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STATEMENT OF  
WILBUR D. CAMPBELL, ASSOCIATE DIRECTOR  
COMMUNITY AND ECONOMIC DEVELOPMENT DIVISION

BEFORE THE  
SUBCOMMITTEE ON ENERGY DEVELOPMENT AND APPLICATIONS  
HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY *H5E03514*  
AND THE  
SUBCOMMITTEE ON TRANSPORTATION AND COMMERCE  
HOUSE COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE *H5E02306*

ON  
[ CODISPOSAL OF GARBAGE AND SEWAGE SLUDGE ]

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE:

WE ARE HERE AT YOUR REQUEST TO DISCUSS OUR MAY 16, 1979,  
REPORT TO THE CONGRESS ENTITLED "CODISPOSAL OF GARBAGE  
AND SEWAGE SLUDGE--A PROMISING SOLUTION TO TWO PROBLEMS"  
(CED-79-59).

AS THE VOLUME OF GARBAGE AND SEWAGE SLUDGE BEING GENER-  
ATED INCREASES SHARPLY AND THE CURRENT DISPOSAL OPTIONS  
BECOME MORE RESTRICTED OR EVEN COMPLETELY ELIMINATED, IT  
BECOMES INCREASINGLY IMPORTANT THAT AS A NATION WE BEGIN  
TO CONSIDER ALTERNATIVE TECHNOLOGIES. WE BELIEVE THAT  
CODISPOSAL OF THESE TWO WASTES IS A POTENTIALLY VIABLE  
ALTERNATIVE WHICH IS BOTH ECONOMICALLY AND TECHNOLOGICALLY  
FEASIBLE.

THE NATION'S GARBAGE IS GENERALLY DISPOSED OF IN LAND-  
FILLS, OPEN DUMPS, OR INCINERATORS WHILE THE MOST COMMON  
METHODS FOR DISPOSING OF SEWAGE SLUDGE ARE OCEAN DISPOSAL,

*Testimony*  
*005900*

LANDFILLING, LAND APPLICATION, AND INCINERATION. ALL OF THESE PRACTICES CAN CAUSE MAJOR ENVIRONMENTAL AND/OR ECONOMIC PROBLEMS AND SOME MAY BE ULTIMATELY ELIMINATED OR SEVERELY RESTRICTED. FOR EXAMPLE, EPA REGULATIONS AND THE 1977 MARINE PROTECTION, RESEARCH, AND SANCTUARIES ACT PROHIBIT OCEAN DUMPING AFTER DECEMBER 31, 1981. THE DRAWBACK TO LANDFILLING IS THAT IT CAN CREATE ODORS AND PUBLIC HEALTH AND GROUND-WATER CONTAMINATION PROBLEMS. THE FUTURE OF LANDFILLING IS QUESTIONABLE AS A VIABLE ALTERNATIVE BECAUSE THE AVAILABILITY OF SUITABLE SITES IS DIMINISHING AND NEW FEDERAL REGULATIONS TO BE ISSUED UNDER THE RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), AS WELL AS THE CLEAN WATER ACT, WILL TEND TO RESTRICT THE PRACTICE AND MAKE IT MORE EXPENSIVE.

INCINERATION MAY PRESENT PROBLEMS WITH AIR POLLUTION CONTROL AND THE POSSIBILITY THAT THE ASH AND AIR POLLUTION CONTROL RESIDUALS MAY CAUSE GROUND-WATER CONTAMINATION WHEN LANDFILLED. IN ADDITION, INCINERATION IS EXPENSIVE AND OFTEN REQUIRES LARGE AMOUNTS OF AUXILIARY FUEL OR ELECTRICITY FOR DRYING AND INCINERATING SLUDGE.

#### THE FUNDAMENTALS OF THERMAL CODISPOSAL

THERE ARE TWO BASIC CODISPOSAL APPROACHES, BOTH OF WHICH USE GARBAGE AS A FUEL TO FACILITATE SLUDGE DRYING AND/OR BURNING. ONE APPROACH USES GARBAGE INCINERATION EQUIPMENT WHILE THE OTHER USES PROCESSED GARBAGE AS THE AUXILIARY FUEL SOURCE IS SLUDGE INCINERATORS. BOTH HAVE BEEN DEMONSTRATED

TO BE TECHNOLOGICALLY FEASIBLE BUT THE USE OF GARBAGE BURNING INCINERATORS HAS THE BEST TRACK RECORD. USING GARBAGE IN SLUDGE INCINERATORS HAS NOT YET BEEN PROVEN ON A COMMERCIAL SCALE.

THE OBJECTIVE OF CODISPOSAL IS TO USE THE HEAT RELEASED BY THE BURNING GARBAGE TO DRY THE SLUDGE TO ITS SELF-BURNING POINT WHICH IS ABOUT 30 PERCENT SOLID. THE HEAT FORM USED IS EITHER HOT FLUE GAS OR STEAM. AFTER IT IS DRIED THE SLUDGE CAN BE BURNED ALONG WITH THE GARBAGE. THE HEAT VALUE OF DRIED SLUDGE CAN BE RELATIVELY HIGH--AS GREAT AS 10,000 BTUs PER POUND OF DRY WEIGHT SOLIDS. EXCESS OR EXPORTABLE ENERGY FOR SUCH PURPOSES AS POWERING WASTEWATER TREATMENT PLANTS MAY BE PRODUCED.

CODISPOSAL IS TECHNOLOGICALLY VIABLE

WESTERN EUROPEAN COUNTRIES HAVE BEEN USING TECHNOLOGIES TO RECOVER ENERGY FROM THE COMBUSTION OF GARBAGE MORE EXTENSIVELY THAN HAS THE UNITED STATES. ONE OF THE LARGEST INTEGRATED WASTEWATER TREATMENT CODISPOSAL FACILITIES IN EUROPE IS THE KREFELD, WEST GERMANY, PLANT WHICH BEGAN OPERATING IN 1975 AND CAN SERVE A POPULATION EQUIVALENT TO ABOUT 300,000 FOR GARBAGE DISPOSAL AND 600,000 FOR SLUDGE DISPOSAL. ANOTHER CODISPOSAL PLANT HAS RECENTLY BECOME OPERATIONAL IN INGOLSTADT, WEST GERMANY, AND THREE PLANTS ARE OPERATIONAL IN FRANCE.

DESPITE THE SUCCESS OF THE EUROPEAN EXPERIENCE, WIDESPREAD LARGE-SCALE IMPLEMENTATION OF THE TECHNOLOGY HAS NOT TAKEN PLACE IN THE UNITED STATES. ALTHOUGH

THERE ARE MANY REASONS FOR THIS, ONE MAJOR FACTOR MAY BE THE ABSENCE OF DETAILED OPERATING AND TECHNOLOGICAL DATA ON THE PLANTS. EPA AND THE DEPARTMENT OF ENERGY ARE TRYING TO ADDRESS THIS SITUATION BY CONTRACTING FOR STUDIES WHICH INCLUDE EVALUATING SOME SELECTED EUROPEAN FACILITIES.

ONLY A FEW PLANTS HAVE OPERATED SUCCESSFULLY IN THIS COUNTRY IN RECENT YEARS. MANY FAILED DUE TO TECHNOLOGICAL AND RELATED ECONOMIC PROBLEMS. GENERALLY, PREVIOUS ATTEMPTS INVOLVED CO-INCINERATION IN GARBAGE INCINERATORS WHICH WERE NOT DESIGNED FOR CODISPOSAL AND WERE INCAPABLE OF ADJUSTING TO THE NEW FEED MATERIAL. FREQUENTLY THE FIRE WAS EXTINGUISHED AND THE MATERIAL DID NOT BURN PROPERLY.

ATTEMPTS TO CORRECT THESE TECHNOLOGICAL PROBLEMS WERE GENERALLY EXPENSIVE AND INEFFECTIVE. THERE WAS NOT MUCH INCENTIVE TO INVEST IN NEW EQUIPMENT BECAUSE INEXPENSIVE LAND DISPOSAL ALTERNATIVES WERE OFTEN AVAILABLE FOR BOTH TYPES OF WASTE. SEPARATE SLUDGE INCINERATION ALSO REMAINED AN ATTRACTIVE ALTERNATIVE BECAUSE THE COST OF AUXILIARY FUEL WAS RELATIVELY LOW. AS A RESULT, CODISPOSAL WAS OFTEN ABANDONED AND BY 1975 ONLY A FEW PLANTS WERE STILL OPERATING.

SINCE THE MID-1970s, HOWEVER, BOTH GOVERNMENT AND INDUSTRY HAVE HAD A RENEWED INTEREST IN CODISPOSAL. THE ENERGY CRISIS, IMPROVEMENTS IN INCINERATOR TECHNOLOGY, AND DIMINISHING LAND DISPOSAL OPTIONS HAVE CONTRIBUTED TO

CODISPOSAL'S REEMERGENCE. THE RENEWED EFFORT HAS INCLUDED DEVELOPING NEW TECHNOLOGIES AND PLANNING AND CONSTRUCTING CODISPOSAL FACILITIES. BOTH EPA AND THE DEPARTMENT OF ENERGY HAVE BEEN INVOLVED. AT LEAST FIVE CODISPOSAL FACILITIES COSTING ABOUT \$225 MILLION ARE EITHER UNDER CONSTRUCTION OR IN THE PLANNING PHASE. EACH FACILITY IS PART OF A LARGER WASTEWATER TREATMENT PROJECT FOR WHICH EPA IS PROVIDING SOME FUNDING UNDER THE CONSTRUCTION GRANTS PROGRAM.

#### CODISPOSAL IS ECONOMICALLY FEASIBLE

ALTHOUGH ACTUAL OPERATING COST DATA IS LACKING AT THIS TIME, CODISPOSAL CAN BE AN ECONOMICALLY VIABLE ALTERNATIVE. IN SOME CASES, IT MAY ACTUALLY BE LESS EXPENSIVE THAN SEPARATE SLUDGE AND GARBAGE DISPOSAL. IT DOES, HOWEVER, REQUIRE A MAJOR CAPITAL INVESTMENT, OFTEN WELL ABOVE THAT NEEDED TO IMPLEMENT OTHER DISPOSAL OPTIONS SUCH AS LANDFILLING. AS A RESULT, THE AVAILABILITY OF CONSTRUCTION MONEY, PARTICULARLY FEDERAL FUNDING, WILL INFLUENCE WHETHER CODISPOSAL WILL BE IMPLEMENTED IN A PARTICULAR AREA.

MOST OF THE COST INFORMATION AVAILABLE REPRESENTS ESTIMATES AND PROJECTIONS. ALTHOUGH DATA ON AMERICAN FACILITIES IS NOT AVAILABLE, DUE TO THE LIMITED U.S. EXPERIENCE, PROJECTIONS AND STUDIES, PARTICULARLY THE 1976 STUDY BY ROY F. WESTON, INC., FOR EPA, SHOW THAT CODISPOSAL CAN BE COST EFFECTIVE. THE WESTON STUDY IS THE

MOST COMPREHENSIVE ON CODISPOSAL COSTS CURRENTLY AVAILABLE AND COMPARES THE PROJECTED TOTAL COSTS OF SEPARATE GARBAGE AND SLUDGE INCINERATION WITH FOUR CODISPOSAL OPTIONS. DETAILED DATA IS DEVELOPED IN THREE PRIMARY COST CATEGORIES--CONSTRUCTION COSTS, TOTAL FACILITY CAPITAL COSTS, AND OPERATING COSTS. THE STUDY CONCLUDED THAT:

--CO-INCINERATION IS THE PREFERRED OPTION IN ALL THREE COST CATEGORIES.

--WHILE THE CAPITAL COST SAVINGS ATTRIBUTABLE TO CO-INCINERATION WILL VARY AS PLANT SIZE CHANGES, THE PERCENT DIFFERENCES SHOULD REMAIN FAIRLY CONSTANT.

--CO-INCINERATION'S LOWER OPERATING COSTS ARE ATTRIBUTABLE MAINLY TO SAVINGS IN MANPOWER AND AUXILIARY FUEL COSTS.

--ALL CODISPOSAL ALTERNATIVES SHOWED SAVINGS OVER SEPARATE INCINERATION IN TOTAL ANNUAL COSTS MEASURED IN TOTAL DOLLARS OR DOLLARS PER TON, THE REAL ECONOMIC INDICATORS.

--CODISPOSAL COST SAVINGS SHOULD BE GREATER IN 1985 SINCE SEPARATE INCINERATION IS MORE SUSCEPTIBLE TO INFLATIONARY INCREASES.

--ALTHOUGH THE FOUR CODISPOSAL TECHNIQUES ARE LESS EXPENSIVE THAN SEPARATE INCINERATION, THE IMPROVED ECONOMIES WILL NOT BRING THE COSTS DOWN TO THE LEVEL OF LAND OR OCEAN DISPOSAL.

OTHER SOURCES ALSO SUPPORT THE ECONOMIC VIABILITY OF CODISPOSAL. FOR EXAMPLE, THE COST ANALYSIS FOR THE PROJECT IN GLEN COVE, NEW YORK, SHOWED THAT CODISPOSAL WAS THE MOST EXPENSIVE OF THE PROPOSED OPTIONS IN TERMS OF TOTAL ANNUAL COSTS, REQUIRING A MUCH HIGHER CAPITAL INVESTMENT THAN THE OTHER ALTERNATIVES. HOWEVER, WHEN TOTAL OFFSETS OF ABOUT \$870,000 PER YEAR WERE CONSIDERED FOR SUCH ITEMS AS ELECTRICITY SAVINGS, REVENUES FROM FERROUS METAL RECOVERY, AND DISPOSAL FEES, THE TOTAL ANNUAL COSTS OF CODISPOSAL WERE SUBSTANTIALLY LESS THAN THOSE OF THE OTHER ALTERNATIVES EVALUATED.

ONE OF THE KEY FACTORS AFFECTING THE FUTURE OF CODISPOSAL WILL BE THE AVAILABILITY OF FEDERAL CONSTRUCTION FUNDS. BILLIONS OF FEDERAL DOLLARS HAVE BEEN MADE AVAILABLE TO CONSTRUCT WASTEWATER TREATMENT PLANTS--INCLUDING SLUDGE DISPOSAL SYSTEMS--UNDER EPA'S CONSTRUCTION GRANTS PROGRAM. NO SIMILAR MECHANISM EXISTS, HOWEVER, FOR FINANCING THE CONSTRUCTION OF GARBAGE DISPOSAL FACILITIES. THE FUNDING ISSUE CENTERS AROUND WHETHER CONSTRUCTION GRANTS MONEY CAN BE USED TO FUND ALL OR PART OF A CODISPOSAL FACILITY'S GARBAGE COMPONENT.

THOSE OPPOSED CAN ARGUE THAT ALREADY SCARCE FUNDS SHOULD NOT BE FURTHER LIMITED BY FUNDING ACTIVITIES NOT OF PRIMARY CONCERN UNDER THE FEDERAL WATER POLLUTION CONTROL ACT. HOWEVER, COMPELLING ARGUMENTS ALSO EXIST ON THE OTHER SIDE. SECTION 201 (E) OF THE ACT SPECIFICALLY DIRECTS THE

EPA ADMINISTRATOR TO ENCOURAGE WASTE TREATMENT MANAGEMENT WHICH INTEGRATES SEWAGE TREATMENT WITH OTHER WASTE DISPOSAL FACILITIES. IN ADDITION, THE RESOURCE CONSERVATION AND RECOVERY ACT OF 1976 SEEMS TO ENCOURAGE INTEGRATED WASTE MANAGEMENT APPROACHES.

THE 1977 CLEAN WATER ACT ENCOURAGES INNOVATIVE AND ALTERNATIVE WASTEWATER TECHNOLOGIES, INCLUDING SLUDGE MANAGEMENT, THROUGH INCREASED FUNDING. ALTHOUGH SOME CHANGES HAVE TAKEN PLACE, WE BELIEVE THAT EPA'S CONSTRUCTION GRANTS FUNDING POLICY IS CONFUSING AND HAS FAVORED SLUDGE-ONLY DISPOSAL OPTIONS. THE CONFUSION STEMS FROM THE FACT THAT EPA HAS FUNDED CODISPOSAL PROJECTS DIFFERENTLY THROUGHOUT THE COUNTRY.

IN MAY 1976, EPA'S REGION V APPROVED A CONSTRUCTION GRANT FOR A CODISPOSAL PROJECT IN DULUTH, MINNESOTA, FOR \$17.3 MILLION OR 75 PERCENT OF TOTAL PROJECT COST, INCLUDING THE GARBAGE COMPONENT. DURING THIS PERIOD, EPA'S REGION II RECEIVED SEVERAL INQUIRIES ON FUNDING CODISPOSAL PROJECTS AND CONSIDERED THREE OPTIONS.

--FUND 75 PERCENT OF THE ENTIRE PROJECT, VIEWING GARBAGE AS THE FUEL SOURCE.

--PROVIDE THE SAME AMOUNT OF FUNDING EPA WOULD USE TO FUND THE LEAST COSTLY SINGLE-PURPOSE SLUDGE INCINERATORS.

--PRORATE COSTS AND FUND ONLY THOSE SPECIFICALLY PERTAINING TO SLUDGE.

THE PRORATED FORMULA IS BEING USED, AT THE DIRECTION OF EPA HEADQUARTERS, TO FUND THE GLEN COVE, NEW YORK, PROJECT. EPA CALCULATED THAT 53.3 PERCENT OF TOTAL COSTS PERTAINED SPECIFICALLY TO SLUDGE AND WAS THEREFORE FUNDABLE. EPA WILL FUND 75 PERCENT OF THIS FIGURE OR ABOUT 40 PERCENT OF TOTAL PROJECT COSTS. THE CITY WOULD HAVE RECEIVED SUBSTANTIALLY MORE MONEY IF EPA HAD USED THE SECOND OPTION AND APPROVED AN AMOUNT COMPARABLE TO THE LEAST COSTLY SLUDGE INCINERATOR. WE WERE INFORMED THAT GLEN COVE WENT FORWARD WITH THE PROJECT DESPITE THE RELATIVELY LOW LEVEL OF FEDERAL PARTICIPATION, PRIMARILY BECAUSE THE CITY WAS FACED WITH MAJOR SLUDGE AND GARBAGE DISPOSAL PROBLEMS.

THE PRORATED FUNDING FORMULA, WHICH WAS EVENTUALLY PUBLISHED AS THE EPA FUNDING POLICY, HAS, TO SOME EXTENT, ACTED AS A DISINCENTIVE TO CODISPOSAL IMPLEMENTATION. HOWEVER, IT NOW APPEARS THAT THE 1977 AMENDMENTS TO THE FEDERAL WATER POLLUTION CONTROL ACT WILL RESULT IN CODISPOSAL PROJECTS RECEIVING MORE FAVORABLE TREATMENT.

UNDER A PROPOSED EPA FUNDING POLICY, THE GRANT ELIGIBLE PORTION OF A CODISPOSAL PROJECT WHICH EMPLOYS INNOVATIVE OR ALTERNATIVE TECHNOLOGY, WOULD BE 115 PERCENT OF THE RATIO OF THE MOST COST-EFFECTIVE SLUDGE OPTION'S PRESENT COST AND THE CODISPOSAL PROJECT'S PRESENT COST. IN SOME CASES APPLYING THE FORMULA MAY RESULT IN A GRANT ELIGIBLE AMOUNT FOR CODISPOSAL WHICH IS LESS THAN THE SLUDGE-ONLY OPTION'S CAPITAL COST. IF THIS OCCURS, A

MINIMUM ELIGIBILITY FIGURE (115 PERCENT OF THE LEAST COSTLY SLUDGE DISPOSAL OPTION'S CAPITAL COSTS) WOULD BE USED.

USING THIS APPROACH, THE GRANT ELIGIBLE AMOUNT FOR A CODISPOSAL PROJECT WOULD BE SIGNIFICANTLY HIGHER THAN UNDER THE CURRENT PRORATED FORMULA.

#### ENVIRONMENTAL CONSIDERATIONS

THERMAL CODISPOSAL, LIKE OTHER WASTE DISPOSAL OPTIONS, INVOLVES SOME ENVIRONMENTAL RISKS. POTENTIAL AIR EMISSIONS PROBLEMS AND, TO A LESSER EXTENT, POSSIBLE GROUND-WATER CONTAMINATION RESULTING FROM LANDFILLING OF CODISPOSAL RESIDUAL MATERIALS ARE THE PRIMARY ENVIRONMENTAL CONCERNS. UNFORTUNATELY, ONLY LIMITED SPECIFIC DATA REGARDING THESE CONCERNS EXIST. ADDITIONAL HARD DATA BASED ON ACTUAL EXPERIENCE IS NEEDED TO PERMIT MORE EFFECTIVE AND COMPLETE ASSESSMENT OF CODISPOSAL'S POTENTIAL IMPACT ON THE ENVIRONMENT AND HEALTH. NUMEROUS SITE-SPECIFIC VARIABLES STRONGLY INFLUENCE HOW CODISPOSAL AFFECTS THE ENVIRONMENT. OUR REVIEW INDICATED THAT GENERALLY (1) ENVIRONMENTAL PROBLEMS ASSOCIATED WITH CODISPOSAL SHOULD BE NO MORE SERIOUS THAN THOSE RESULTING FROM SEPARATE SLUDGE AND GARBAGE DISPOSAL, (2) THE PROBLEMS ARE CONTROLLABLE, (3) SEPARATING CERTAIN GARBAGE ITEMS AND PRETREATING INDUSTRIAL WASTEWATER MAY REDUCE CODISPOSAL'S ENVIRONMENTAL IMPACTS, AND (4) THERMAL CODISPOSAL CAN BE ENVIRONMENTALLY SUPERIOR TO CERTAIN WASTE DISPOSAL OPTIONS.

## INSTITUTIONAL BARRIERS

INSTITUTIONAL PROBLEMS HAVE BEEN A SERIOUS CONSTRAINT TO THE CONSIDERATION AND IMPLEMENTATION OF CODISPOSAL. INSTITUTIONAL BARRIERS ARE COMPLEX AND ENCOMPASS VARIOUS PROBLEMS WHICH RESTRICT THE DEVELOPMENT AND ADOPTION OF INTEGRATED AND COORDINATED GARBAGE AND SLUDGE DISPOSAL APPROACHES. THE MOST SERIOUS PROBLEM IS CONSTRAINING ORGANIZATIONAL ARRANGEMENTS. IN MANY AREAS OF THE NATION, SLUDGE AND GARBAGE DISPOSAL ARE HANDLED BY DIFFERENT GOVERNMENTAL OR POLITICAL ENTITIES. COORDINATION BETWEEN THESE ORGANIZATIONS, WHICH IS ESSENTIAL TO SERIOUS CONSIDERATION OF CODISPOSAL, IS FREQUENTLY LACKING. TO EXPECT IMMEDIATE CHANGES IN THESE ESTABLISHED PATTERNS WOULD BE UNREALISTIC, EVEN THOUGH THE RESOURCE CONSERVATION AND RECOVERY ACT AND THE FEDERAL WATER POLLUTION CONTROL ACT ENCOURAGE A MORE UNIFIED APPROACH. HOWEVER, THERE ARE SOME STEPS WHICH EPA CAN TAKE TO FOSTER GREATER CONSIDERATION OF CODISPOSAL AS AN ALTERNATIVE WASTE DISPOSAL PROCESS.

WE, THEREFORE, RECOMMENDED THAT THE ADMINISTRATOR,  
EPA:

--REQUIRE THAT STATES AND LOCAL COMMUNITIES CONSIDER CODISPOSAL TECHNOLOGY AS A POSSIBLE ALTERNATIVE DURING THE AREAWIDE AND FACILITIES PLANNING PROCESS AND AS PART OF THE PLANNING ACTIVITIES UNDER THE RESOURCE CONSERVATION AND RECOVERY ACT.

- REQUIRE THAT FUTURE EVALUATIONS OF CODISPOSAL PROJECTS PROVIDE FOR DEVELOPING AND DISSEMINATING ACTUAL OPERATING COST DATA WHICH COGNIZANT OFFICIALS CAN USE IN EVALUATING DISPOSAL OPTIONS.
- ESTABLISH A CONSTRUCTION GRANTS FUNDING POLICY WHICH, TO THE EXTENT ALLOWED UNDER EXISTING LEGISLATIVE AUTHORITY, WOULD PROVIDE AT LEAST THE SAME LEVEL OF FUNDING FOR DESERVING CODISPOSAL PROJECTS AS FOR SINGLE-PURPOSE SLUDGE-ONLY DISPOSAL OPTIONS.
- UNDERTAKE RESEARCH DESIGNED TO IDENTIFY AND ANALYZE THERMAL CODISPOSAL'S IMPACT ON HEALTH AND ENVIRONMENT. RESULTS OF THE RESEARCH SHOULD BE DISSEMINATED TO AGENCY REGIONAL OFFICES AND TO COGNIZANT STATE AND LOCAL OFFICIALS.

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IT SHOULD BE EMPHASIZED THAT OUR PRIMARY CONCERN HAS BEEN WITH ENSURING THAT CODISPOSAL, WHICH CAN OFFER CERTAIN ADVANTAGES, SUCH AS SIGNIFICANT COST SAVINGS, AT LEAST BE CONSIDERED DURING THE WASTE DISPOSAL DECISIONMAKING PROCESS. DECISIONS TO IMPLEMENT A PARTICULAR OPTION, CAN ONLY BE MADE BY THE RESPONSIBLE LOCAL OFFICIALS.

MR. CHAIRMAN, THIS CONCLUDES MY PREPARED STATEMENT. WE SHALL BE GLAD TO RESPOND TO ANY QUESTIONS YOU MAY HAVE.