr. Vinod Kansal, REAC Analytical Section

Leader, from Jay Patel, REAC Inorganic Group Leader, re: Grand Street Mercury Site Results for samples Collected February 6-8, 1996, February 14, 1996.

- P. 200689-200730 Letter to Mr. Jack Harmon, OSC, Removal Action Branch, U.S. EPA, Region II, from Mr. Thomas O'Neill, Project Manager, Roy F. Weston, Inc., re: Grand Street Site, Sampling Trip Report, February 6-8, 1996, February 26, 1996. (Attachment: Report: Sampling Trip Report, Grand Street Mercury Site, prepared by Mr. Thomas O'Neill, Roy F. Weston, Inc., prepared for U.S. EPA, Region II, February 26, 1996.)
- P. 200731-200734 Letter to 722 Grand Street Resident, from Irmee Huhn, U.S. EPA, re: update on EPA's involvement at 722 Grand Street, April 11, 1996.
- P. 200735-201014 Memorandum to Mr. Rodney Turpin, U.S. EPA/ERT Work Assignment Manager, through Mr. Vinod Kansal, REAC Analytical Section Leader, from Mr. Michael Morganti, REAC Task Leader, re: Subsurface Soil Sampling, Grand Street Mercury Site, Hoboken, N.J., May 15, 1996.
- P. 201015-201039 Letter to Mr. Jack Harmon, OSC, Removal Action Branch, U.S. EPA, Region II, from Mr. Thomas O'Neill, Project Manager, Roy F. Weston, Inc., re: Grand Street Site, June 4, 1996. (Attachment: Report: Investigation of Lead in Paint and Mercury in Brick and Flooring Utilizing the Spectrace 9000 XRF at the Grand Street Mercury Site, Hoboken, Hudson County, N.J., prepared by START, Roy F. Weston, Inc., prepared for U.S. EPA, Region II, June 4, 1996.)
- P. 201040-201045 Letter to Mr. Jack Harmon, Task Monitor, Removal Action Branch, U.S. EPA, Region II, from Mr. Thomas O'Neill, Project Manager, Roy F. Weston, Inc., re: Grand Street Site, Sampling Trip Report, July 23, 1996, July 26, 1996. (Attachment: Report: Sampling Trip Report, Grand Street Mercury Site, prepared by Mr. Thomas O'Neill, Roy F. Weston, Inc., prepared for U.S. EPA, Region II, July 24, 1996.)
- P. 201046-201070 Transmittal memo to Mr. Jack Harmon, Removal Action Branch, U.S. EPA, Region II, from Ms. Jennifer Leahy, Inorganic Data Reviewer, START Region II, Roy F. Weston, Inc., re: Grand Street, Hoboken, N.J., Mercury Validation Results and Soil Matrices, August 23, 1996. (Attachment: Memorandum to Mr. Jack Harmon, U.S. EPA, Region II, from Ms. Jennifer Leahy, START Data Review Team, re: QA/QC Compliance Review Summary, August 23, 1996, (2) Report: Sampling Trip Report, Grand Street Mercury

Site, prepared by Mr. Thomas O'Neill, Roy F. Weston, Inc., prepared for U.S. EPA, Region II, July 24, 1996, (3) Chain of Custody Record, Roy F. Weston, Inc., U.S. EPA Region II, START, July 23, 1996, and, (4) Analytical Data Report, prepared by Accredited Laboratories, Inc., prepared for Roy F. Weston, Inc., July 23, 1996.)

- P. 201071- Letter to 722 Grand Street Resident, from Irmee
201074 Huhn, U.S. EPA, re: summary of new events since
the last update of April 1996, September 3, 1996.
- P. 201075- Fax Transmittal to Ms. Catherine Garypie, Esq.,
201079U.S. EPA, Region II, from Ms. Jane W. Gardner,
Counsel-Remediation Programs, General Electric
Company (GE), re: attached reference to GE Vapor
Lamp and Cooper-Hewitt, September 12, 1996.
(Attachment: The Electric-Lamp Industry:
Technological Change and Economic Development from
1800 to 1947, written by Arthur A. Bright,
Jr.,(pages 428 through 430).)
- P. 201080- Letter to Mr. Jack Harmon, OSC, Removal Action
201134 Branch, U.S. EPA, Region II, from Mr. Thomas
O'Neill, Project Manager, Roy F. Weston, Inc., re:
Grand Street Site, Mercury Contamination
Investigation Final Report, October 7, 1996.
(Attachment: Report: Final Report, Mercury
Contamination Investigation, Grand Street Mercury
Site, Hoboken, Hudson County, N.J., prepared by
START, Roy F. Weston, Inc., prepared for U.S. EPA,
Region II - Removal Action Branch, October 2,
1996.)
- P. 201135- Letter to Mr. Jack Harmon, OSC, Removal Action
201147 Branch, U.S. EPA, Region II, from Mr. Thomas
O'Neill, START Project Manager, Roy F. Weston,
Inc. , re: Grand Street Site, Sampling Trip Reports
for August 13, 21, and 22, and September 5 and 6,
1996, October 8, 1996. (Attachment: (1) Report:
Sampling Trip Report, Grand Street Mercury Site,
prepared by Mr. Thomas O'Neill, Roy F. Weston,
Inc., prepared for U.S. EPA, Region II, October 8,
1996, (2) Report: Sampling Trip Report, Grand
Street Mercury Site, prepared by Mr. Thomas
O'Neill, Roy F. Weston, Inc., prepared for U.S.
EPA, Region II, October 8, 1996.)
- P. 201148 Letter to Mr. Jack Harmon, OSC, Removal Action
201153 Branch, U.S. EPA, Region II, from Mr. Thomas
O'Neill, START Project Manager, Roy F. Weston,
Inc., re: Grand Street Site Amended Basement
Sample Results, October 21, 1996. (Attachment:
Evaluation of Inorganic Data for the Contract
Laboratory Program, Appendix A.2: Data Assessment
Narrative, Grand Street Mercury Site, reviewed by
Ms. Smita Sumbaly, January 1992.)

- P. 201154-
201158 Letter to Mr. Jack Harmon, OSC, Removal Action Branch, U.S. EPA, Region II, from Mr. Thomas O'Neill, START Project Manager, Roy F. Weston, Inc., re: Grand Street Site, Sampling Trip Report, October 15, 1996, October 29, 1996.(Attachment: Report: Sampling Trip Report, Grand Street Mercury Site, prepared by Mr. Rodolfo Hafner, Roy F. Weston, Inc., prepared for U.S. EPA, Region II, October 22, 1996.)
- P. 201159-
201168 Memorandum to Mr. Richard Caspe, Director, Emergency and Remedial Response, U.S. EPA, Region II, from Mr. Stephen D. Luftig, Director, Office of Emergency and Remedial Response, U.S. EPA, Region II, re: Grand Street Mercury Site, Hoboken, N.J., Relocation Benefits, November 12, 1996. (Attachments: Memorandum to Ms. Catherine Garypie, Assistant Regional Counsel, Office of Regional Counsel, U.S. EPA, Region II, re: Relocation Issues at the Grand Street Mercury Site, Hoboken, New Jersey, September 11, 1996 and Memorandum to Mr. Stanley L. Laskowski, Acting Regional Administrator, U.S. EPA, Region 3, from Ms. Jean C. Nelson, General Counsel, re:Legal Authority to replace demolished building at Superfund Sites, December 16, 1993.
- P. 201169-
201182 Transmittal memo to Mr. Jack Harmon, OSC, Removal Action Branch, U.S. EPA, Region II, from Ms. Smita Sumbaly, Data Reviewer, and Mr. Thomas O'Neill, START Project Manager, Roy F. Weston, Inc., re: Grand Street Mercury Site, Data Validation Assessment, December 9, 1996. (Attachment: (1) Memorandum to Mr. Jack Harmon, OSC, U.S. EPA, Region II, from Ms. Smita Sumbaly, START Data Review Team, re: QA/QC Compliance Review Summary, November 27, 1996, (2) Evaluation of Inorganic Data for the Contract Laboratory Program, Appendix A.2: Data Assessment Narrative, Grand Street Mercury Site, reviewed by Ms. Smita Sumbaly, January 1992, (3) Nonconformance Summary, undated, (4) Metals Analysis Results, prepared by IEA, prepared for Weston TAT, October 25, 1996, and, (5) Chain of Custody Form, October 15, 1996.)
- P. 201183-
201184 Letter to Mr. Richard L. Caspe, Director, Emergency and Remedial Response Division, U.S. EPA, Region II, from Mr. George W. Crimmins, Business Administrator, Office of the Business, Administrator, re: 722 Grand Street Mercury Site, Hoboken, N.J., December 19, 1996.
- P. 201185-
201185 Letter to Mr. Robert Drasheff, Director, Department of Human Services, City of Hoboken, from Ms. Lisa P. Jackson, Project Manager, Emergency and Remedial Response Division, re: Superfund Policy Directive Regarding Land Use,

December 19, 1996.

- P. 201186- Letter to Mr. Jack Harmon, Task Monitor, Removal
201217 Action Branch, U.S. EPA, Region II, from Mr.
Thomas O'Neill, Project Manager, Roy F. Weston,
Inc., re: Grand Street Site, Sampling Trip Report,
December 12, 1996, December 20, 1996. (Attachment:
Report: Sampling Trip Report, Grand Street Mercury
Site, prepared by Mr. Thomas O'Neill, Roy F.
Weston, Inc., prepared for U.S. EPA, Region II,
December 20, 1996.)
- P. 201218- Letter to Mr. George W. Crimmins, Director,
201219 Department of Administration, from Mr. Richard L.
Casper, Director, Emergency Remedial and Response
Division, U.S. EPA, Region II, re: 722 Grand
Street Mercury Site, Hoboken, N.J., January 9,
1997.
- P. 201220- Letter to Mr. Jack Harmon, OSC, Removal Action
201229 Branch, U.S. EPA, Region II, from Mr. Thomas
O'Neill, START Project Manager, Roy F. Weston,
Inc., re: Grand Street Site Wipe Sample Results,
January 31, 1997. (Attachment: Table 1 - Wipe
sample Results, Grand Street Mercury Site,
Hoboken, N.J., undated, (2) Attachment A -
Laboratory Data, Analytical Data Report for
Mercury in wipes, prepared by Enviro-Probe, Inc.,
prepared for Roy F. Weston, Inc., December 13,
1996, (3) Chain of Custody Record, Roy F. Weston,
Inc., U.S. EPA Region II, START, December 12,
1996, (4) Chain of Custody Form for Wipe Samples,
December 13, 1996, (5) MDL Determination for
Mercury in Drinking Water, July 7, 1995, and, (6)
Facsimile transmittal to Ms. Smita Sumbaly, Roy F.
Weston, Inc., from Subhash, Enviro-Probe, Inc.,
re: Calibration for Mercury, January 16, 1997.)
- P. 201230- Memorandum to Grand Street Mercury Site File, from
201235 Mr. John F. Hansen, Project Manager, U.S. EPA,
Region II, re: Grand Street Mercury, Site, EPA
Visit to GE Lighting Facility, February 6, 1997,
February 13, 1997.
- P. 201236- Letter to Mr. Jack Harmon, Task Monitor, U.S. EPA,
201254 Region II, Removal Action Branch, from Mr. Thomas
O'Neill, Project Manager, Roy F. Weston, Inc., re:
Work and Sampling Plan - Grand Street Mercury Site
- Risk Assessment, February 27, 1997. (Attachment:
Plan: Sampling QA/QC Work Plan, Grand Street
Mercury Site/725 Adams Street, Risk Assessment,
Hoboken, Hudson County, N.J., prepared by START,
Roy F. Weston, Inc., prepared for U.S. EPA, Region
II - Removal Action Branch, February 27, 1997.)
- P. 201255- Letter to Mr. Jack Harmon, Task Monitor, Removal
201262 Action Branch, U.S. EPA, Region II, from Mr.

Thomas O'Neill, Project Manager, Roy F. Weston, Inc., re: Sampling Trip Report - 725 Adams Street, March 11, 1997. (Attachment: Report: Sampling Trip Report, 725 Adams Street, Hoboken, N.J., prepared by Mr. Thomas O'Neill, Roy F. Weston, Inc., prepared for U.S. EPA, Region II, March 4, 1997.)

- P. 201263-
201263 Letter from Mr. John F. Hansen, Project Manager, New Jersey Remediation Branch, U.S. EPA, Region II, re: the review and approval of the document entitled, "Technical Engineering Evaluation for Mercury Remediation at the Grand Street Site", dated March 11, 1997, sent March 18, 1997.
- P. 201264-
201296 Transmittal memo to Mr. Jack Harmon, OSC, Removal Action Branch, U.S. EPA, Region II, from Ms. Smita Sumbaly, Data Reviewer, and Mr. Thomas O'Neill, Project Manager, START Region II, Roy F. Weston, Inc., re: Grand Street Mercury Site, Data Validation Assessment, March 25, 1997. (Attachment: Memorandum to Mr. Jack Harmon, OSC, U.S. EPA, Region II, from Ms. Smita Sumbaly, START Data Review Team, re: QA/QC Compliance Review Summary, March 24, 1997, (2) Evaluation of Inorganic Data for the Contract Laboratory Program (w/ attachments), Appendix A.2: Data Assessment Narrative, Grand Street Mercury Site, reviewed by Ms. Smita Sumbaly, January 1992.)
- P. 201297-
201443 Letter to Mr. Jack Harmon, Task Monitor, Removal Action Branch, U.S. EPA, Region II, from Mr. Thomas O'Neill, Project Manager, Roy F. Weston, Inc., re: Grand Street Air Monitoring Data Sheets, May 12, 1997. (Attachments: (1) Daily Mercury Vapor Survey Results, 722 Grand Street, Hoboken, N.J., various dates, and (2) Region II START, Mercury Vapor Survey Results, various dates.)

4.0 FEASIBILITY STUDY

4.3 Feasibility Study Reports

- P. 400001-
400006 Report: Mercury Exposure Among Residents of a Building Formerly Used for Industrial Purposes, New Jersey, January 1995.
- P. 400007-
400026 Report: Center for Disease Control and Prevention, Morbidity and Mortality Weekly Report, Vol. 45, No. 20, May 24, 1996.
- P. 400027-
400032 Appraisal Review, prepared by Nationwide Consulting Company, Inc., prepared for Baltimore District, U.S. Army Corps. of Engineers, June 7, 1996 (Note: This document is CONFIDENTIAL. It is located at the U.S. EPA Superfund Records Center, 290 Broadway, 18th Floor, N.Y., N.Y. 10007..)

- P. 400033-
400037 Appraisal Review, prepared by Lama Realty Services, prepared for Baltimore District, U.S. Army Corps. of Engineers, June 7, 1996 (Note: This document is CONFIDENTIAL. It is located at the U.S. EPA Superfund Records Center, 290 Broadway, 18th Floor, N.Y., N.Y. 10007..)
- P. 400038-
400040 Appraisal Review, prepared by Lama Realty Services, prepared for Baltimore District, U.S. Army Corps. of Engineers, July 2, 1996 (Note: This document is CONFIDENTIAL. It is located at the U.S. EPA Superfund Records Center, 290 Broadway, 18th Floor, N.Y., N.Y. 10007..)
- P. 400041-
400120 Report: Appraisal of Real Property, Industrial Buildings, 720-722 Grand Street, Hoboken, Hudson County, N.J., prepared by Anthony F. Lama Realty Services, Inc., prepared for Baltimore District, U.S. Army Corps. of Engineers, July 2, 1996 (Note: This document is CONFIDENTIAL. It is located at the U.S. EPA Superfund Records Center, 290 Broadway, 18th Floor, N.Y., N.Y., 10007..)
- P. 400121-
400257 Report: Appraisal of Real Property, 720-722 Grand Street, Hoboken, Hudson County, N.J., prepared by Anthony F. Lama Realty Services, Inc., prepared for Baltimore District, U.S. Army Corps. of Engineers, July 2, 1996 and July 24, 1996. (Note: This document is CONFIDENTIAL. It is located at the U.S. EPA Superfund Records Center, 290 Broadway, 18th Floor, N.Y., N.Y., 10007..)
- P. 400258-
400355 Report: Appraisal of 720-732 Grand Street, Hoboken, N.J., Block: 85 Lots: 14 and 15.1 (17 condominium Units) prepared by Nationwide Consulting Company, Inc., prepared for Baltimore District, U.S. Army Corps. of Engineers, July 9, 1996 (Note: This document is CONFIDENTIAL. It is located at the U.S. EPA Superfund Records Center, 290 Broadway, 18th Floor, N.Y., N.Y., 10007..)
- P. 400356-
400439 Report: Technical Engineering Evaluation for Mercury Remediation at The Grand Street Site, prepared by Levine Fricke Recon Inc., prepared for Roy F. Weston, Inc., March 11, 1997.
- P. 400440-
400578 Report: Final Baseline Human Health Risk Assessment, Grand Street Site, Hudson County, Hoboken, NJ, prepared by Roy F. Weston, Inc., prepared for U.S. EPA, Region II, Removal Action Branch, April 1997.

4.6 Correspondence

- P. 400579-
400580 Memorandum to Chief, Real Estate Section, New Jersey Field Office, East Brunswick, N.J., from Mr. Thomas J. Geronikos, MAI, ASA, Acting Chief,

Appraisal Branch, U.S. Army Corps of Engineers,
re: 722 Grand Avenue, Hoboken, N.J., September 6,
1996.

GRAND STREET MERCURY SITE
ADMINISTRATIVE RECORD FILE UPDATE
INDEX OF DOCUMENTS

4.0 FEASIBILITY STUDY

4.6 Correspondence

- P. 400581- Letter to Catherine Garypie, Esq., Office of
400584 Regional Counsel, New Jersey Superfund Branch,
U.S. EPA, Region II, from Robert E. Murray, Esq.,
Murray, Murray, Corrigan, & Garcia, re: 722 Grand
St., Hoboken, NJ, Mercury Contaminated Site,
requested information submitted on behalf of the
City of Hoboken in response to correspondence
dated September 11, 1997, September 22, 1997.

7.0 ENFORCEMENT

7.1 Enforcement History

- P. 700001- January 17, 1997 Meeting Outline, General Electric
700216 Co. and U.S. EPA Region II, "Hoboken, prepared by
General Electric, prepared for U.S. EPA, Region
II, January 17, 1997.

7.3 Administrative orders

- P. 700217- Letter to Mr. John Welch, Jr., Chief Executive
700245 Officer, General Electric Company, and Mr. John
Pascale, Sr., from Mr. Richard Caspe, Director,
Emergency and Remedial Response Division, U.S.
EPA, Region II, re: Grand St. Mercury Superfund
Site - Unilateral Administrative Order, Index No.
II-CERCLA-97-0108, February 24, 1997. (Attachment:
Unilateral Administrative Order for Removal
Response Activities, In the Matter of Grand Street
Mercury Site, Hoboken, New Jersey, vs. General
Electric Company and John Pascale, Sr.,
Respondents, February 24, 1997.)
- P. 700246- Letter to Catherine Garypie, Esq., Assistant
700264 Regional Counsel, U.S. EPA, Region II, from Mr.
John F. Semple, Sterns & Weinroth, re: Grand
Street Mercury Superfund Site - Unilateral
Administrative Order, Index No. II-CERCLA-97-0108,
March 28, 1997.
- P. 700265- Letter to Catherine Garypie, Esq., Office of
700334 Regional Counsel, U.S. EPA, Region II, from Ms.

Jane W. Gardner, Manager and Counsel - Remediation Programs, General Electric Company, re: Grand Street Artists Partnership Site, Hoboken, N.J.,: General Electric Companys Comments on Unilateral Administrative Order, Index No. II-CERCLA-97-0108, April 1, 1997. (Attachments: (1) Attachment 1 - GEs Specific Comments on the Proposed Order, undated, (2) Letter (w/ attachment) to Catherine Garypie, Esq., Office Of Regional Counsel, U.S. EPA, from Ms. Kathryn B. Thompson, Sidley & Austin, re: Grand Street Artists Partnership Site, Hoboken, N.J., General Electric Companys Comments on Unilateral Administrative Order, Index No. II-CERCLA-97-0108, April 1, 1997, (3) Attachment 2 - Comments on U.S. EPA Fire Analysis for 722 Grand Street in Hoboken, N.J., prepared by PTI Environmental Services, prepared for U.S. EPA, Region II, undated, (4) Attachment 3 - Letter to Sperti Faraday, Inc., Cooper Hewitt Electric Company Division, from Mr. Bill Rice, re: Replacement Bulb for p106 sunlamp, October 5, 1994, (5) Attachment 4 - Grand Street Artists Partnership Meeting Minutes, November 4, 1995, (6) Attachment 6 - Letter to Ira Karasick, Esq. from Mr. Stephen R. Spector, Spector & Dimin, P.A., re: Grand Street Artists Partnership, November 7, 1995, (7) Attachment 7 - Letter to Ching-Huang Chung and Shun Yi Chen, from Mr. Jack Harmon, On-Scene Coordinator, U.S. EPA, Region II, re: Grand Street Mercury Site, Hoboken, N.J., undated, (8) Attachment 8 - Group Meeting of Grand Street Artists Members, March 31, 1996, (9) Attachment 9 - Letter to Mr. David Pascale, c/o Michael Edelson, Esq., Hellring, Lindeman, Goldstein & Siegal, from Mr. Richard J. Gimello, Assistant Commissioner, NJDEP, re: Industrial Establishment: Quality Tool & Die Co., Inc., Negative Declaration Approval dated February 8, 1993, December 20, 1996, and, (10) Attachment 10 - Letter to Patricio Martinez-Lorenzo, Esq., from Mr. Henry Guzman, Assistant Regional Counsel, U.S. EPA, Region II, re: Juncos Landfill Superfund Site, May 10, 1993.)

P. 700335- Unilateral Administrative Order for Removal
700342 Response Activities, In the Matter of Grand Street Mercury Site, Hoboken, N.J., vs. General Electric Company and Mr. John Pascale, Sr., May 6, 1997.

7.5 Affidavits

P. 700343- U.S. EPA, Region II, Redacted Administrative
700393 Deposition, In the Matter of Grand Street Mercury Site, Hoboken, N.J., 10:15 A.M., April 16, 1996.

P. 700394- Administrative Deposition, In the Matter of Grand
700443 Street Mercury Site, Hoboken, New Jersey transcript of testimony taken by Waga and

Spennelli, certified shorthand reporters, on April 16, 1996. (Note: This document is CONFIDENTIAL. It can be located in the Superfund Record Center at 290 Broadway - 18th Floor, N.Y., N.Y., 10007.)

- P. 700444-700465 U.S. EPA, Region II, Redacted Administrative Deposition, In the Matter of Grand Street Mercury Site, Hoboken, N.J., 2:00 P.M., April 16, 1996.
- P. 700466-700486 Administrative Deposition, In the Matter of Grand Street Mercury Site, Hoboken, New Jersey, transcript of testimony taken by Waga and Spennelli, certified shorthand reporters, on April 16, 1996. (Note: This document is CONFIDENTIAL. It can be located in the Superfund Record Center at 290 Broadway - 18th Floor, N.Y., N.Y., 10007.)
- P. 700487-700515 U.S. EPA, Region II, Redacted Administrative Deposition, In the Matter of Grand Street Mercury Site, Hoboken, N.J., April 18, 1996.
- P. 700516-700543 Administrative Deposition, In the Matter of Grand Street Mercury Site, Hoboken, New Jersey, transcript of testimony taken by Waga and Spennelli, certified shorthand reporters, on April 18, 1996. (Note: This document is CONFIDENTIAL. It can be located in the Superfund Record Center at 290 Broadway - 18th Floor, N.Y., N.Y., 10007.)
- P. 700544-700581 U.S. EPA, Region II, Redacted Administrative Deposition, In the Matter of Grand Street Mercury Site, Hoboken, N.J., April 19, 1996.
- P. 700582-700618 Administrative Deposition, In the Matter of Grand Street Mercury Site, Hoboken, New Jersey, transcript of testimony taken by Waga and Spennelli, certified shorthand reporters, on April 19, 1996. (Note: This document is CONFIDENTIAL. It can be located in the Superfund Record Center at 290 Broadway - 18th Floor, N.Y., N.Y., 10007.)
- P. 700619-700643 U.S. EPA, Region II, Redacted Administrative Deposition, In the Matter of Grand Street Mercury Site, Hoboken, N.J., May 31, 1996.
- P. 700644-700667 Administrative Deposition, In the Matter of Grand Street Mercury Site, Hoboken, New Jersey, transcript of testimony taken by Waga and Spennelli, certified shorthand reporters, on May 31, 1996. (Note: This document is CONFIDENTIAL. It can be located in the Superfund Record Center at 290 Broadway - 18th Floor, N.Y., N.Y., 10007.)
- P. 700668-700714 U.S. EPA, Region II, Redacted Administrative Deposition, In the Matter of Grand Street Mercury Site, Hoboken, N.J., June 11, 1996.

- P. 700715- Administrative Deposition, In the Matter of Grand
700758 Street Mercury Site, Hoboken, New Jersey,
transcript of testimony taken by Waga and
Spennelli, certified shorthand reporters, on June
11, 1996. (Note: This document is CONFIDENTIAL.
It can be located in the Superfund Record Center
at 290 Broadway - 18th Floor, N.Y., N.Y., 10007.)
- P. 700759- U.S. EPA, Region II, Redacted Administrative Sworn
700882 Statement In the Matter of Grand Street Mercury
Site, Hoboken, N.J., July 1, 1996.
- P. 700883- Administrative sworn statement (with Exhibits
701019 attached), In the Matter of The Grand Street
Mercury Site, Hoboken, New Jersey, taken by
Britton & Associates, on July 1, 1996. (Note:
This document is CONFIDENTIAL. It can be located
in the Superfund Record Center at 290 Broadway -
18th Floor, N.Y., N.Y., 10007.)
- P. 701020- Telecopy Cover Letter to Catherine Garypie, Esq.,
701030 from Michael Edelson, Esq., re: Grand Street
Mercury Superfund Site, November 19, 1996.
(Attachments: (1) Declaration of Ms. Rose
Sinclair, November 6, 1996, and (2) Counterclaim
of Rogers Environmental Management, Inc., November
6, 1996)
- P. 701031- Administrative Deposition of Mr. John J. Pascale,
701075 In the Matter of Grand Street Artists vs. General
Electric Company, February 12, 1997.

7.7 Notice Letters and Responses - 104(e)'s

- P. 701076- Documents submitted with Mr. David P. Pascale's
705186 response to November 7, 1996 EPA Supplemental
Request, in answer to request no. 1, undated.
(Attachment: Letter (w/ attachments) to Catherine
Garypie, Esq., Assistant Regional Counsel, U.S.
EPA, Region II, from Mr. Michael Edelson, Bellring
Lindeman Goldstein & Siegal, re: Grand Street
Mercury Superfund Site (the "Site"), 722 Grand
Street, Hoboken, N.J., December 18, 1996.)
- P. 705187- Exhibits to a lawsuit filed by Spector & Dimin
705802 against the Grand Street Artists Partnership,
undated.
- P. 705803- Request for Information Letter to Mr. John Welch,
705805 Jr., Chief Executive officer, General Electric
Company, c/o Jane W. Gardner, Esq., from Ms.
Kathleen C. Callahan, Director, Emergency and
Remedial Response Division, U.S. EPA, Region II,
re: 722 Grand Street Mercury Site, Hoboken, New
Jersey, Request for Information Pursuant to
Comprehensive Environmental Response, Compensation
and Liability Act, 42 U.S.C. Section 9601, et

seq., February 2, 1996.

- P. 705806- Request for Information Letter to Mr. John Welch,
705817 Jr., Chief Executive officer, General Electric
Company, c/o Jane W. Gardner, Esq., from Ms.
Kathleen C. Callahan, Director, Emergency and
Remedial Response Division, U.S. EPA, Region II,
re: 722 Grand Street Mercury Site, Hoboken, New
Jersey, Request for Information Pursuant to
Comprehensive Environmental Response, Compensation
and Liability Act, 42 U.S.C. Section 9601, et
seq., February 5, 1996. (Attachments: (1)
Instructions for Responding to Request for
Information; (2) Request for Information; and (3)
Certification of Answers to Request for
Information.)
- P. 705818- Letter to Ms. Marissa Wiggett, Emergency and
706212 Remedial Response Division, U.S. EPA, Region II,
from Mr. Dennis O. Correia, Technical Manager -
Environmental, General Electric Company, re:
Response of General Electric Company to 104(e)
Request for Information, Re: 722 Grand Street
Site, Hoboken, N.J., March 8, 1996. (Attachments:
Index of Attachments, undated) (Note: This
document is CONFIDENTIAL. It is located at the
U.S. EPA Superfund Records Center, 290 Broadway,
N.Y., N.Y. 10007.)
- P. 706213- Request for Information Letter to David and
706225 Sherrill Pascale, from Ms. Kathleen C. Callahan,
Director, Emergency and Remedial Response
Division, U.S. EPA, Region II, re: 722 Grand
Street Mercury Site, Hoboken, New Jersey, Request
for Information Pursuant to Comprehensive
Environmental Response, Compensation and Liability
Act, 42 U.S.C. Section 9601, et seq., March 17,
1996. (Attachments: (1) Instructions for
Responding to Request for Information; (2)
Request for Information; and (3) Certification of
Answers to Request for Information.)
- P. 706226- Request for Information Letter to KBD Inc., c/o
706238 Mr. James C. Shepherd, President, from Ms.
Kathleen C. Callahan, Director, Emergency and
Remedial Response Division, U.S. EPA, Region II,
re: 722 Grand Street Mercury Site, Hoboken, New
Jersey, Request for Information Pursuant to
Comprehensive Environmental Response, Compensation
and Liability Act, 42 U.S.C. Section 9601, et
seq., March 17, 1996. (Attachments: (1)
Instructions for Responding to Request for
Information; (2) Request for Information; and (3)
Certification of Answers to Request for
Information.)
- P. 706239- Request for Information Letter to Mr. John

- 706251 Pascale, from Ms. Kathleen C. Callahan, Director, Emergency and Remedial Response Division, U.S. EPA, Region II, re: 722 Grand Street Mercury Site, Hoboken, New Jersey, Request for Information Pursuant to Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. Section 9601, et seq., March 29, 1996. (Attachments: (1) Instructions for Responding to Request for Information; (2) Request for Information; and (3) Certification of Answers to Request for Information.)
- P. 706252- Request for Information Letter to Mr. George
706260 Sperti, from Ms. Kathleen C. Callahan, Director, Emergency and Remedial Response Division, U.S. EPA, Region II, re: 722 Grand Street Mercury Site, Hoboken, New Jersey, Request for Information Pursuant to Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. Section 9601, et seq., March 29, 1996. (Attachments: (1) Instructions for Responding to Request for Information; (2) Request for Information; and (3) Certification of Answers to Request for Information.)
- P. 706261- Request for Information Letter to Mr. John
706276 Pascale, Jr., from Ms. Kathleen C. Callahan, Director, Emergency and Remedial Response Division, U.S. EPA, Region II, re: 722 Grand Street Mercury Site, Hoboken, New Jersey, Request for Information Pursuant to Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. Section 9601, et seq., April 11, 1996. (Attachments: (1) Instructions for Responding to Request for Information; (2) Request for Information; and (3) Certification of Answers to Request for Information.)
- P. 706277- Letter to Ms. Marissa Wiggett, U. S. EPA, Region
706289 II, from Mr. Michael Edelson, Hellring Lindeman Goldstein & Siegal, re; 722 Grand Street Mercury Site, Hoboken, N.J., April 12, 1996. (Attachment: Response (w/ attachments) of Mr. David Pascale to request for information forwarded with the March 17, 1996 letter of Ms. Kathleen C. Callahan, Director, Emergency and Remedial Response Division, U.S. EPA, Region II, April 9, 1996.)
- P. 706290- Request for Information Letter to Mr. John
706291 Welch, Jr., Chief Operating Officer, General Electric Company, c/o Jane W. Gardner, Esq., from Ms. Kathleen C. Callahan, Director, Emergency and Remedial Response Division, U.S. EPA, Region II, re: 722 Grand Street Mercury Site, Hoboken, New Jersey, response to Request for Information (dated February 5, 1996) Pursuant to Comprehensive Environmental Response, Compensation and Liability

Act, 42 U.S.C. Section 9601, et seq., May 10, 1996.

- P. 706292-
706301 Answers to Request for Information Pursuant to CERCLA letter dated April 11, 1996, prepared by Mr. John J. Pascale, Jr., May 10, 1996.
- P. 706302-
706312 Request for Information Letter to Mr. John Welch, Jr., Chief operating Officer, General Electric Company, c/o Jane W. Gardner, Esq., from Ms. Kathleen C. Callahan, Director, Emergency and Remedial Response Division, U.S. EPA, Region II, re: 722 Grand Street Mercury Site, Hoboken, New Jersey, Request for Information Pursuant to Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. Section 9601, et seq., May 10, 1996. (Attachments: (1) Instructions for Responding to Request for Information; (2) Supplemental Request for Information; and (3) Certification of Answers to Request for Information.)
- P. 706313-
706389 Letter to Catherine Garypie, Esq., Office of Regional Counsel, U.S. EPA, Region II, from Jane W. Gardner, Esq., re: Grand Street Properties, Hoboken, June 7, 1996. (Attachments: (1) Civil Case Information Statement (CIS), filed by Mr. George Weiner, September 28, 1995, (2) Civil Action Complaint, George Weiner; Louis Nel and Janet Filameno, husband and wife; and Gerald Norton and Katherine Parker, husband and wife, Plaintiffs, vs. Grand Street Artists Partnership, Defendant, September 26, 1995, (3) Exhibit "A" - Grand Street Artists Partnership Agreement, prepared by Chasan, Leyner, Tarrant & Lamparello, P.C., August 3, 1993, (4) Civil Order to Show Cause, George Weiner, Louis Nel and Janet Filameno, husband and wife, and Gerald Norton and Katherine Parker, husband and wife, Plaintiffs, vs. Grand Street Artists Partnership, Defendant, October 2, 1995, (5) Civil Action Consent Order, George Weiner; Louis Nel and Janet Filameno, husband and wife; and Gerald Norton and Katherine Parker, husband and wife, Plaintiffs, vs. Grand Street Artists Partnership, Defendant, November 8, 1995, and, (6) Civil Action Certification of Stephen R. Spector (w/ attachments), George Weiner, Louis Nel and Janet Filameno, husband and wife, and Gerald Norton and Katherine Parker, husband and wife, Plaintiffs, vs. Grand Street Artists Partnership, Defendant, September 26, 1995.)
- P. 706390-
706395 Letter to Mr. Warren G. Millar, from Ms. Catherine Garypie, Assistant Regional Counsel, U.S. EPA, Region II, re: Grand Street Mercury Superfund Site, Hoboken, N.J., Subpoena Ad Testificandum and

Subpoena Duces Tecum, June 14, 1996. (Attachments: (1) Subpoena Ad Testificandum and Subpoena Duces Tecum, In the Matter of Grand Street Mercury Superfund Site, 722 Grand Street, Hoboken, N.J., prepared by Ms. Jeanne M. Fox, Regional Administrator, U.S. EPA, Region II, prepared for Mr. Warren G. Millar, Respondent, June 12, 1996, and, (2) Affidavit of Service, served by Ms. Orelia Lewis, Section Secretary, June 14, 1996.)

- P. 706396-
706402 Letter to Mr. John J. Pascale, Sr., from Ms. Catherine Garypie, Assistant Regional Counsel, U.S. EPA, Region II, re: Grand Street Mercury Superfund Site, Hoboken, N.J., Subpoena Ad Testificandum and Subpoena Duces Tecum, June 14, 1996. (Attachments: (1) Subpoena Ad Testificandum and Subpoena Duces Tecum, In the Matter of Grand Street Mercury Superfund Site, 722 Grand Street, Hoboken, N.J., prepared by Ms. Jeanne M. Fox, Regional Administrator, U.S. EPA, Region II, prepared for Mr. John J. Pascale, Sr., Respondent, June 12, 1996, and, (2) Affidavit of Service, served by Mr. Gerard B. Connolly, Civil Investigator, June 19, 1996.)
- P. 706403-
706412 Letter to Ms. Marissa Wiggett, Emergency and Remedial Response Division, U.S. EPA, Region II, from Mr. Dennis O. Correia, Technical Manager - Environmental, General Electric Company, re: Supplemental Response of General Electric Company to 104(e) Request for Information re: 722 Grand Street Site, Hoboken, N.J., June 21, 1996. (Attachment: Attachment #1 - Securities and Exchange Commission, Form 10-K, General Electric Company, for the fiscal year ended December 31, 1995.)(Note: This document is CONFIDENTIAL. It is located at the Superfund Records Center, 290 Broadway, 18th Floor, N.Y., N.Y., 10007.)
- P. 706413-
706461 Redacted Letter to Ms. Marissa Wiggett, Emergency and Remedial Response Division, U.S. EPA, Region II, from Mr. Dennis O. Correia, Technical Manager - Environmental, General Electric Company, re: Response of General Electric Company to 104(e) Request for Information re: 722 Grand Street Site, Hoboken, N.J., June 21, 1996. (Attachment: Index of attachments from General Electric's second 104(e) Response, undated.)
- P. 706462-
706516 Letter to Ms. Marissa Wiggett, Emergency and Remedial Response Division, U.S. EPA, Region II, from Mr. Dennis O. Correia, Technical Manager - Environmental, General Electric Company, re: Response of General Electric Company to 104(e) Request for Information re: 722 Grand Street Site, Hoboken, New Jersey, June 21, 1996. (Attachments: Letter (with attachments) to Ms. Marissa Wiggett,

Emergency and Remedial Response Division, U.S. EPA, Region II, from Mr. Dennis O. Correia, Technical Manager - Environmental, General Electric Company, re: Supplemental Response of General Electric Company to 104(e) Request for Information re: 722 Grand Street Site, Hoboken, New Jersey, June 21, 1996.) (Note: This document is CONFIDENTIAL. It can be located in the Superfund Record Center at 290 Broadway - 18th Floor, N.Y., N.Y., 10007.)

- P. 706517- Letter to Catherine Garypie, Esq., Assistant
706529 Regional Counsel, U.S. EPA, Region II, from Mr. Robert P. Stein, Camhy, Karlinsky, & Stein LLP, re: Grand Street Mercury Site: Hoboken N.J., August 2, 1996. (Attachment: (1) Attachment G - Report of Underground Tank Removal, Quality Tool & Die Co., Inc., prepared by Jenny Engineering Corporation, undated, and (2) Page #277 - Laboratory Analysis - EP Toxicity Test, Leachate Analysis (from Vol. 45, no. 98), prepared by Mr. M. Mullen, Industrial corrosion Management, Inc., prepared for Jenny Engineering for Quality Tool Die Co., Inc., October 31, 1989.)
- P. 706605- Documents provided to U.S. EPA by representatives
706567 of General Electric Company, re: Cooper Hewitt Electric Company Certificates of Incorporation and Annual Reports between 1910 and 1924, August 7, 1996.
- P. 706568- Letter to General Electric Company, CT Corporation
706574 System, Registered Agent, from Mr. Richard Caspe, Director, Emergency and Remedial Response Division, U.S. EPA, Region II, re: General Notice of Potential Liability, Grand Street Mercury Superfund Site, 722 Grand Street, Hoboken, N.J., August 12, 1996. (Attachment: List of PRP's, undated.)
- P. 706575- Letter to Mr. David Pascale, from Mr. Richard L.
706580 Caspe, Director, Emergency and Remedial Response Division, U.S. EPA, Region II, re: General Notice of Potential Liability, Grand Street Mercury Superfund Site, 722 Grand Street, Hoboken, N.J., August 12, 1996. (Attachment: List of PRP's, undated.)
- P. 706581- Letter to Mr. John J. Pascale, Sr., from Mr.
706586 Richard L. Caspe, Director, Emergency and Remedial Response Division, U.S. EPA, Region II, re: General Notice of Potential Liability, Grand Street Mercury Superfund Site, 722 Grand Street, Hoboken, N.J., August 12, 1996. (Attachment: List of PRP's, undated.)
- P. 706587- Request for Information Letter to Angstrom

- 706604 Technologies, Inc. c/o Gael Morris, from Mr. Richard L. Caspe, Director, Emergency and Remedial Response Division, U.S. EPA, Region II, re: 722 Grand Street Mercury Site, Hoboken, New Jersey, Request for Information Pursuant to Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. Section 9601, et seq., August 14, 1996. (Attachments: (1) Instructions for Responding to Request for Information; (2) Supplemental Request for Information; and (3) Certification of Answers to Request for Information.)
- P. 706605- Request for Information Letter to Angstrom
706622 Technologies, Inc. c/o The Corporation, from Mr. Richard L. Caspe, Director, Emergency and Remedial Response Division, U.S. EPA, Region II, re: 722 Grand Street Mercury Site, Hoboken, New Jersey, Request for Information Pursuant to Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. Section 9601, et seq., August 14, 1996. (Attachments: (1) Instructions for Responding to Request for Information; (2) Supplemental Request for Information; and (3) Certification of Answers to Request for Information.)
- P. 706623- Request for Information Letter to Antex
706640 Corporation c/o Mr. Ken Masser, from Mr. Richard L. Caspe, Director, Emergency and Remedial Response Division, U.S. EPA, Region II, re: 722 Grand Street Mercury Site, Hoboken, New Jersey, Request for Information Pursuant to Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. Section 9601, et seq., August 14, 1996. (Attachments: (1) Instructions for Responding to Request for Information; (2) Supplemental Request for Information; and (3) Certification of Answers to Request for Information.)
- P. 706641- Request for Information Letter to Sperti Drug
706662 Products c/o Mr. William J. Walsh, from Mr. Richard L. Caspe, Director, Emergency and Remedial Response Division, U.S. EPA, Region II, re: 722 Grand Street Mercury Site, Hoboken, New Jersey, Request for Information Pursuant to Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. Section 9601, et seq., August 14, 1996. (Attachments: (1) Instructions for Responding to Request for Information; (2) Supplemental Request for Information; and (3) Certification of Answers to Request for Information.)
- P. 706663- Request for Information Letter to Natmar, Inc.
706680 c/o Mr. Ken Masser, from Mr. Richard L. Caspe,

Director, Emergency and Remedial Response
Division, U.S. EPA, Region II, re:722 Grand
Street Mercury Site, Hoboken, New Jersey, Request
for Information Pursuant to Comprehensive
Environmental Response, Compensation and Liability
Act, 42 U.S.C. Section 9601, et seq., August 14,
1996. (Attachments: (1) Instructions for
Responding to Request for Information; (2)
Supplemental Request for Information; and (3)
Certification of Answers to Request for
Information.)

- P. 706681- Request for Information Letter to Faraday, Inc.,
706702 c/o Mr. Dennis Riley, Registered Agent, from Mr.
Richard L. Caspe, Director, Emergency and Remedial
Response Division, U.S. EPA, Region II, re: 722
Grand Street Mercury Site, Hoboken, New Jersey,
Request for Information Pursuant to Comprehensive
Environmental Response, Compensation and Liability
Act, 42 U.S.C. Section 9601, et seq., August 14,
1996. (Attachments: (1) Instructions for
Responding to Request for Information; (2)
Supplemental Request for Information; and (3)
Certification of Answers to Request for
Information.)
- P. 706703- Documents given to U.S. EPA by General Electric,
706846 re: Grand Street, Hoboken, N.J. Site, Potentially
Responsible Parties, September 18, 1996.
- P. 706847- Request for Information Letter to Grand Street
706859 Artist Partnership c/o Ira Karasick, Esq., from
Mr. Richard L. Caspe, Director, Emergency and
Remedial Response Division, U.S. EPA, Region II,
re: 722 Grand Street Mercury Site, Hoboken, New
Jersey, Request for Information Pursuant to
Comprehensive Environmental Response, Compensation
and Liability Act, 42 U.S.C. Section 9601, et
seq., November 7, 1996. (Attachments: Instructions
for Responding to Request for Information and
Certification of Answers to Request for
Information.)
- P. 706860- Request for Information Letter to David and
706872 Sherrill Pascale, from Mr. Richard L. Caspe,
Director, Emergency and Remedial Response
Division, U.S. EPA, Region II, re: Supplemental
Request for Information Pursuant to Comprehensive
Environmental Response, Compensation and Liability
Act, 42 U.S.C. Section 9601, et seq., November 7,
1996. (Attachments: (1) Instructions for
Responding to Request for Information; (2)
Supplemental Request for Information; and (3)
Certification of Answers to Request for
Information.)
- P. 706873- Request for Information Letter to Westinghouse

- 706888 Electric Company, c/o Mr. Michael H. Jordan, Chairman and CEO, from Mr. Richard L. Caspe, Director, Emergency and Remedial Response Division, U.S. EPA, Region II, re: 722 Grand Street Mercury Site, Hoboken, New Jersey, Request for Information Pursuant to Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. Section 9601, et seq., November 15, 1996. (Attachments: Instructions for Responding to Request for Information and Certification of Answers to Request for Information.)
- P. 706889- Letter to Ms. Marissa Wiggett, Emergency and
706897 Remedial Response Division, and Catherine Garypie Esq., Assistant Regional Counsel, U.S. EPA, Region II, from Mr. John F. Semple, Sterns & Weinroth, re: Response to EPA's Request for Information Pursuant to 42 U.S.C. Section 9604, et seq, November 15, 1996. (Attachments: (1) Responses to EPA's Section 104(e) Request, from Mr. John J. Pascale, Sr., November 14, 1996, and (2) Certification of Answers to Request for Information, signed by Mr. John Pascale, Sr., November 14, 1996.)
- P. 706898- Letter to Ms. Marissa Wiggett, Emergency and
706928 Remedial Response Division, U.S. EPA, Region II, from Mr. Robert P. Stein, Cahmy, Karlinsky & Stein LLP, re: attached Response of Grand Street Artists to 104(e) Request for Information Relating to 722 Grand Street, Hoboken, New Jersey, December 11, 1996. (Note: This document is CONFIDENTIAL. It can be located in the Superfund Record Center at 290 Broadway - 18th Floor, N.Y., N.Y., 10007.)
- P. 706929- Redacted Letter to Ms. Marissa Wiggett, Emergency
706960 and Remedial Response Division, U.S. EPA, Region II, from Mr. Robert P. Stein, Camhy; Karlinsky, & Stein, LLP, re: Response of Grand Street Artists to 104(e) Request for Information Relating to 722 Grand Street, Hoboken, N.J., December 11, 1996. (Attachments: (1) Responses to Request for Information from the Grand Street Artists, undated, and, (2) Certification of Answers to Request for Information, signed by Stephen Keough, undated.)
- P. 706961- Letter to Catherine Garypie, Esq., Assistant
706964 Regional Counsel, U.S. EPA, Region II, from Mr. Michael Edelson, Hellring, Lindeman, Goldstein, & Siegal, re: Grand Street Mercury Site, Hoboken, N.J., December 30, 1996. (Attachments: (1) Supplemental Response of Mr. David P. Pascale to Request for Information, December 24, 1996, and, (2) Floor Plan of Cooper Hewitt Electric Co., Hoboken, N.J., prepared by M.P. Rolka, Factory Insurance Association, August 16, 1955.)

7.8 Correspondence

- P. 706965- Redacted record of telephone interview conducted
706966 by Mr. Gerard B. Connolly, Investigator, U.S. EPA,
Site: Grand Street Mercury, February 6, 1996.
- P. 706967- Record of telephone interview conducted by Mr.
706967 Gerard B. Connolly, Investigator, U.S. EPA, Site:
Grand Street Mercury, February 6, 1996. (Note:
This document is CONFIDENTIAL. It can be located
in the Superfund Record Center at 290 Broadway -
18th Floor, N.Y., N.Y., 10007.)
- P. 706968- Letter to Catherine Garypie Esq., Assistant
707206 Regional Counsel, U.S. EPA, Region II, from Mr.
Langley R. Shook, Sidley & Austin, re: Hoboken,
N.J., Mercury Site, June 27, 1996. (Attachments
(1) Page 123 from "Modern Glass Working and
Laboratory Technique", written by M.C. Nokes, and,
(2) "A Complete Treatise on Illumination with
Mercury Vapor Lamps, written by Mr. George J.
Taylor.)
- P. 707207- Letter to Mr. Jack Harmon, On-Scene Coordinator,
707207 U.S. EPA, Region II, from Jane W. Gardner, Esq.,
Acting Manager, Remedial Programs, General
Electric Company, re: Grand Street Properties
Site, Hoboken, NJ, August 27, 1996.
- P. 707208- Letter to Catherine Garypie, Esq., Assistant
707208 Regional Counsel, U.S. EPA, Region II, from
Michael Edelson, Hellring Lindeman Goldstein &
Siegal, re: Grand Street Mercury Superfund Site,
722 Grand Street, Hoboken, New Jersey, September
3, 1996.

9.0 NATURAL RESOURCE TRUSTEES

9.4 Correspondence

- P. 900001- Memorandum for the record from Ms. Lisa Rosman,
900001 National Oceanic and Atmospheric Administration
(NOAA) Associate CRC, re: Grand Street Mercury,
Hoboken, N.J., May 13, 1997.

10.0 PUBLIC PARTICIPATION

10.1 Comments and Responses

- P. 10.00001- Letter to Docket Coordinator, U.S. EPA,
10.00025 Headquarters, CERCLA Docket Office, from
Langley R. Shook, Esq., and Margaret S. Bass,
Esq., Sidley & Austin, re: U.S. EPA Proposed Rule,
NPL Nomination, 61 Fed. Reg., 67678 (Dec. 23,
1996), February 21, 1997. (Attachment: Comments on
the National Priorities List Nomination of the
Grand Street Mercury Site, Hoboken, New Jersey.)

10.2 Community Relations Plans

- P. 10.00026- Letter to Ms. Katherine Parker, from Ms. Joanne M.
10.00027 Wireman, Community Relations Manager, ICF Kaiser,
re: Meeting to discuss the community's concerns
regarding the Grand Street Mercury site, February
14, 1997.
- P. 10.00028- Letter to Ms. Janet Filameno, from Ms. Joanne M.
10.00029 Wireman, Community Relations Manager, ICF Kaiser,
re: Meeting to discuss the community's concerns
regarding the Grand Street Mercury Site, February
14, 1997.
- P. 10.00030- Letter to Ms. Donna Cahill, Environment Committee
10.00030 of Hoboken, from Ms. Joanne M. Wireman, Community
Relations Manager, ICF Kaiser, re: Meeting on
Wednesday, February 19, at 7:00 p.m. to discuss
the community's concerns regarding the Grand
Street Mercury Site, February 14, 1997.
- P. 10.00031- Letter to Mr. Gary Garetano, Assistant Director,
10.00031 Hudson Regional Health Commission, from Ms. Joanne
M. Wireman, Community Relations Manager, ICF
Kaiser, re: Meeting on Thursday, February 20, at
10:30 a.m. to discuss the community's concerns
regarding the Grand Street Mercury Site, February
14, 1997.
- P. 10.00032- Letter to Mr. Frank J. Spano, Principal, Hoboken
10.00032 High School, from Ms. Joanne M. Wireman, Community
Relations Manager, ICF Kaiser, re: Meeting on
Thursday, February 27, at 10:00 a.m. to discuss
the community's concerns regarding the Grand
Street Mercury Site, February 14, 1997.
- P. 10.00033- Letter to Mr. Eugenio Notaro, from Ms. Joanne M.
10.00033 Wireman, Community Relations Manager, ICF Kaiser,
re: Meeting on Thursday, February 20, at 9:00 a.m.
to discuss the community's concerns regarding the
Grand Street Mercury Site, February 14, 1997.
- P. 10.00034- Letter to Mr. Michael Solter, from Ms. Joanne M.
10.00034 Wireman, Community Relations Manager, ICF Kaiser,
re: Meeting on Monday, March 10, at 7:00 p.m. to
discuss the community's concerns regarding the
Grand Street Mercury Site, February,17, 1997.
- P. 10.00035- Letter to Mr. Mark Machonis, Albee Services, from
10.00036 Ms. Joanne M. Wireman, Community Relations
Manager, ICF Kaiser, re: Community interviews
regarding the Grand Street Mercury Site, February
18, 1997.
- P. 10.00037- Letter to Ms. Donna Cahill, President, Environment
10.00037 Committee of Hoboken, from Ms. Joanne M. Wireman,
Community Relations Manager, ICF Kaiser, re:

Development of Community Relations Plan, Grand Street Mercury Site, March 4, 1997.

- P. 10.00038- Letter to Ms. Mary Perry, Environment Committee of
10.00038 Hoboken, from Ms. Joanne M. Wireman; Community Relations Manager, ICF Kaiser, re: Development of Community Relations Plan, Grand Street Mercury Site, March 4, 1997.
- P. 10.00039- Letter to Ms. Mollie Thompson, Environment
10.00039 Committee of Hoboken, from Ms. Joanne M. Wireman, Community Relations Manager, ICF Kaiser, re: Development of Community Relations Plan, Grand Street Mercury Site, March 4, 1997.
- P. 10.00040- Letter to Ms. Deborah Edwards, Esq., Environment
10.00040 Committee of Hoboken, from Ms. Joanne M. Wireman, Community Relations Manager, ICF Kaiser, re: Development of Community Relations Plan, Grand Street Mercury Site, March 4, 1997.
- P. 10.00041- Letter to Ms. Cynthia Silber, Vice President,
10.00041 Environment Committee of Hoboken, from Ms. Joanne M. Wireman, Community Relations Manager, ICF Kaiser, re: Development of Community Relations Plan, Grand Street Mercury Site, March 4, 1997.
- P. 10.00042- Letter to Ms. Katherine Parker and Mr. Gerald
10.00042 Norton, from Ms. Joanne M. Wireman, Community Relations Manager, ICF Kaiser, re: Development of Community Relations Plan, Grand Street Mercury Site, March 4, 1997.
- P. 10.00043- Letter to Ms. Janet Filameno and Mr. Louis
10.00043 Nel, from Ms. Joanne M. Wireman, Community Relations Manager, ICF Kaiser, re: Development of Community Relations Plan, Grand Street Mercury Site, March 4, 1997.
- P. 10.00044- Letter to Mr. Eugenio Notaro, from Ms. Joanne M.
10.00044 Wireman, Community Relations Manager, ICF Kaiser, re: Development of Community Relations Plan, Grand Street Mercury Site, March 4, 1997.
- P. 10.00045- Letter to Mr. Frank J. Spano, Principal, Hoboken
10.00045 High School, from Ms. Joanne M. Wireman, Community Relations Manager, ICF Kaiser, re: Development of Community Relations Plan, Grand Street Mercury Site, March 4, 1997.
- P. 10.00046- Letter to Mr. George Crimmins, Public Safety
10.00046 Director, City Hall, from Ms. Joanne M. Wireman, Community Relations Manager, ICF Kaiser, re: Development of Community Relations Plan, Grand Street Mercury Site, March 4, 1997.
- P. 10.00047- Letter to Mr. Gary Garetano, Assistant Director,

- 10.00047 Hudson Regional Health Commission, from Ms. Joanne M. Wireman, Community Relations Manager, ICF Kaiser, re: Development of Community Relations Plan, Grand Street Mercury Site, March 4, 1997.
- P. 10.00048- Letter to Mr. Michael Korman, Public Information
10.00048 Officer, City Hall, from Ms. Joanne M. Wireman, Community Relations Manager, ICF Kaiser, re: Development of Community Relations Plan, Grand Street Mercury Site, March 4, 1997.
- P. 10.00049- Letter to Mr. Frank S. Sasso, Health Officer, City
10.00049 of Hoboken Board of Health from Ms. Joanne M. Wireman, Community Relations Manager, ICF Kaiser, re: Development of Community Relations Plan, Grand Street Mercury Site, March 4, 1997.
- P. 10.00050- Letter to Ms. Serena Bocchino, from Ms. Joanne M.
10.00050 Wireman, Community Relations Manager, ICF Kaiser, re: Development of Community Relations Plan, Grand Street Mercury Site, March 17, 1997.
- P. 10.00051- Letter to Ms. Shun Yi-Chen and Mr. Ching Huang
10.00051 Chung, from Ms. Joanne M. Wireman, Community Relations Manager, ICF Kaiser, re: Development of Community Relations Plan, Grand Street Mercury Site, March 17, 1997.
- P. 10.00052- Letter to Mr. Curtis Crystal, from Ms. Joanne M.
10.00052 Wireman, Community Relations Manager, ICF Kaiser, re: Development of Community Relations Plan, Grand Street Mercury Site, March 17, 1997.
- P. 10.00053- Letter to Mr. Matt Schley, from Ms. Joanne M.
10.00053 Wireman, Community Relations Manager, ICF Kaiser, re: Development of Community Relations Plan, Grand Street Mercury Site, March 17, 1997.
- P. 10.00054- Letter to Mark and Myra Graham, from Ms. Joanne M.
10.00054 Wireman, Community Relations Manager, ICF Kaiser, re: Development of Community Relations Plan, Grand Street Mercury Site, March 17, 1997.
- P. 10.00055- Letter to Ms. Meredith Lippman and Mr. John
10.00055 Steadwell, from Ms. Joanne M. Wireman, Community Relations Manager, ICF Kaiser, re: Development of Community Relations Plan, Grand Street Mercury Site, March 17, 1997.
- P. 10.00056- Letter to Mr. Robert Schiffmacher, from Ms. Joanne
10.00056 M. Wireman, Community Relations Manager, ICF Kaiser, re: Development of Community Relations Plan, Grand Street Mercury Site, March 17, 1997.
- P. 10.00057- Letter to Mr. Michael Solter, from Ms. Joanne M.
10.00057 Wireman, Community Relations Manager, ICF Kaiser, re: Development of Community Relations Plan, Grand

Street Mercury Site, March 17, 1997.

10.6 Fact Sheets and Press Releases

- P. 10.00058- Newspaper article: "Mercury turns a dream into a
10.00059 living nightmare", written by Mr. Tom Johnson,
Star Ledger Newspaper, November 3, 1996.

- P. 10.00060- Press Release of Senator Lautenberg and
10.00063 Representative Pallone regarding completion of CIC
off-site removal, and, Statement of Representative
Frank Pallone responding to a just released GOA
report, February 13, 1997.

- P. 10.00064- News Release: EPA Orders General Electric and
10.00067 John Pascale, Sr., To Take over Superfund
Activities At Mercury-Contaminated Condo In
Hoboken, prepared by U.S. EPA, Region II, March 5,
1997. (Attachment: Facsimile cover sheet to Mr.
George Crimmins, Hoboken Office of Business
Administration, from Mr. John Hansen, Remedial
Project Manager, U.S. EPA Region II, re: Grand
Street Mercury Site, March 6, 1997.)

- P. 10.00068- Newspaper article: "GE Is Told to Pay for
10.00069 Hoboken Evacuees Housing, written by Mr. Ronald
Smothers, The New York Times, March 6, 1997.

- P. 10.00070- Newspaper article: "Mercury cleanup ordered",
10.00070 written by Mr. Agustin C. Torres, The Jersey
Journal, March 6, 1997.

- P. 10.00071- Newspaper article: " "Mercury condo" owners hail
10.00071 federal pay-up order", written by Mr. Peralto C.
Paul, The Jersey Journal, March 7, 1997.

- P . 10 00072- Newspaper Article: "GE files suit over Mercury,
10:00073 Countersuing artists group", written by Mr.
Peralto C. Paul, The Jersey Journal, March 8,
1997.

Note: Attached are indices for the Removal Administrative Record which is available for review at the U.S. EPA's administrative record repositories.

From: Jack Harmon, On-Scene Coordinator
Removal Acton Branch
U.S. EPA Region II
2890 Woodbridge Ave.
Building 209
Edison, NJ 08837

To: Lenore Hyland, Librarian
Hoboken Public Library
560 Park Ave.
Hoboken, New Jersey 07030

I acknowledge that I have received the following documents from the U.S. EPA Region II Office, pertaining to the Grand Street Site.

Administrative Record Name - Grand Street Site
Administrative Record Documents Numbers:

GSS 1.1001 - 1.1002	GSS 1.2062 - 1.2079
GSS 1.1003 - 1.1050	GSS 1.2080 - 1.2081
GSS 1.1051 - 1.1068	GSS 1.2082 - 1.2082
GSS 1.1069 - 1.1072	GSS 1.2083 - 1.2083
GSS 1.1073 - 1.1100	GSS 2.1001 - 2.1003
GSS 1.2001 - 1.2004	GSS 2.1004 - 2.1011
GSS 1.2005 - 1.2010	GSS 2.1012 - 2.1020
GSS 1.2011 - 1.2011	GSS 2.1021 - 2.1075
GSS 1.2012 - 1.2013	GSS 2.1076 - 2.1121
GSS 1.2014 - 1.2033	GSS 3.1001 - 3.1011
GSS 1.2034 - 1.2034	GSS 3.1012 - 3.1020
GSS 1.2035 - 1.2059	GSS 4.1001 - 4.1002
GSS 1.2060 - 1.2060	GSS 4.1003 - 4.1003
GSS 1.2061 - 1.2061	GSS 5.1001 - 5.1002

Please return this form to: Jack Harmon
On-Scene Coordinator
Removal Acton Branch
U.S. EPA Region II
2890 Woodbridge Ave.
Building 209
Edison, NJ 08837

GRAND STREET SITE

ADMINISTRATIVE RECORD FILE

INDEX OF DOCUMENTS

The index of documents contains the following information about each document:

Document #: Site Code(three letters of site name)-Section, First Page-Section - Last Page EXAMPLE (ABC
1.1001 - 1.1002)
Title: Abstract of Document Contents
Category: Document Category/Section of Administrative Record File
Author: Writer and Affiliation
Recipient: Addressee or Public and Affiliation, if applicable
Date: When Document was Created or Transmitted

Note: Items in the Administrative Record are for public access, and should be removed from the file only for copying. The cost of reproduction of the documents in the file is the responsibility of the person requesting the copy.

GRAND STREET SITE

ADMINISTRATIVE RECORD FILE

LIST OF DOCUMENTS

Document #: GSS - 1.1001 - 1.1002
Title: Concurrence on a Nationally Significant Removal Action at the Grand Street Mercury Site,
Hoboken, NJ
Category: Background
Author: Stephen D. Luftig, Director, Office of Emergency and Remedial Response, U.S. Environmental
Protection Agency
Recipient: Kathleen C. Callahan, Director, Emergency and Remedial Response Division, U.S. Environmental
Protection Agency, Region II
Date: January 4, 1996

Document #: GSS - 1.1003- 1.1050
Title: General Information Submission (GIS) & Site Evaluation Submission (SES)
Category: Background
Author: New Jersey Department of Environmental Protection (NJDEPE)
Recipient: N/A
Date: April 20, 1990

Document #: GSS - 1.1051 - 1.1068
Title: Declaration of Environmental Restrictions and Grant of Easement for the Site
Category: Background
Author: Michael Edelson, Scarpone & Edelson, Attorneys at Law
Recipient: Michael Bunani, Case Manager, NJDEPE
Date: January 28, 1993

Document #: GSS - 1.1069 - 1.1072
Title: Negative Declaration by Operator
Category: Background
Author: Kenneth T. Hart, Assistant Director, Industrial Site Evaluation Element. NJDEPE
Recipient: David Pascale, Quality Tool & Die Co., Inc.
Date: February 8, 1993

Document #: GSS - 1.1073 - 1.1100
Title: Letter/Sampling and Analysis Report

Category: Background
Author: Gary M. Annibal, CIH. ENPAK Services Company. Inc.
Recipient: Mr. Mike Salter, Grand Street Artist Partners
Date: March 28, 1995

Document #: GSS - 1.2001 - 1.2004
Title: Initial Questionnaire - Memorandum of Agreement Application
Category: Site Identification
Author: Mike Desai, Albee Services
Recipient: State of New Jersey Department of Environmental Protection
Date: August 29, 1995

Document #: GSS - 1.2005- 1.2010
Title: Letter Concerning Discovery of Mercury
Category: Site Identification
Author: N/A
Recipient: Shun-Yl Chen & Ching-Huang Chung
Date: October 26, 1995

Document #: GSS - 1.2011
Title: Letter
Category: Site Identification
Author: David W. Williamson, President, D.W.W. Enterprises, Inc.
Recipient: Steve Keough, Grand Street Artist Partners
Date: October 30, 1995

Document #: GSS - 1.2012 - 1.2013
Title: Letter - Progress Report
Category: Site Identification
Author: John Szalkowski, Senior Environmental Scientist, Environmental Waste Management Associates, Inc.
Recipient: Mr. Steven Keough, Grand Street Artist Partnership
Date: November 1, 1995

Document #: GSS - 1.2014 - 1.2033
Title: Mercury Vapor Survey
Category: Site Identification
Author: Detail Associates. Inc.
Recipient: Janice Filemeno, Kathy Parker, Residents. 722 Grand St.
Date: November 8, 1995

Document #: GSS - 1.2034 - 1.2034
Title: Letter - Mercury Remediation
Category: Site Identification
Author: David W. Williamson, President, D.W.W. Enterprises, Inc.
Recipient: Mr. John Szalkowski, Environmental Waste Management Associates. Inc.
Date: November 16, 1995

Document #: GSS - 1.2035 - 1.2059
Title: Mercury Abatement/Encapsulation Specifications
Category: Site Identification
Author: Environmental Waste Management Associates, Inc.
Recipient: Grand Street Artist Partnership
Date: N/A

Document #: GSS - 1.2060 - 1.2060
Title: Mercury Vapor Monitoring

Category: Site Identification
Author: James Pasquallo, New Jersey Department of Health
Recipient: N/A
Date: December 22, 1995

Document #: GSS - 1.2061 - 1.2061
Title: Letter
Category: Site Identification
Author: Richard J. Gimello, Assistant Commissioner, Site Remediation Program, State of New Jersey
Department of Environmental Protection
Recipient: Richard Salkie, USEPA Region II
Date: January 02, 1996

Document #: GSS - 1.2062 - 1.2079
Title: Mercury Vapor Monitoring Survey
Category: Site Identification
Author: Thomas O'Neill, START PM
Recipient: Jeff Bechtel, OSC, Response and Prevention Branch U. S. EPA, Region II
Date: January 2, 1996

Document #: GSS - 1.2080 - 1.2081
Title: Removal Request
Category: Site Identification
Author: Robert Van Fossen, Assistant Director, Discharge Response Element State of New Jersey
Department of Environmental Protection
Recipient: Kathleen C. Callahan, Director, Emergency and Remedial Response Division, U. S. Environmental
Protection Agency
Date: January 3, 1996

Document #: GSS - 1.2082 - 1.2082
Title: Order of Health Officer
Category: Site Identification
Author: Frank S. Sasso, MS. MSW, Health Officer, City of Hoboken Board of Health
Recipient: N/A
Date: January 4, 1996

Document #: GSS - 1.2083 - 1.2083
Title: Interim Protocol for Mercury Screening of Personal Belongings
Category: Site Identification
Author: N/A
Recipient: Grand Street Mercury Site Residents
Date: N/A

Document #: GSS - 1.2084 - 1.2089
Title: Mercury Contamination
Category: Site Identification
Author: John Szalkowski, Senior Environmental Scientist, EWMA
Recipient: Stephen Keough, Grand Street Artist Partnership
Date: November 20, 1995

Document #: GSS - 1-2090
Title: Region II Incident Notification Report
Category: Site Identification
Author: Margaret Chong, EPA
Recipient: File
Date: December 12, 1995

Document #: GSS - 1.2091 - 1.2095
Title: Referral of Casework in Bulk
Category: Site Identification
Author: Sue J. Smith, Director Office of Agency Liaison, The White House
Recipient: EPA - 35
Date: April 26, 1995

Document #: GSS - 1.2096 - 1.2097
Title: Response to March 14, 1996 Letter
Category: Site Identification (to be replaced at a later date)
Author: EPA
Recipient: Stephen Keough, Grand Street Artist Partnership
Date:

Document #: GSS - 1.2098 - 1:2101
Title: Henry Keough Letter of January 10, 1996
Category: Site Identification
Author: Bill Bradley, United States Senator
Recipient: Jeanne Fox, Regional Administrator, USEPA
Date: January 30, 1996

Document #: GSS - 1.2102 - 1:2103
Title: Response to January 30, 1996 Letter
Category: Site Identification
Author: Jeanne M. Fox, Regional Administrator, USEPA
Recipient: Honorable Bill Bradley, United States Senate
Date: April 8, 1996

Document #: GSS - 2.1001 - 2.1003
Title: Authorization Form
Category: Removal Response
Author: John Blanchard, HQ Project Officer
Recipient: Jack Harmon, On-Scene Coordinator
Date: January 17, 1996

Document #: GSS - 2.1004 - 2.1011
Title: Results of Mercury Vapor Monitoring Survey - Personal Belongings
Category: Removal Response
Author: Thomas O'Neill, START PM
Recipient: Jeff Bechtel, OSC, Response and Prevention Branch U.S. EPA, Region II
Date: January 22, 1996

Document #: GSS - 2.1012 - 2.1020
Title: Executive Summary Report - Grand Street Mercury Site, Hoboken, NJ
Category: Removal Response
Author: Michael Morganti, REAC Task Leader
Recipient: Rodney Turpin, U.S. EPA/ERT Work Assignment Manager
Date: February 13, 1996

Document #: GSS - 1.1021 - 2.1075
Title: Air Quality Modeling for Grand Street Mercury Site, Hoboken, NJ
Category: Removal Response
Author: Rod Turpin, Senior Environmental Scientist
Recipient: Jack Harmon, On-Scene Coordinator
Date: February 16, 1996

Document #: GSS - 2.1076 - 2.1121

Title: Action Memorandum
Category: Removal Response
Author: Jack D. Harmon, On-Scene Coordinator
Recipient: Jeanne M. Fox
Date: March 21, 1996

Document #: GSS - 2.2001 - 2.2011
Title: Sampling QA/QC Workplan, 722 Grand Street
Category: Removal Response
Author: Thomas O'Neill, Region II START
Recipient: Jeff Bechtel, OSC, EPA Region II
Date: January 4, 1996

Document #: GSS - 2.2012 - 2.2027
Title: Final Report for Phase 1 and 2 of ERT Activities
Category: Removal Response
Author: Rod Turpin, Senior Environmental Scientist, EPA ERT
Recipient: Jack Harmon, OSC, EPA Region II
Date: February 15, 1996

Document #: GSS - 2-2028 - 2.2038
Title: Sampling QA/QC Workplan and Sample Results, 725 Adams Street
Category: Removal Response
Author: Thomas O'Neill, Region II START
Recipient: Jack Harmon, OSC, EPA Region II
Date: April 1996

Document #: GSS - 2.2039 - 2.2054
Title: Sampling QA/QC Workplan Mercury Contamination Study
Category: Removal Response
Author: Thomas O'Neill, Region II START
Recipient: Jack Harmon, OSC, EPA Region II
Date: August 8, 1996

Document #: GSS - 2.2055 - 2.2080
Title: Final Report, Mercury Contamination Investigation
Category: Removal Response
Author: Thomas O'Neill, Region II START
Recipient: Jack Harmon, OSC, EPA Region II
Date: October 7, 1996

Document #: GSS - 2.3001 - 2.3006
Title: National Priorities List Nomination of the Grand Street Mercury, NJ Site
Category: Removal Response
Author: Richard L. Caspe, Director, Emergency and Remedial Response Division
Recipient: David Evans, Director, State, Tribal, and Site Identification Center
Date: November 18, 1996

Document #: GSS - 3.1001 - 3.1011
Title: Health Consultation
Category: Health Assessments
Author: U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry
Recipient: Hoboken Board of Health
Date: January 3, 1996

Document #: GSS - 3.1012 - 3.1020

Title: Public Health Advisory
Category: Health Assessments
Author: U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry
Recipient: N/A
Date: January 22, 1996

Document #: GSS - 3.2001
Title: Correspondence
Category: Health Assessments
Author: Elin Gursky, Sc.D., Senior Assistant Commissioner, State of New Jersey, Department of Health
Recipient: Frank Sasso, Health Officer, Hoboken Health Department
Date: January 4, 1996

Document #: GSS - 3.3001 - 3.3024
Title: Hazardous Substance Database (HSDB) - Mercury
Category: Health Assessments
Author: N/A
Recipient: N/A
Date: N/A

Document #: GSS - 3.3025 - 3.3028
Title: NIOSH Method 6009 Mercury
Category: Health Assessments
Author: NIOSH Manual of Analytical Methods
Recipient: N/A
Date: 5/15/89

Document #: GSS - 3.3029 - 3.3030
Title: Material Safety Data Sheet for Mercury (Revision C)
Category: Health Assessments
Author: Genium Publishing Corporation
Recipient: N/A
Date: August 1988

Document #: GSS - 3.3031 - 3.3033
Title: CAMEO Chemical Report
Category: Health Assessments
Author: CAMEO Response Information, NOAA
Recipient: N/A
Date: December 12, 1996

Document #: GSS - 4.1001 - 4.1002
Title: Mercury Exposure and Health
Category: Public Participation - Fact Sheet
Author: Agency for Toxic Substances and Disease Registry
Recipient: New Jersey Department of Health
Date: January 4, 1996

Document #: GSS - 4.1003 - 4.1003
Title: Notice of Public Availability
Category: Public Participation - Public Notice
Author: N/A
Recipient: N/A
Date: N/A

Document #: GSS - 4.2001 - 4,2002

Title: Hoboken Mercury Scare
Category: Public Participation - Newspaper Article
Author: Beth Ellen Fand, Jersey Journal
Recipient: N/A
Date: December 29, 1995

Document #: GSS - 4.2003
Title: Mercury Driving Artists From Building
Category: Public Participation - Newspaper Article
Author: Jim Efstatiou, The Record
Recipient: N/A
Date: December 30, 1995

Document #: GSS - 4.2004
Title: Few Artists Ready to Leave Mercury-Tainted Condo
Category: Public Participation - Newspaper Article
Author: Richard Cowen, The Record
Recipient: N/A
Date: December 31, 1995

Document #: GSS - 4.2005
Title: High Mercury Level Spurs Hoboken to call for Evacuation of Condos
Category: Public Participation - Newspaper Article
Author: Gene Ruffini, The Star Ledger
Recipient: N/A
Date: December 31, 1995

Document #: GSS - 4.2006
Title: Cops Halt Move From Tainted Condos
Category: Public Participation - Newspaper Article
Author: Randy Diamond, The Record
Recipient: N/A
Date: January 1, 1996

Document #: GSS - 4.2007 - 4.2008
Title: Residents Face Cold Reality on Toxic Site
Category: Public Participation - Newspaper Article
Author: Elizabeth Moore, Star Ledger
Recipient: N/A
Date: January 1, 1996

Document #: GSS - 4.2009 - 4.2012
Title: A Toxic Nightmare in Hoboken
Category: Public Participation - Newspaper Article
Author: Ravi Nessman, The Associated Press
Recipient: N/A
Date: January 27, 1996

Document #: GSS - 4.2013
Title: Dream Home Turns into Big Nightmare
Category: Public Participation - Newspaper Article
Author: The Associated Press
Recipient: N/A
Date: January 27, 1996

Document #: GSS - 4.2014
Title: GE to Reimburse Mercury Condominium Residents

Category: Public Participation - Newspaper Article
Author: Beth Ellen Fand, Jersey Journal
Recipient: N/A
Date: January 27, 1996

Document #: GSS - 4.2015 - 4.2017
Title: ATSDR Finds Unsafe Mercury Levels in N.J. Condominium; DEP Blamed
Category: Public Participation - Newsletter
Author: Hazardous Waste News
Recipient: N/A
Date: February 5, 1996

Document #: GSS - 4.2018 - 4.2019
Title: Ad Seeks Mercury Polluters
Category: Public Participation - Newspaper Article
Author: Beth Ellen Fand, Jersey Journal
Recipient: N/A
Date: February 6, 1996

Document #: GSS - 4.2020
Title: Feds Gauge Mercury's Spread
Category: Public Participation - Newspaper Article
Author: Beth Ellen Fand, Jersey Journal
Recipient: N/A
Date: April 4, 1996

Document #: GSS - 4.2021 - 4.2022
Title: Mercury Pollutes 2nd Site
Category: Public Participation - Newspaper Article
Author: Beth Ellen Fand, Jersey Journal
Recipient: N/A
Date: May 9, 1996

Document #: GSS - 4.2023
Title: Cleanup Bills are Assessed
Category: Public Participation - Newspaper Article
Author: Sarah Kershaw, New York Times
Recipient: N/A
Date: August 17, 1996

Document #: GSS - 4.1024 - 4.2025
Title: Someone to Blame
Category: Public Participation - Newspaper Article
Author: Caren Lissner, The Hoboken Reporter
Recipient: N/A
Date: August 18, 1996

Document #: GSS - 4.2026
Title: In Hoboken, a Dream is Poisoned by Mercury
Category: Public Participation - Newspaper Article
Author: Steve Strunsky, New York Times
Recipient: N/A
Date: September 29, 1996

Document #: GSS - 4.2027 -.4.1-030
Title: Jazz on Canvas
Category: Public Participation - Newspaper Article

Author: Barry Schwabsky, New York Times
Recipient: N/A
Date: October 6, 1996

Document #: GSS - 4.2031
Title: Evacuated Artists Plan Show
Category: Public Participation - Newspaper Article
Author: Terry Pristin, New York Times
Recipient: N/A
Date: October 16, 1996

Document #: GSS - 4.2032
Title: ...While in Hoboken, Artists Hold Open House
Category: Public Participation - Newspaper Article
Author: Karen DeMasters, New York Times
Recipient: N/A
Date: October 20, 1996

Document #: GSS - 4.2033 - 4.2034
Title: Mercury Turns a Dream into a Living Nightmare
Category: Public Participation - Newspaper Article
Author: Tom Johnson, Star-Ledger
Recipient: N/A
Date: November 3, 1996

Document #: GSS - 4.2035
Title: EPA Adds Seven Sites to Superfund Toxic Waste List
Category: Public Participation - Newspaper Article
Author: Reuters Financial Service
Recipient: N/A
Date: December 20, 1996

Document #: GSS - 4.3001 - 4.3014
Title: National Priorities List for Uncontrolled Hazardous Waste Sites, Proposed Federal Register, Vol. 61, No. 246
Category: Public Participation
Author: Environmental Protection Agency
Recipient: N/A
Date: December 23, 1996

Document #: GSS - 4.4001 - 4.4004
Title: Information Update
Category: Public Participation
Author: Irmee Huhn, EPA
Recipient: 7212 Grand Street Residents
Date: April 11, 1996

Document #: GSS - 4.4005 - 4.4008
Title: Information Update
Category: Public Participation
Author: Irmee Huhn, EPA
Recipient: 722 Grand Street Residents
Date: September 3, 1996

Document #: GSS - 4.4009 - 4.4024
Title: Documents Given to Residents of 722 Grand Street in Meetings with Residents on 12/17/96 and 12/18/96

Category: Public Participation
Author: EPA Region II
Recipient: 722 Grand Street Residents
Date: 12/17/96 and 12/18/96

Document #: GSS - 4.5001 - 4.5002
Title: 722 Grand Street Mercury Site, Hoboken, NJ
Category: Public Participation
Author: George Crimmins, Business Administrator, Hoboken
Recipient: Richard L. Caspe, Director Emergency-Remedial Response Division, USEPA
Date: December 19, 1996

Document #: GSS - 4.5003 - 4.5004
Title: 722 Grand Street Mercury Site, Hoboken, NJ
Category: Public Participation
Author: Richard L. Caspe, Director Emergency & Remedial Response Division, USEPA
Recipient: George Crimmins, Business Administrator, Hoboken
Date: January 9, 1997

Document #: GSS - 5.1001 - 5.1002
Title: EPA Regional Guidance Documents
Category: Technical Source and Guidance Documents
Author: N/A
Recipient: File
Date: N/A

Document #: GSS - 6.1001 - 6.1006
Title: General Notice of Potential Liability
Category: Enforcement
Author: Richard L. Caspe, Director Emergency and Remedial Response Division
Recipient: David Pascale
Date: August 12, 1996

Document #: GSS - 6.1007 - 6.1012
Title: General Notice of Potential Liability
Category: Enforcement
Author: Richard L. Caspe, Director Emergency and Remedial Response Division
Recipient: John J. Pascale. Sr.
Date: August 12, 1996

Document #: GSS - 6.1013 - 6.1018
Title: General Notice of Potential Liability
Category: Enforcement
Author: Richard L. Caspe. Director Emergency and Remedial Response Division
Recipient: General Electric Corporation
Date: August 12, 1996

Document #: GSS - 6.1019
Title: Grand Street Properties Site, Hoboken, NJ
Category: Enforcement
Author: Jane W. Gardner, Esq., General Electric Company.
Recipient: Jack Harmon, On-Scene Coordinator, EPA
Date: August 27, 1996

Document #: GSS - 6.1020
Title: Grand Street Mercury Superfund Site
Category: Enforcement

Author: Michael Edelson, Hellring Lindeman Goldstein & Siegal
Recipient: Catherine Garypie, Esq. EPA
Date: September 3, 1996

Document #: GSS - 6.1021 - 6.1049
Title: Grand Street Mercury Site, Hoboken, NJ
Category: Enforcement
Author: Rachel Jeanne Lehr, Deputy Attorney General, State of New Jersey
Recipient: Catherine Garypie, Esq. EPA
Date: December 14, 1996

Document #: GSS - 6.1050 - 6.1092
Title: Grand Street Mercury Site, Hoboken, NJ
Category: Enforcement
Author: Jane W. Gardner, Esq., General Electric Company
Recipient: Catherine Garypie, Esq., EPA
Date: January 22, 1997

From: Jack Harmon, On-Scene Coordinator
Removal Action Branch
U.S. EPA Region II
2890 Woodbridge Ave.
Building 209
Edison, NJ 08837

To: Lenore Hyland, Librarian
Hoboken Public Library
500 Park Ave.
Hoboken, New Jersey 07030

I acknowledge that I have received the following documents from the U.S. EPA Region II Office, pertaining to the Grand Street Site.

Administrative Record Name -- Grand Street Site
Administrative Record Documents Numbers:

GSS 1.2084 - 1.2089	GSS 4.2001 - 4.2002	GSS 4.2031
GSS 1.2090	GSS 4.2003	GSS 4.2032
GSS 1.2091 - 1.2095	GSS 4.2004	GSS 4.2033 - 4.2034
GSS 1.2096 - 1.2097	GSS 4.2006	GSS 4.2035
GSS 1.2098 - 1.2101	GSS 4.2007 - 4.2008	GSS 4.3001 - 4.3014
GSS 1.2102 - 1.2103	GSS 4.2009 - 4.2012	GSS 4.4001 - 4.4004
GSS 2.2001 - 2.2011	GSS 4.2013	GSS 4.4005 - 4.4008
GSS 2.2012 - 2.2027	GSS 4.2014	GSS 4.4009 - 4.4024
GSS 2.2028 - 2.2038	GSS 4.2015 - 4.2017	GSS 4.5001 - 4.5002
GSS 2.2039 - 2.2054	GSS 4.2018 - 4.2019	GSS 4.5003 - 4.5004
GSS 2.2055 - 2.2080	GSS 4.2020	GSS 6.1001 - 6.1006
GSS 2.3001 - 2.3006	GSS 4.2021 - 4.2022	GSS 6.1007 - 6.1012
GSS 3.2001	GSS 4.2023	GSS 6.1013 - 6.1018
GSS 3.3001 - 3.3024	GSS 4.2024 - 4.2025	GSS 6.1019
GSS 3.3025 - 3.3028	GSS 4.2026	GSS 6.1020
GSS 3.3029 - 3.3030	GSS 4.2027 - 4.2030	GSS 6.1021 - 6.1049
GSS 3.3031 - 3.3033	GSS 4.2005	GSS 6.1050 - 6.1092

Please return this form to:

Jack Harmon
On-Scene Coordinator
Removal Action Branch
U.S. EPA Region II
2890 Woodbridge Ave.
Building 209
Edison, NJ 08837§

ROD FACT SHEET

SITE

Name : Grand Street Mercury Site
Location/State : Hoboken, NJ
EPA Region :II
HRS Score (date) : not scored, NCP Sec.300.425(c)(3)
Site ID # : NJ0001327733

ROD

Date Signed: September 30, 1997
Remedy: temporary and permanent relocation of residents, building demolition, soil remediation and offsite disposal of all waste above risk-basd levels
Operating Unit Number: OU-1
Capital cost: \$13,861,000 (in 1997 dollars)
Construction Completion: December 1999
O & M per year:
Present worth: \$13,861,000 (no O&M)

LEAD

Remedial: Superfund lead
Enforcement: to be determined
Primary contact: John Hansen (212) 637-3915
Secondary contact: Lisa Jackson (212) 637-4380
Main PRP(s): General Electric Company
PRP Contact: Dave Thompson (610) 992-7890

WASTE

Type:mercury
Medium: building components and soil
Origin: attributed to mishandling during mercury vapor lamp manufacture; possible spill release to exterior soil.
Est. quantity: 1,000 lbs liquid elemental mercury in building