AN APPLICATION SUBMITTED BY THE CONNECTICUT : RESOURCES RECOVERY AUTHORITY FOR A

CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE CONSTRUCTION, MAINTENANCE, AND OPERATION OF AN ELECTRIC

GENERATING FACILITY IN THE CITY OF

BRIDGEPORT, CONNECTICUT.

CONNECTICUT SITING

COUNCIL

:

:

August 16, 1985

## FINDINGS OF FACT

- 1. The Connecticut Resources Recovery Authority (CRRA), in accordance with provisions of section 16-50k and 16-50l of the Connecticut General Statutes (CGS), applied to the Connecticut Siting Council on April 11, 1985, for a certificate of environmental compatibility and public need to construct a refuse-to-energy facility. The project is known as the Bridgeport Resco Project. (Record)
- 2. The fee as prescribed by section 16-50v-1 of the Regulations of Connecticut State Agencies (RSA) accompanied the application. (Record)
- The application was accompanied by proof of service as required by section 16-501(b) of the CGS. (Record)
- Affidavits of newspaper notice as required by statute and section 16-501-1 of the RSA were filed with the application. (Record)
- Pursuant to section 16-50j of the CGS, the Connecticut Department of Environmental Protection (DEP) and the Connecticut Office of Policy and Management filed written comments with the Council. (Record)
- 6. Letters of support for the project were received from the municipalities of Stratford, Monroe, Darien, and Milford, (Record)
- The parties to the proceedings include the applicant and those persons and organizations whose names are listed in the Decision and Order which accompanies these findings. (Record)

- 8. The Council and its staff made an inspection of the proposed facility site on May 28, 1985. (Record)
- 9. Pursuant to section 16-50m of the CGS, the Council, after giving due notice thereof, held a public hearing on May 28, 1985, at 7:00 P.M. in the Common Council Room of the Bridgeport City Hall, Bridgeport, Connecticut. (Record)
- 10. The Council took administrative notice of portions of its record in Docket 46 and DPUC Docket No. 85-04-12. (Record)
- 11. The project includes a refuse disposal facility, electrical generation equipment, and electrical interconnections. Steam would be produced from the combustion of municipal solid waste (MSW) and used to generate electricity (CRRA-1, A-2, A-4)
- 12. The proposed project serves the needs of the public by reducing dependence on imported energy resources, reducing the environmental degradation brought about from landfilling refuse, and retaining the economic viability of the Southwest region by reducing pressure on land use. (CRRA-1, B-6; Tr. p. 22; CRRA-10; Tr. p. 79, Testimony of Roland C. Clement representing the Connecticut Audubon Society)
- 13. The primary objective of the proposed project is the environmentally safe disposal of waste. (Tr. p. 24)
- 14. The project would be fueled primarily by approximately 500,000 tons per year of MSW from municipalities in the Southwestern Connecticut wasteshed and additional waste from outside the region. Landfill disposal for municipal refuse in this region is extremely limited and is expected to be exhausted by 1987. (CRRA-1, A-3; Tr. pp. 22-23; CRRA-10)

- 15. There is a critical need for alternatives to land disposal of municipal refuse. The Connecticut Solid Waste Management Plan recommends that a resource recovery facility be ready to fill this need by 1987. (CRRA-1, B-3, B-4)
- 16. The General Assembly has found that the prevailing Connecticut solid waste practices generally result in unnecessary environmental damage, waste valuable land and other resources, and constitute a continuing hazard to the health and welfare of the people of the state. The Connecticut statutes further recommend large-scale solid waste processing. (CRRA-1, B-4)
- 17. According to the Connecticut Solid Waste Management Plan, the total annual waste stream for the State equals 3.25 million tons per year (MTY). This includes 2.2 MTY (69%) of municipal solid waste; .55 MTY (16.5%) of bulky wastes; .35 MTY (10%) of hazardous wastes; and .15 MTY (4.5%) of special wastes (non-hazardous industrial wastes and water treatment sludges). Of the 2.2 million tons of municipal solid waste generated annually within the state, ninety to ninety-five percent of this solid waste is disposed of in landfills. (CRRA-1, A-1; Tr. p. 22; CRRA-2, Q. 57: Connecticut Solid Waste Management Plan-Draft, August, 1983, p. 12)
- 18. The Southwestern Connecticut wasteshed would produce 1500 tons of refuse per day by the end of 1987. (CRRA-1, B-4; CRRA-2, Q. 57; Connecticut Solid Waste Management Plan-Draft. August 1983, p. 51)
- 19. The proposed facility would be provided with three independent mass burning boilers, each rated to burn 750 tons of MSW per day. The total processing capacity would be 2250 tons of MSW per day. Assuming an average downtime of 20% for maintenance, the project

- would have an annual capacity to burn 657,000 tons of municipal refuse. (CRRA-1, A-1, B-1, D-4 to D-6)
- 20. The second objective of the project is to produce energy so that the environmentally safe disposal of waste can be accomplished in an economically efficient manner. (Tr. p. 24)
- 21. Use of MSW would reduce the state's dependence on imported fuels in favor of diversified, reuseable, and indigenous energy resources. (CRRA-1, B-1; Tr. p. 22)
- 22. Net electricity production at the facility would be for exclusive sale to the United Illuminating Company (UI). (CRRA-1, A-2, A-3; CRRA-10)
- 23. The diversification of the electrical generation fuel mix meets the near-term and long-term objectives of UI. (CRRA-1, B-2; UI 1985 Forecast)
- 24. The project would add 55 MW of MSW fired power to the UI system, approximately five percent of UI's energy supply requirements under forecast planning assumptions for the year 2000. (CRRA-1, C-2; UI 1985 Forecast)
- 25. By purchasing power from the project, UI would be able to defer new construction to meet reliability requirements for customer service by two or three years. (CRRA-1, B-3; UI 1985 Forecast)
- 26. UI and its ratepayers would not pay for power produced by the project until electricity actually flows from the project and then only for energy actually delivered. (CRRA-1, B-3)
- 27. The facility would produce approximately 360 million kilowatt hours per year of electricity, displacing approximately 580,000 barrels of oil per year. (CRRA-1, A-1, C-1; Tr. p. 25)

- 28. The facility would have a 69.6 MW (gross) turbine-generator with the capacity to produce 62.1 MW (net) of electricity; 7.5 MW would be required for station service. (CRRA-1, A-2, C-3, I-8)
- 29. Power metering would be located in the UI switchyard. UI would design, construct, and operate the substation and transmission line connection to its system. (CRRA-1, I-9, I-12)
- 30. CRRA is a non-profit public instrumentality established by the General Assembly in 1973 to implement a statewide solid waste management program. (CGS section 22a-257-281; CRRA-1, A-2)
- 31. CRRA, in consultation with municipalities, selected Signal Resco (Signal) to design and construct the project. (CRRA-1, A-3)
- 32. The proposed site, owned by CRRA, is currently occupied by a decommissioned refuse-derived fuel facility. (CRRA-1, A-2, G-1)
- 33. The exterior walls, columns, and concrete slabs and walls of the existing facility would be removed as necessary to construct the proposed facility. The tipping floor will remain. (CRRA-1, A-4; CRRA 2, Q. 32)
- 34. The proposed site of the proposed facility consists of nine acres located on a filled area of an embayment of Long Island Sound.

  Boring records show that the water table is generally 4 to 10 feet below the land surface with noticeable tidal fluctuation.

  (CRRA-1, G-12)
- 35. The proposed site lies within Bridgeport's Coastal Zone Management Area and Connecticut's coastal boundary as defined by the Connecticut General Statutes and delineated in the city's coastal boundary map. As required by Bridgeport's zoning regulations, the

- facility would be subject to the coastal site plan review requirements and procedures outlined in CGS sections 22a-105 through 22a-109 which address coastal zone management. (CRRA-1, G-4 to G-5)
- 36. Currently, there are no plans for rail or barge transportation to the facility. However, the proposed facility would not pre-empt rail or barge transportation around the site. (CRRA-2, Q. 36)
- 37. Cedar Creek lies to the south of the proposed facility with a 150-foot wide channel converging into Black Rock Harbor. At the head of Cedar Creek are two active fuel oil terminals. Across from Cedar Creek lies city-owned land consisting of Seaside Park and a city landfill. (CRRA-1, G-1 to G-2)
- 38. A 1975 sampling program undertaken for the Higher Educational Center for Urban Studies indicated that the water quality of the Cedar Creek Black Rock Harbor system was degraded and characterized by low dissolved oxygen and high coliform, phosphorous, and nitrogen counts. (CRRA-1, G-21, Exhibit G-10)
- 39. In 1982, Army Corps of Engineers testing of Cedar Creek indicated that background and test mercury concentrations slightly exceeded instantaneous Environmental Protection Agency (EPA) water quality standards and that sediment samples contain high levels of volatile solids, oil, grease, and metals. (CRRA-1, G-22 to G-23, Exhibit G-11)
- 40. Industries abut the property to the north, east, and west. The industrial zone to the west of the proposed site is bordered by a dense residential housing complex within one half mile of the site. (CRRA-1, G-1 to G-3)

- 41. Approximately one half mile to the north, railroad tracks separate two distinct land uses: an industrial area to the south of the tracks and a predominantly low to medium density residential area to the north of the tracks. (CRRA-1, G-2)
- 42. The proposed site is zoned heavy industrial, as are land areas around the perimeter of the site. The Zoning Regulations of the City of Bridgeport specifically permit the generation of electricity by a public utility for public distribution within heavy industrial zones. (CRRA-2, Q. 55(f) City Zoning Code; CRRA-1, G-3)
- 43. The main process building would be approximately 140 feet wide by 300 feet long with a 65 foot by 100 foot extension for the turbine-generator. (CRRA-1, I-2)
- 44. The proposed stack height of approximately 295 feet exceeds the height limitation of 150 feet for structures in the heavy industrial zone. However, the stack is exempt from the City of Bridgeport's height limitations. (CRRA-2, Q. 53, Q. 55(f) City Zoning Code; CRRA-1, J-4)
- 45. The stack would be visible from residential and recreational areas in the vicinity of the facility, I-95, and Long Island Sound where unobstructed lines of sight are present. (CRRA-2, 0, 52)
- 46. The roof of the boiler structure, a part of the main process building, would be 151 feet above grade. The spray dryers adjacent to the boilers would be 157 feet above grade. The Zoning Regulations of the City of Bridgeport limit the maximum height of buildings in heavy industrial zones to 12 stories or 150 feet. (CRRA-2, Q. 55(f) City Zoning Code; CRRA Late File Exhibit No. 4)

- 47. The Scale House, Administration Building, and Process Building would have neutral-colored vertical paneled exterior siding.

  (CRRA-1, I-1)
- 48. Three mass burning boilers would be equipped with individual refuse feed systems to process municipal solid waste at a capacity rating of 750 tons per day (TPD) each. A hydraulic ram feeder would move the refuse from the feed chute hopper onto a Von Roll mass burning grate for controlled and complete combustion of the organic products. (CRRA-1, D-4, D-5, I-4)
- 49. Each furnace is of sufficient size and structural integrity to contain explosions resulting from aerosol cans, other small containers, or flammable liquids commonly found in MSW. The boilers would be designed in accordance with the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section I, Power Boilers. A dump condenser would be used to condense full turbine steam flow during a turbine generator outage. (CRRA-1, I-5 to I-9)
- 50. The scheduled maintenance program requires shut down for 180 boiler-days per year out of a total possible 1095 boiler-days per year (3 boilers x 365 days). Shut down for uncontrollable circumstances have been calculated to occur for an additional 39 boiler days per year. (CRRA-1, D-7)
- 51. The average system availability is expected to be 80% over the planned operating period of 20 years. (CRRA-1, D-4)
- 52. The proposed project would be designed to operate continuously 24 hours per day, seven days per week, and would receive solid waste six days per week. (CRRA-1, J-38)

- 53. Due to the relatively recent extensive disturbance of land and excavation that has taken place on the proposed site, it is anticipated that there are no historical or archaeological resources which might be adversely affected by the proposed facility.

  (CRRA-1, J-6)
- 54. The industrial nature of the area surrounding the proposed facility site and the almost complete lack of natural vegetative cover limit the use of the area by wildlife. No species of plants or wildlife designated as threatened or endangered are expected to inhabit the proposed facility site. (CRRA-1, G-15 to G-16)
- 55. The project reduces raw refuse 65% to 75% in weight. The resulting ash and residue occupy about five to ten percent of the original volume. (CRRA-1, B-5)
- 56. Assuming that the facility is operated at capacity (657,000 tons of MSW per year), it would produce 230,000 tons of ash per year. (CRRA-2, Q. 43)
- 57. CRRA owns a landfill in Shelton, which is to be used for this project for disposal of ash, residue, and bypass waste. (CRRA-1, A-3)
- 58. The Shelton landfill, as presently permitted, is estimated to have a useful life through September, 1991. CRRA will establish a fund to search for new landfill sites and evaluate the availability of additional capacity on the Shelton site. (CRRA-2, Q. 43)
- 59. The existing transfer stations that would continue to be used for the project are located in Darien, Greenwich, Fairfield,

  Stratford, Trumbull, and Westport. The negotiations on two

- existing additional stations, in Milford and Norwalk, are incomplete. (CRRA-2, Q. 27; CRRA-1, Exhibit A-6)
- 60. There would be some two thousand feet of queuing space and a truck turnaround area provided near the scale house to allow for on-site queuing and for trucks containing rejected waste to leave the site. (CRRA-1, I-2; Tr. p. 109)
- 61. A storage building has been designed to store up to three days' production of ash and residue. Under normal operations, an estimated 30 loads per day (approximately 180 loads per week) would be hauled to the landfill. No other on-site storage of ash would be provided for. (CRRA-1, I-11, I-12; Tr. p. 108)
- 62. The ash residue generated from the combustion of MSW would be sprayed with water; combined with bottom ash from the boilers, fly ash, grate siftings, and reagent residues from the spray dryer; transferred to the ash storage building; and removed to the landfill. (CRRA-1, I-11, I-12)
- 63. Efforts are being made to find productive uses for the residue, such as use as a landfill cover, as an aggregate for road building, or for the manufacture of asphalt. No recovery and recycling of non-combustibles such as glass and cans are planned. However, recovery of ferrous metals from the ash prior to disposal would not be precluded. (CRRA-2, Q. 45)
- 64. Unacceptable waste (hazardous waste, non-burnable materials such as soil and concrete, and oversized bulky waste) would be sorted out and removed for disposal at a landfill. The municipalities are not entitled to deliver hazardous waste, and Signal has no responsibility to accept and dispose of hazardous waste. Signal

- would, however, cause waste that has been inadvertently accepted to be removed and disposed of at a hazardous waste disposal facility. The cost would be borne by the communities. (CRRA-2, Q. 28, Q. 44; Tr. pp. 106-108)
- 65. The groundwater at the landfill would be monitored in accordance with the DEP permits for the landfill. (CRRA-2, Q. 43)
- Data for the existing traffic demand shows that key intersections providing access to the industrial area along Howard and Wordin Avenues operate under acceptable conditions. The level of service (LOS) for these intersections has been classified as LOS B "Short traffic delays" from a range of LOS A "Little or no delays" to LOS F "Intersection blocked by external causes." (CRRA-1, G-29 to G-31, Exhibit G-16, Exhibit G-17)
- 67. It is estimated that during the 36 month construction period, peak hour(s) traffic increases would total 285 vehicles. About 90% of the traffic would use I-95 to Wordin Avenue to Howard Avenue to reach the site. None of the intersections analyzed are expected to experience a decline in LOS. (CRRA-1, J-28 to J-30, Exhibit J-12)
- 68. After construction operations are complete, the facility would be served by 190 to 246 solid waste refuse trucks per day based on a ten hour schedule. The heaviest hourly truck traffic would be 30 refuse trucks per hour. Additional traffic from employees (20 to 35 per shift on three shifts), ash and chemical transport vehicles, and visitors has been estimated to range from 75 to 105 vehicles per day. An estimated 265 to 351 total vehicles would visit the facility daily. (CRRA-1, J-30 to J-33; CRRA-2, Q. 37)

- 69. The analysis of the key intersections shows that all the intersections are expected to continue to operate at LOS "B" during all peak hours with all additional truck and employee traffic.

  (CRRA-1, J-32, J-33, Exhibit J-14)
- 70. Currently no unusual congestion or traffic problems exist in the study area. In addition, adequate turning radii exist at the key intersections, and the pavement is in good condition for truck traffic. No road improvements or traffic light installations are anticipated. (CRRA-1, G-27 to G-31; CRRA-2, Q. 37; Tr. p. 57)
- 71. Facility operations require the use of 1.7 million gallons per day (MGD) of potable water from the Bridgeport Hydraulic Company (BHC) via an existing 12-inch pipe. The BHC has indicated that the 1.7 MGD can be met with no foreseeable difficulty from the system's safe yield capacity of approximately 76 MGD. BHC's current average daily system demand is 58 MGD. (CRRA-1, J-10; CRRA-2, Q. 38; Late File Exhibit No. 7)
- 72. Cooling tower makeup represents 1,601,712 gal/day or 97% of the 1.7 MGD required for plant operations. About 1,291,680 gal/day of the cooling tower makeup would be lost through evaporation and drift. (CRRA-2, Q. 38)
- 73. Water conservation measures at the plant include the reuse of 167,760 gal/day of the total 310,032 gal/day cooling tower blow-down for the ash handling and flue gas cleaning system. (CRRA-2, Q. 38)
- 74. In the event that the supply of 1.7 MGD of water cannot be met, the options investigated would include utilization of water from another source such as Long Island Sound, reduction of water

- demand, reduction of plant capacity, or plant shutdown. (Tr. pp. 99-100)
- 75. Noise from construction operations would be limited to normal daylight hours during the week for the 36 month construction period. In the worst case, noise from construction operations would be 4 dBA higher than existing noise levels at the closest receptors. Noise from construction vehicles (10 to 20 trips per hour) would be less than a 1 dBA increase over the existing noise levels at the closest receptors. (CRRA-1, J-35 to J-37)
- 76. Noise generated during demolition of the existing structure on the proposed site, pile driving, and blasting is expected to range from 70 to 75 dBA at the closest receptors and would potentially be a source of annoyance. (CRRA-1, J-37)
- 77. Noise from construction activities is generally exempt from the State of Connecticut and City of Bridgeport noise regulations.

  (CRRA-1, J-37; CRRA-2, Q. 51, DEP Noise Regulations, Bridgeport Noise Control Ordinance)
- 78. The maximum expected noise levels (L<sub>10</sub>) at the boundary of the proposed facility during operations would be 59 dBA. The ambient noise levels (L<sub>10</sub>) measured in the vicinity of the site are about 57 dBA. The noise increase expected from the project would be up to two dBA. It is considered that an increase of 3 dBA is required to result in a noticeable increase in sound levels. (CRRA-1, J-38, J-39; CRRA-2, Q. 51; Tr. p. 90)
- 79. Noise control measures during plant operation would include sound insulated and enclosed tipping areas, low-noise emission equipment,

- and fans and safety relief valves fitted with silencers. (CRRA-1, J-40, J-41)
- 80. Excess blow-down water from the cooling tower, between .14 and .32 MGD, would be discharged into Cedar Creek. Modeling results indicate that the cooling tower blow-down water, at a normal operating temperature approximately 20°F above ambient water temperature, would increase the temperature of Cedar Creek by less than 1°F. (CRRA-1, J-11 to J-12; CRRA-2, Q. 40; Tr. p. 56)
- 81. A dilution model indicates that the total dissolved solids (TDS) of cooling tower blow-down water would decrease the TDS concentration within Cedar Creek by less than 40 mg/l. This buoyant plume would not have a significant impact. Incoming water treatment would prevent discharges of toxic pollutants to Cedar Creek. Due to the quality of the discharge, treatment would not be required. The project is not expected to have a negative effect on local marine organisms. (CRRA-1, J-11 to J-13)
- 82. Process wastewaters, boiler blow-down, filtered backwash, demineralized wastes, and equipment facilities wash-down would be neutralized and combined with sanitary waste discharge to total approximately 74,000 gallons per day and would be discharged into the Bridgeport wastewater treatment plant via an existing sanitary sewer located on Howard Avenue. The flow of sanitary wastewater discharged from the proposed facility would represent approximately 0.2 percent of the existing daily treatment flow to the

- treatment plant and would not adversely affect the treatment system. (CRRA-1, J-11 to J-12, I-14 to I-16; CRRA-2, Q. 41; Tr. p. 56)
- 83. The refuse storage pit, with a storage capacity of 6750 tons of MSW, would be waterproof. Equipment and facility washdown would be collected in the wastewater storage basin until it could be discharged into the sewer. All process areas would be located indoors. As a result, storm water runoff from the plant site would not be contaminated by the refuse. (CRRA-1, D-5, D-6, I-14, J-12)
- 84. The storm water runoff characteristics of the proposed site would be slightly altered from the existing condition. Therefore, the peak runoff would not likely change from the present discharge of 15 cfs. (CRRA-1, J-12)
- 85. The air emission control equipment would consist of combustion controls and spray dryer absorber ("scrubbers") baghouse systems.

  Scrubbers produce an atomized mist of lime slurry which reacts with sulfur dioxide, hydrogen chloride, and other acid gases.

  Reactive solids, unreacted lime, and fly ash are then collected in the baghouse filter. (CRRA-1, J-19 to J-21; Tr. p. 54)
- 86. The greatest potential for direct impact to biological resources from the operation of resource recovery facilities is from the emission of major air pollutants including sulfur dioxide  $(SO_2)$ , particulate matter (as TSP), carbon monoxide (CO), and nitrogen oxides (as  $NO_2$ ), and from emission of minor air pollutants including hydrogen chloride (HCL) and hydrogen fluoride (HF). (CRRA-1, Exhibit J-1)

- 87. Projected emissions of particulate matter (as TSP), sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (as NO<sub>2</sub>), carbon monoxide (CO), lead (Pb), mercury (Hg), and hydrogen choloride (HCL) are identical to allowable emission rates (lb/hr). The air pollution control systems would be designed to achieve State and Federal emissions standards and technology requirements issued by DEP and EPA. (CRRA-1, J-19; CRRA-2, Q. 47; Tr. pp. 54-55; Late File Exhibit No. 9)
- 88. Based on an air quality dispersion analysis, the proposed facility, in combination with other sources in the area, would comply with all National Ambient Air Quality Standards (NAAQS), and Prevention of Significant Deterioration (PSD) increments. (Tr. p. 55; CRRA-1, Exhibit J-2 to J-7)
- 89. Based on the State's responsibility to ensure that air quality standards in the state plan as approved by the Federal government are maintained, sulfur dioxide, nitrogen oxides, and nitrogen dioxides would be continuously monitored for compliance. Other continuous emission monitors would measure and record emissions as required by regulations. (Tr. p. 102; CRRA-1, K-2, I-14)
- 90. Fugitive dust and odors would be minimized by maintaining a negative air pressure within enclosed refuse unloading and handling areas. Air drawn from unloading and handling areas would be used as combustion air for each of the three furnaces. Combustion ash would be moistened with a water spray and hauled in a wet condition, eliminating a potential fugitive dust problem. (CRRA-1, J-14 to J-15; Tr. p. 48, p. 53)

- 91. Construction vehicles would be watered down to wash off dust before leaving the site and the site, would be watered in order to control fugitive dust during construction operations. (CRRA-1, J-13)
- 92. Peak construction truck traffic would be 10 to 20 vehicle trips per hour. These trucks would emit volatile organic compounds, particulate matter, and  $NO_X$ , depending on the type of fuel used. These emissions would be minimal compared to other mobile source emissions surrounding the proposed site, particularly I-95, and should not have a significant impact on air quality. (CRRA-1, J-13, J-36)
- 93. Although mobile sources of air pollutants from refuse delivery trucks have not been clearly quantified, the control of the transfer stations by Signal would allow delivery times to be stretched out to a uniform flow that would minimize the concentration of pollutants from waiting trucks. (Tr. p. 109)
- 94. CRRA would finance project construction through its bonding authority and would contract with the participating municipalities to obtain a minimum waste commitment through the life of the project. (CRRA-1, A-2; CRRA-10)
- 95. All bonds from the Bridgeport I project have been paid off. The only obligation CRRA and communities have remaining in this matter indebtedness of about \$350,000 to UI for equipment and services provided by UI with respect to the initial project. (CRRA-2, Q. 5; CRRA Supplemental Response to CRRA-2, Q. 5)

- 96. Signal is providing an equity contribution to the project and would set up a limited partnership, Bridgeport Resco, which would own and operate the completed facility on land leased from CRRA. (CRRA-1, A-3)
- 97. CRRA expects to issue approximately \$215,000,000 worth of tax-exempt solid waste disposal facility bonds, and Signal will provide up to \$60,000,000 in equity to cover the estimated \$275 million total installed cost. Signal would provide additional funds to complete construction if necessary. (CRRA-2, Q. 7; CRRA-1, Exhibit E-1; CRRA-2, Q. 9, Q. 13; CRRA-10)
- 98. Revenue from the sale of recovered products, electricity generation, and from service fees charged to the participating municipalities is expected to cover the annual debt service of the construction bond plus annual operating and maintenance costs. Signal would provide additional funds for operations if necessary. (Tr. pp. 25-26; CRRA-10)
- 99. Without the sale of electricity, tipping fees would range from \$80-\$90 per ton in the first year. (CRRA-2, 0, 19; Tr. p. 26)
- 100. The Department of Public Utility Control has rendered a decision regarding the Petition of the CRRA and UI (Docket No. 85-04-12) requesting a ruling for an electricity payment contract. The agreement provides that UI shall pay CRRA a minimum price of 8 cents per kilowatt hour (KWH). Escalation of that rate occurs when UI's avoided costs exceed 8 cents per Kwh. (CRRA-10)
- 101. UI will make no financial expenditure for the waste treatment facility component of the project. Project participants will pay

- all the construction costs for the necessary electrical interconnections with the UI system. (CRRA-2, Q. 8; Tr. p. 27)
- 102. The estimated service fee at this time is \$39.50 per ton of waste delivered, based on a minimum commitment of 500,000 tons per year. (CRRA-1, Q. 2; Tr. pp. 30, 35)
- 103. Towns entering the system after a certain date would pay a surcharge determined by the Interlocal and Regional Solid Waste Commission. (CRRA-2, Q. 3; Tr. p. 120)
- 104. Construction costs for the project are estimated to be \$199,441,000. The total installed cost of the project, including financing costs, is estimated to be \$275 million. (CRRA-1, Exhibit E-1; CRRA-2, Q. 9, Q. 13)
- 105. Estimated operations and maintenance (0&M) costs would be \$16,454,000 per year beginning in 1988, with an annual escalation rate of 6%. Initial annual 0&M costs, in 1984 dollars, are estimated as follows:
  - a. Operating salaries \$2,430,000;
    b. Maintenance, parts, and contract supplies \$3,000,000;
    c. Utilities and operating supplies \$1,345,000;
    d. Residue handling \$5,610,000;
    e. General and administrative costs \$1,430,000; and \$13,815,000.

(CRRA-1, Exhibit E-1; CRRA 2, Q. 14)

- 106. The project's operating staff is estimated to total 71 persons.

  The annual labor cost is estimated to total \$2.43 million. (CRRA 2, Q. 25; CRRA-1, Exhibit E-1)
- 107. Signal would be responsible for the demolition of the existing facility. An estimated salvage value of \$500,000 would be used to

- reduce the estimated demolition cost of \$2,000,000 to a net cost of \$1,500,000. (CRRA-2, Q. 20)
- 108. The State Air Quality permit requires a stack test for dioxin at initial start-up and thereafter whenever the Department of Environmental Protection determines it to be necessary. A test for chlorinated-p-dioxins could cost in the order of \$50,000 \$75,000. If a complete asphyxiation of the facility is necessary, a single test could cost \$500,000. (Tr. p. 115)