

AN APPLICATION SUBMITTED BY OGDEN MARTIN SYSTEMS, INC., FOR THE BRISTOL RESOURCE RECOVERY PROJECT FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE CONSTRUCTION, MAINTENANCE, AND OPERATION OF AN ELECTRIC GENERATING FACILITY IN THE CITY OF BRISTOL, CONNECTICUT. : CONNECTICUT SITING COUNCIL August 29, 1985

F I N D I N G S O F F A C T

1. Ogden Martin Systems, Inc., in accordance with provisions of section 16-50k and 16-50l of the Connecticut General Statutes (CGS), applied to the Connecticut Siting Council on June 20, 1985, for a certificate of environmental compatibility and public need for Ogden Martin Systems of Bristol, Inc. (OMSB), to construct, maintain, and operate an electric generating refuse-to-energy facility in the City of Bristol, Connecticut. The project is known as the Bristol Resource Recovery Project. (Record)
2. The fee as prescribed by section 16-50v-1 of the Regulations of Connecticut State Agencies (RSA) accompanied the application. (Record)
3. The application was accompanied by proof of service as required by section 16-50l(b) of the CGS. (Record)
4. Affidavits of newspaper notice as required by statute and section 16-50l-1 of the RSA were filed with the application. (Record)
5. Pursuant to section 16-50j of the CGS, the Connecticut Department of Environmental Protection (DEP) filed written comments with the Council. (Record)
6. Pursuant to section 16-50j-15 of the RSA, the municipalities of Bristol and New Britain submitted limited appearance written comments in support of the project. (Record)

7. The Council and its staff made an inspection of the proposed facility site on July 29, 1985. (Record)
8. Pursuant to section 16-50m of the CGS, the Council, after giving due notice thereof, held a public hearing at 7:00 P.M., July 29, 1985, in the Bristol City Hall, 111 North Main Street, Bristol, Connecticut. (Record)
9. The parties to the proceeding are the applicants and those persons and organizations whose names are listed in the Decision and Order which accompanies these findings. (Record)
10. During the hearing proceedings, testimony in support of the project was given by representatives from the municipalities of Bristol, Southington, Burlington, and Plymouth. (Tr. pp. 9-12, 54-62)
11. The Council took administrative notice of the following documents:
 - State of Connecticut Conservation and Development Policies Plan 1982-1985.
 - Department of Environmental Protection Solid Waste Management Plan.
 - Connecticut State Air Improvement Implementation Plan.
 - The Northeast Utilities System 1985 Forecast of Loads and Resources for 1985-1994.
 - Annual Report of the Connecticut Energy Advisory Board to the Governor and General Assembly, March, 1985.
 - Proposed Air Pollution Control Guidelines for Resource Recovery Facilities and Incinerators, Connecticut Department of Environmental Protection.
 - Dioxin Emissions for Municipal Waste Combustors from EPA, CSC Docket 46, Exhibit 50.
 - Annual Air Quality Summary, Connecticut Air Quality Summary 1981, Connecticut Department of Environmental Protection.
 - The contract between CL&P and CRRA in the Mid Connecticut Project,

12. The project would consist of a refuse disposal facility, an electrical generator, and electrical connection facilities. (OMSB-1, p. 29-34; OMSB-2, Q. 52; Tr. 37, 53)
13. The project would serve the needs of the public by mitigating the environmental degradation brought about by landfilling raw refuse, conserving land, and recovering valuable energy. (OMSB-1, p. 17-18)
14. The project would be primarily intended to dispose of municipal solid waste (MSW) for participating communities. However, co-disposal of sewage sludge and MSW would be technically feasible at any time during the contract life. The facility would be capable of burning other fuels such as low-grade coal, peat, or wood, but it would be impractical to burn substantial quantities of such fuels without a major revision to the fuel receiving, handling, and delivery system. (OMSB-1, p. 10, p. 36; OMSB-2, Q. 3, Q. 13; Tr. p. 13)
15. According to the Connecticut Solid Waste Management Plan, approximately ninety-five percent of all solid waste generated within the state is presently disposed of by landfilling. (OMSB-2, Q. 60; Connecticut Solid Waste Management Plan p. 2)
16. The State Legislature has found that throughout the state the prevailing solid waste disposal practices generally result in unnecessary environmental damage, waste valuable land and other natural resources, and constitute a continuing hazard to the health and welfare of the people of the state. (Connecticut General Statute (CGS) 22a-258)

17. The majority of MSW committed to the project would be from the contracting communities of Bristol, New Britain, Southington, Plainville, Plymouth, Burlington, Berlin, and Washington. Contract commitments have been signed for 424 tons per day (TPD) of MSW from the eight contract communities. These municipalities, with the exception of Washington, are located within the Mid-Connecticut Wasteshed. (OMSB-1, p. 8-9; OMSB-2, Q. 1, Q. 60; Connecticut Solid Waste Management Plan p. 37, p. 66-71)
18. Available landfill space for disposal of MSW from the contracting communities is limited. As currently utilized by the contracting communities, all landfills are expected to be at capacity on or before the year 1992. (OMSB-1, p. 8-9; OMSB-2, Q. 1, Q. 6, Q. 60; Connecticut Solid Waste Management Plan p. 66-68; Tr. p. 107)
19. The Connecticut Solid Waste Management Plan, identifies the critical need for disposal of MSW and recommends resource recovery facilities as an alternative to landfilling. The plan further states that, if found feasible, a small scale resource recovery facility could serve the needs of the western most portion of the Mid-Connecticut Wasteshed or serve the future needs of the Northwest Wasteshed. (OMSB-2, Q. 60; Connecticut Solid Waste Management Plan p. 27-30, 66-71, 88)
20. The facility would have a nameplate capacity of 650 TPD and an annualized capacity of 536 TPD assuming downtime for maintenance and repairs. It is anticipated that 50 TPD would be reserved for future growth and 62 TPD would be used to satisfy one or more interested towns in the immediate vicinity, including Watertown,

Thomaston, Wolcott, Litchfield, Morris, and Bethlehem, which represent a potential aggregate of 100 TPD of MSW. (OMSB-2, Q. 1; Tr. p. 20, 31-32; OMSB-1, p. 10)

21. The facility would process 195,731 TPY, which is 8.9 percent of the total 2.2 million tons per year (MTY) of MSW produced within the state. (OMSB-1, p. i, 10; OMSB-2, Q. 60; Connecticut Solid Waste Management Plan p. 11; Tr. p. 24)
22. The facility would include a 16.7 megawatt (MW) turbine generator with the capacity to produce approximately 13.2 MW (net) of electricity. Approximately 3.5 MW would be diverted to in-station use. (OMSB-1, p. i, 11, 13, 29, 34; Tr. p. 37, 53)
23. The facility would be expected to generate 70,000-90,000 megawatt hours (MWh) per year, depending on refuse throughput and quality. (OMSB-2, Q. 50)
24. The Northeast Utilities Service Company (NU) would guarantee to purchase all electricity produced by the facility, net of in-station use. (OMSB-1, p. 11, 29, 34, 50; OMSB-2, Q. 48, Q. 49; Tr. p. 37)
25. During the 25 year service agreement, more than 5 million barrels of oil could be saved by utilizing waste as fuel. (OMSB-1, p. i, 13)
26. The electricity purchased by NU would help NU's efforts to reduce its oil consumption and diversify its fuel mix. An economic analysis of the pricing terms used in the energy purchase agreement between NU and OMSB indicates that there would be benefits likely to NU's ratepayers over the full 25 year term of the

- contract. NU strongly supports the project. (Tr. pp. 36-38; NU System 1985 Forecast of Loads and Resources of 1985-1994; Annual Report of the Connecticut Energy Advisory Board of the Governor and General Assembly, March, 1985)
27. The facility would be connected to the NU system by a dedicated 13.8 kV distribution feeder. The interconnection would run from the facility for approximately 1.5 miles to the NU Shelby's Forestville Substation. All NU line, pole, and tie-in costs have been included in service fee calculations and would be reimbursed by OMSB. (OMSB-2, Q. 52; Tr. p. 37, 44)
 28. OMSB is a Connecticut company specifically formed to own and operate the Bristol project. Its contractual obligations are fully backed by the parent, Ogden Corporation, a \$2.1 billion diversified company. (OMSB-1, p. 5)
 29. The City of Bristol and six other municipalities, Berlin, Burlington, New Britain, Plymouth, Plainville, and Southington reviewed approximately 20 proposals for a waste-to-energy, solid waste disposal project. In November of 1984, Ogden Martin Systems, Inc., a subsidiary of the Ogden Corporation, was selected as the full service contractor. (OMSB-1, p. 1-2)
 30. The general contractor would be J.A. Jones Construction Company, which is obligated to build a facility per specifications of the Project Agreement within a 33 month schedule. (OMSB-2, Q. 39; OMSB-1, p. 60)
 31. OMSB would have the overall contractual responsibility for facility price, schedule, design, engineering, construction, operations,

environmental compliance, permit acquisition, and finance arrangement. (OMSB-1, p. 2, 4; OMSB-2, Q. 39)

32. The proposed 23 acre building site would be located in the Southeast corner of the Middle Street Industrial Park, adjacent to the Bristol landfill. The majority of the land within the Industrial Park is owned and is presently being developed by the City of Bristol for additional industrial development. (OMSB-1, p. 23, 24, 29)
33. Alternative sites were not investigated by the City of Bristol. Determination was made in the early stages of the project that the proposed site would be well suited for the intended development. (Tr. p. 68)
34. The former use of the proposed 23 acre site was for gravel mining operations and, more recently, isolated landfilling operations. (OMSB-1, Figure 4-1, Figure 4-3, p. 24; Tr. p. 78-79)
35. The land use along the Middle Street Industrial Park approach road, Middle Street (Route 229), is for industrial facilities, landfill operations, sand and gravel excavation operations, commercial improvements, and apartment buildings. (OMSB-1, p. 23, p. 60; Figure 4-1; Tr. p. 112)
36. Residential development is present to the east, north, and west of the proposed facility, but is expected to be compatible with the industrial nature of the industrial park and proposed facility. (OMSB-1, p. 23-24; OMSB-2, Q. 36; Tr. p. 112)
37. A special permit to construct a resource recovery facility on Lot 16A, Middle Street Industrial Park, was granted effective July 15, 1985, by the Bristol Zoning Commission. (OMSB-5)

38. The proposed facility will have an outward appearance of a multi-story, light industrial building. The maximum height of any building structure would not exceed 117 feet above grade except for the stack, which would be 292 feet above grade. (OMSB-1, p. 29, 55; Drawing M-002, General Arrangement, Section A-A)
39. It is expected that the proposed facility would complement its industrial neighbors. The facility would be landscaped and seeded for aesthetics and to prevent soil erosion. The stack and other parts of the facility would be visible from Middle Street, Lake Street, and from other angles where unobstructed lines of sight are present; however, natural vegetation would be preserved to the extent possible to serve as a visual and noise buffer. (OMSB-1, p. 12, p. 24, p. 34, p. 70; Tr. p. 112)
40. The proposed facility housing would consist of an enclosed tipping floor area, refuse pit area, hopper area, boiler house, air pollution control area, stack, ash handling building, cooling tower, water and waste treatment area, scale house, administration building, and a turbine generator building. Specific equipment to be used would include truck scales, two overhead cranes, two hydraulic feed rams, two boiler combustion units, residue handling systems, two air pollution control systems, draft fans, and a turbine generator. (OMSB-1, p. 31-37, Site Plan C101; OMSB-2, Q. 37)
41. Arriving refuse vehicles would be automatically weighed, then enter the enclosed receiving pit. Overhead cranes would deliver refuse into the feed hoppers where it would be pushed by hydraulic feed rams onto Martin reverse reciprocating stoker grates for an average residence time of one hour. The stoker would consist of alternating

rows of grate bars that would push refuse uphill against the natural downhill flow of gravity to agitate and assume complete combustion. Combustion air would be supplied from undergrate chambers and overfire nozzles. Ash would then be quenched in a residue discharger, processed for metal recovery, and transported for disposal. (OMSB-1, p. 30-33)

42. The residue ash, less metals content, would represent about 5 percent of the original refuse volume and approximately 20 percent of the original weight. (OMSB-1, p. 33)
43. Combustion gases would reach temperatures of 1800-2000°F, flow through boiler tubes, be converted to turbine quality steam, and be piped to the 16.7 MW turbine generator. (OMSB-1, p. 33-34)
44. The facility would be expected to achieve an overall availability of 82.5 percent or better. (OMSB-1, p. 35; OMSB-2, Q. 1)
45. Scheduled shutdown for each of the two boiler units would consist of a major maintenance period and a minor cleaning and inspection period at approximately half year intervals. Scheduling would be during off-peak MSW delivery and reduced energy demand to the extent possible. (OMSB-1, p. 35-36)
46. Equipment that is critical to the system's operation would have backup equipment to ensure year round availability. (OMSB-1, p. 35-36)
47. During a boiler unit shutdown, the unit on-line would continue to operate at rated capacity. Approximately 2500 tons of MSW, three to five days of incoming waste, could be stored in the refuse pit. (OMSB-1, p. 36, Agreement, V, K, Section 5.11(5))

48. The turbine-generator would be able to handle 100 percent of the full facility steam flow. During turbine-generator maintenance, to be scheduled for three to five weeks every three to five years, the steam generated would go to the facility by-pass condenser to ensure continuous refuse disposal. (OMSB-1, p. 36-37)
49. No shortfall adjustment would be payable for failure to produce electricity during turbine-generator maintenance so long as downtime did not exceed three weeks in any period of three contract years. (OMSB-1, Agreement V, K, Section 5.11(7))
50. In the event of a total facility shutdown, NU would be notified, the designated town liaison would be notified to redirect refuse deliveries, purchased power would be switched on, and the required maintenance and repairs would begin. If necessary, refuse would be removed from the pit for disposal at a landfill. (OMSB-1, p. 37-38)
51. OMSB would accept waste from 8 A.M. to 5 P.M. Monday through Friday and 8 A.M. to 12 P.M. Saturday (other than Legal Holidays). The facility would process waste to generate electricity 24 hours a day, 7 days a week. (OMSB-1, Agreement, III, A, Section 3.01 D, Section 3.04)
52. The proposed facility would be designed to receive, at any given time of day, as much as 20 percent in excess of the designed MSW capacity of the facility. (Tr. p. 82)
53. The proposed facility would be designed with nine receiving bays and on-site queuing space for 25 trucks thus minimizing vehicle turn around time and eliminating the need for off-site queuing. If special hours of MSW delivery were necessary, the contract has

a provision that would allow a scheduling arrangement by towns.
(OMSB-2, Q. 31, Q. 33; Tr. pp. 81-82)

54. OMSB would encourage community programs to recycle cans, paper, and other waste material by sharing market knowledge to help increase the salability of recycled products. (OMSB-1, p. 17; OMSB-2, Q. 15)
55. OMSB staff would be trained to recognize potentially hazardous materials during inspection of incoming MSW. OMSB has no obligation to accept hazardous or unacceptable waste. (OMSB-1, Agreement III, C, Section 3.03; Tr. p. 86, p.102)
56. Inadvertantly delivered hazardous waste would be segregated from MSW and would be transported to licensed hazardous waste disposal facilities by a qualified company in accordance with applicable manifest requirements. The final responsibility and choice of procedure rests with contracting communities since any additional costs would be passed onto the communities. (OMSB-1, Agreement VII, E, Section 7.05; Tr. pp. 83, 85-87, 102)
57. Unacceptable waste has been defined by contract and includes explosives, pathological and biological waste, radioactive materials, ashes, foundry sand, sewage sludge (unless processed to permit incineration), human waste, human remains, animal carcasses, motor vehicles and major motor vehicle parts, large machinery, white goods, liquid wastes, nonburnable construction materials, and other wastes that may present a substantial danger to public health or safety, cause air or water pollution standards to be violated, or adversely affect the proposed facility.
Hazardous waste, also unacceptable, has been defined in the Solid

Waste Disposal Act, 42 U.S.C. Section 6901 and Section 22a-209-1 of the RSA as any other materials deemed toxic or dangerous by an appropriate government agency or unit and any material which would result in the process residue being hazardous. (OMSB-2, Q. 8; OMSB-4, Q. 6, Project Agreement p. 1-9, 1-18)

58. Based on an annual refuse throughput of 195,730 tons of MSW, 59,000 cubic yards of ash residue would be produced per year. (OMSB-2, Q. 11)
59. Residue ash would be removed from the facility by truck to the adjacent Bristol landfill. Transportation costs would be reflected in the service fee. (OMSB-2, Q. 12)
60. Residue ash would be composed of a combination of fly ash and bottom ash from the proposed facility. It is not expected that residue ash would be toxic and considered hazardous waste; however, the ash would be tested for toxicity in accordance with toxicity criteria established by the EPA. (OMSB-2, Q. 11)
61. The proposed project would lease the Bristol landfill to dispose of residue ash and by-pass MSW, although OMSB would have the option to dispose of such waste in any environmentally acceptable and permitted facility in the United States. (OMSB-1, p. 11, 72; Tr. p. 83, 103)
62. The Bristol landfill comprises 60 acres and has a remaining capacity of 1.8 million cubic yards. Assuming a maximum residue guarantee by OMSB of .26 tons of residue per ton of MSW, guaranteed ferrous metal removal which accounts for 25-40% of residue by weight, MSW by-pass of two weeks annually, and the addition of 14 acres of

property expected to be acquired by the City of Bristol to supplement the existing landfill, the Bristol landfill would have sufficient capacity to dispose of wastes from the proposed facility for the expected operating life of the facility. (OMSB-1, p. 72; OMSB-2, Q. 7; Tr. p. 83, p. 103-105)

63. The Bristol landfill is currently permitted by the DEP. Operating permits allow the landfill to accept MSW, OBW, and ash residue. Quarterly monitoring and testing from six groundwater wells is required by DEP. (OMSB-2, Q. 7, Q. 10; OMSB-1, p.72)
64. Approximately 94,000 to 95,000 gallons of water per day from the Bristol City water system would be utilized for sensitive facility operations such as potable water, boiler makeup, and flue gas emission control equipment. For water conservation purposes, the remaining water needs of the facility to be used as cooling tower makeup would be composed of approximately 384,000 to 432,000 gallons per day of tertiary sewage effluent (TSE). (OMSB-1, p. 63-64, Figure 10-2, Figure 10-3)
65. The Bristol sewage treatment plant, planned for completion by early 1988, would supply TSE and accept cooling tower blowdown and domestic sanitary wastes. All design capacity and operation conditions for this waste treatment plant have been finalized. (OMSB-1, p. 64, Figure 10-2, Figure 10-3; OMSB-2, Q. 29)
66. The proposed operation would not result in any direct discharges of wastes to surface waters without prior treatment at the proposed Bristol Sewage Treatment plant. (OMSB-1, p. 63-67, Figure 10-2, Figure 10-3)

67. Approximately one half of the 23 acre site would be developed for the proposed facility. Most of the seven acres of inland wetland as classified by the City of Bristol would be left undisturbed. (OMSB-1, Figure 4-4, p. 25, 29)
68. The Bristol Wetland Agency granted a permit, effective July 15, 1985, to OMSB to construct the proposed facility on the proposed lot with the stipulation that the necessary erosion control steps be adhered to. (OMSB-6)
69. Generally, the topography of the proposed site is dominated by low-lying wet areas and a former borrow pit. Excavated drainage swales are located on the northern and southern perimeters of the proposed site. (OMSB-1, p. 24, Figure 4-3)
70. The geology of the proposed site includes deposits of stratified drift consisting of sand, gravel, and minor amounts of silt up to 40 feet thick. More recent swamp deposits in the low lying areas are up to three feet thick. (OMSB-1, p. 25-26)
71. A substantial portion of the proposed site lies within an A-Zone (area of 100 year flooding) as established by the Federal Emergency Management Agency. To prevent flooding of areas planned for development, low areas at or below elevation 210 feet would be filled to a uniform grade of 216.5 feet. (OMSB-1, p. 25, Figure 4-4)
72. Although most of the site has not been subject to landfilling operations, any refuse encountered on the proposed site would be removed and disposed of as necessary to accommodate construction of the facility. (Tr. p. 78-79)

73. Boring data indicated that groundwater was at or near the surface in most locations and had a general flow of northwest to southeast. (OMSB-1, p. 27)
74. The project would have no effect on the historical, architectural, or archaeological resources listed on or eligible for the National Register of Historic Places. (OMSB-2, Q. 24)
75. The proposed site would be modified to include ditches and swales next to access roads to intercept storm water runoff from adjacent areas. A retention pond would be constructed to serve as a settling basin and to intercept and release storm water runoff from the proposed site at a rate not to exceed the current rate of runoff from the undeveloped site. (OMSB-1, p. 65)
76. Approximately 700 feet of an excavated drainage swale located on the northern perimeter of the site would be channelized to accommodate the construction of the facility. (OMSB-1, p. 24, Site Plan - C101)
77. The area does not offer a unique habitat for wildlife; however, existing vegetation would be left undisturbed in major portions of the site as a buffer and screen. (OMSB-2, Q. 17; OMSB-1, p. 34)
78. The Connecticut Department of Environmental Protection (DEP) and the Federal Fish and Wildlife Service have no records of rare, endangered, or threatened species, except for occasional transient individuals, for the proposed site. (OMSB-2, Q. 23)
79. A soil erosion and sedimentation control plan has been submitted that is intended to protect site resources during the development stages of the proposed project. (OMSB-4, Q. 4)

80. The air quality study area of the proposed site is designated as attainment for National Ambient Air Quality Standards (NAAQS) for nitrogen dioxide, sulfur dioxide, and for primary standard of particulate matter. The study area is designated as non-attainment for NAAQS for carbon monoxide, ozone, and the secondary standard for particulate matter. (OMSB-1, p. 54)
81. In order to meet emission standards, both incinerator units would be equipped with a separate air pollution control train that would include a state-of-the-art lime injected dry scrubbing device (scrubbers) and a fabric filter baghouse. All emissions would be exhausted through a common 292 foot high stack. (OMSB-1, p. 11, 33, 54, 55)
82. After construction has been complete, but before a final permit to operate has been issued, compliance with applicable state and federal requirements would have to be demonstrated by actual emission tests on the equipment. The DEP could require, at their discretion, emission monitoring and recordings for particulates, sulfur dioxides, nitrogen oxides, volatile organic compounds, carbon monoxide, lead, hydrogen chlorides, dioxins, and furans. (OMSB-2, Q. 27, Q. 28)
83. All trash would be delivered and processed inside an enclosed facility. A negative air pressure inside the facility would prevent odors and dust from escaping to the outside environment. Odors and dust would be drawn into the furnaces where trash is burned at temperatures exceeding 1800°F to ensure complete combustion of refuse and the destruction of odors. (OMSB-1, p. 12, p. 32-33)

84. No ground level fogging or impact on surrounding vegetation or electrical equipment would be expected to result from the exhaust vapor emitted from the cooling tower. However, under certain meteorological conditions, the exhaust vapor might condense to form a moisture plume. (OMSB-2, Q. 26; Tr. 110-111)
85. In summary, modeling analysis shows that emissions from the proposed facility would not exceed any concentrations defined by federal and state standards. (OMSB-1, Table 10-2, p. 59)
86. The principal sources of noise from the proposed project would be from forced draft intake fans, air-cooled condensers, and induced draft discharge fans. Other sources of noise would come from conveyors, ventilation systems, and truck delivery operations. (OMSB-1, p. 67)
87. There should not be any requirement for special noise control methods; however, safety valves would be fitted with silencers and fans would be purchased to meet in-plant OSHA noise requirements. In addition, the noise impact from truck delivery would be attenuated by the thermally insulated facility housing, by natural vegetative cover, and by atmospheric absorption of the proposed site. Additional sound deadening methods would be utilized if noise from equipment did not meet noise requirements. (OMSB-1, p. 34, p. 70; Tr. 108-109)
88. It is expected that the proposed facility will be in compliance with all state and city noise and tonal noise regulations. As such, it could be expected that noise would have only a negligible

effect on neighboring industries and would have no impact on residential locations outside of the industrial park. (OMSB-1, p. 72; Tr. p. 110)

89. Traffic flow in the area of the proposed facility is dominated by north-south movements along Middle Street (Route 229) which provides access to the Middle Street Industrial Park, the proposed facility, and Interstate I-84 located 2.5 miles to the south. (OMSB-1, Figure 10-1, p. 24, p. 60)
90. Middle Street (Route 229) is a two-lane (bidirectional) bituminous concrete roadway approximately 44 feet in width with a 40 mph speed limit. The 1981 average daily traffic (ADT) along Middle Street is 12,700 vehicles with peak-hour conditions of 1270 vehicles. The existing conditions are generally considered to be moderate and unimpeded, with an excess capacity for traffic generated from the Middle Street Industrial Park. (OMSB-1, p. 24, p. 61; Department of Transportation Report, 1985)
91. The proposed project would be expected to generate traffic from 130 trucks and from vehicles carrying employees combined from 4 shifts and 30 visitors per day. The projected maximum peak hour traffic from all sources visiting the project would be 80 vehicles. The traffic volume would, at most, increase four percent over baseline conditions. As such, traffic flow conditions would remain relatively unchanged. (OMSB-1, p. 62-63)
92. The tax-exempt industrial revenue bonds to be issued by the Connecticut Development Authority for financing the project are estimated at \$75 million including interest, required reserve funds, and issuance expenses. This debt would be paid through

project revenues. Fixed rate debt was estimated at 9.5% and floating rate debt at 6.5%. (OMSB-1, Section II, p. 16; Tr. pp. 74-75; OMSB-2, Q. 5)

93. If bonds could not be issued for capital projects, OMSB would seek to arrange debt financing and might provide additional equity capital. (OMSB-1, Section IX, Article V, p. 4; Tr. pp. 73-74)
94. Debt service would be adjusted with the agreement of a majority of the contracting communities to compensate for the cost of additional financing. Without such agreement, such debt financing would not be arranged or equity capital provided. (OMSB-1, Section IX, Article V, p. 4)
95. OMSB would guarantee 490 kWh per year for each ton of refuse disposed and would assume the technical risk of the project's performance, guaranteed waste disposal capacities, and electrical generation. (Tr. p. 25)
96. Ogden Martin would provide 25% of the facility price as initial equity capital. Subject to modification if tax laws change, the company then would provide 25% pro rata equity capital for certain capital projects. (OMSB-1, Section IX, Article V, p. 4)
97. The Service Agreement between OMSB and the towns would cover a 25-year period and obligate the towns to deliver a minimum guaranteed amount of waste annually for a service fee. The fee would be based on the difference between facility costs and revenues from energy sales to CL&P and sale of material recovered. (OMSB-1, Section II, p. 13)
98. OMSB obligations would be governed by cost and performance guarantees to protect communities from service fee increases due to

- contractor cost overruns and technical failures. OMSB would process community waste or pay penalties to make whole communities if these obligations were not met. (OMSB-1, Section II, pp. 13-14)
99. Financing would not constitute a general obligation on the part of the participating towns and would not affect their borrowing capacity. (OMSB-1, Section II, p. 16)
100. The participating communities would not be liable for any unresolved portion of the debt service if the facility ceased operation prior to the end of its expected life, unless termination of operation were caused by unforeseen circumstances, including force majeure conditions and changes of law. If the facility's permanent termination were the communities' fault, then the communities would be responsible for any unresolved debt service. (Tr. p. 70)
101. Contracting communities would reimburse OMSB for any damages paid by the company under the electricity agreement due to default of one or more of the contracting communities or for unforeseen acts of nature specified under that agreement. (OMSB-1, Section 9, Article VIII, p. 6)
102. If an unscheduled shutdown of generating equipment should occur, the facility could continue to dispose of refuse with power required for operation purchased from NU. (OMSB-1, Section VII, p. 37)
103. If the Bristol landfill closed earlier than the expected 25 year life of the Project, any increased costs for obtaining additional landfill disposal areas would be borne by the towns. OMSB would have the responsibility of disposing of ash residues wherever it

- were deemed appropriate. (Tr. pp. 103-106)
104. During construction and operation of the facility, several insurance policies would cover various interruptions that are typically insurable, as well as other unforeseen circumstances. (Tr. p. 72)
105. The estimated cost of constructing the facility is \$58,840,000 (1985\$) subject to adjustments in the CPI (Consumer Price Index), incorrect assumptions, unforeseen circumstances, and faults of the contracting communities. OMSB would provide 25% of the facility price totaling \$15 million. (OMSB-1, Section II, p. 16, Section IX, Article IV, p. 2, Section IX, Article V , p. 4)
106. Annualized operation and maintenance costs are estimated at \$4,021,000 in 1985 dollars which will escalate by the Consumer Price Index throughout the 25 year project life. Labor costs are estimated at \$2,000,000 per year. Pass through expenses including property taxes, residual haulage and disposal, and utilities are estimated at \$2,500,000. (OMSB-2, Q. 42)
107. By participating in the Project, the communities would receive a lower tipping fee due to the contribution of tax benefits from depreciation of plant and equipment more than that allowed by private ownership and by owner contributed equity. (Tr. p. 34, OMSB-I, Section II, p. 15)
108. Communities would pay a service fee reflecting project costs, including operating costs and debt service, less community credit equal to 90% of energy revenues plus 50% of any net material profits. (OMSB-I, Section IX, p. 50)

109. The base case service fee portion of waste disposed charged to participating communities is estimated to range between \$28-\$43 per ton in 1989, and would increase annually in relation to the cost of living. Revenues from the sale of electricity would be deducted from overall project costs to arrive at the net tipping fee charged the participating communities. (OMSB I, Section II, p. 15; Section VII, p. 34; Section IX, p. 51)
110. The net tipping fee per ton of waste, assuming a 9% bond interest rate, is estimated to be \$36/ton at 536 tons per day or \$44/ton at 475 tons per day, in 1988 dollars. (OMSB-2, Q. 56; OMSB 3, Q. 5)
111. Present costs to landfill MSW ranges from \$8-\$26/ton at the Bristol and other area landfills. (OMSB-2, Q. 6)
112. Contracting communities would pay an additional \$12.75 per ton for waste delivered in excess of 600 tons on any day to cover incremental operating costs. This cost could be included in short-term contracts, not in community service fees. (OMSB-1, Section IX, Article V, p. 5; OMSB-2, Q. 2)
113. Based upon the experience of a similar sized facility in Florida, tipping fees charged the municipalities could be \$30-\$35 more per ton without the revenue from electrical generation. (Tr. pp. 76-77)
114. The City of Bristol would receive a fee of \$.25, adjusted for inflation, for each ton of waste delivered to the site. (OMSB-1, Section IX, Article V, p. 5)
115. Electricity purchased by CL&P under the contract with Ogden Martin would be considered energy purchase. The payment mechanism would include payments for future deferred capacity,

- expressed as a percent per kilowatt hour. (Tr. pp. 44-45)
116. In July, 1985, OMSB and CL&P submitted to the DPUC a Petition for Declaratory Ruling requesting approval for the calculation of the 8.3¢/kWh floor price for the purchase of electricity generated by the facility. (OMSB-2, Q. 48, Q. 49)
117. If CL&P's avoided cost increases above the 8.3¢/kWh fixed floor price, a cost sharing arrangement in the OMSB/CL&P contract could increase the electricity purchase price. (Tr. pp. 77-78)
118. Projected payments by CL&P above actual avoided costs are estimated at \$22 million in the first five years of the contract. (OMSB-2, Q. 49)
119. All costs to connect the facility to CL&P's distribution system would be reimbursed by OMSB. These costs are estimated at approximately \$200,000. CL&P would incur no out-of-product expenses relative to the proposed project. (Tr. pp. 42-44)
120. The metering equipment used to monitor the electricity generated by the facility would be owned and maintained by CL&P. The electrical control room equipment would be owned and maintained by OMSB. (Tr. p. 53)
121. Co-generation with the steam produced by the Project would be economically questionable since it would require additional equipment that would penalize energy output efficiency directed at the electricity generation from the Project. (Tr. pp. 112-113)
122. Based upon an annual waste volume of 195,000 tons generating 70,000 Mwh/year, a \$35-40/ton tipping fee, and 8.3¢/kWh electricity sale price, annual revenues would be approximately \$12 million. (Tr. p. 34; OMSB-I, Section II, p. 10; OMSB 2, Q. 50)

123. OMSB encourages the salvaging of ferrous materials which would be sold to a metals processing company, with net profits shared by with the communities on a 50/50 basis. Approximately 80-90% of ferrous metals could be recovered and marketed for \$5/ton, thereby saving \$10-\$15/ton in landfill costs. (Tr. p. 26; OMSB-2, Q. 8)
124. If ash by-products were classified as hazardous waste, the costs of transportation to hazardous waste disposal sites would be paid by the towns. Ogden Martin would be reimbursed for direct cost of disposal of unacceptable waste. (Tr. pp. 75-76; OMSB-I, Section IX, p. 5)
125. The facility site would be purchased by OMSB for \$400,000. The landfill would be leased at an annual cost of approximately \$75,000. (OMSB-2, Q. 57)
126. A one time dioxin test of emissions could cost \$25,000 to \$50,000, which would have minimal cost impact on the participating communities. (OMSB-2, Q. 27)