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Record of Decision:

SOUTH VALLEY
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ALBUQUERQUE, NM
09/30/1988

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#SLD
SITE LOCATION AND DESCRIPTION

THE EDMUNDS STREET PROPERTY IS A PORTION OF THE SOUTH VALLEY SUPERFUND SITE IN ALBUQUERQUE, NEW MEXICO. THE SOUTH VALLEY SUPERFUND SITE IS AND AREA SURROUNDING THE CITY OF ALBUQUERQUE MUNICIPAL WATER WELL KNOWN AS SAN JOSE 6, NEAR THE INTERSECTION OF BROADWAY AND WOODWARD ROAD IN SOUTHERN ALBUQUERQUE. THE EDMUNDS STREET PROPERTY IS LOCATED AT 3301 EDMUNDS STREET. FIGURE 1 BELOW SHOWS THE LARGER SOUTH VALLEY SITE WITH THE EDMUNDS STREET PROPERTY IN THE SOUTHEASTERN CORNER OF THE SITE. FIGURE 2 ON THE NEXT PAGE SHOWS THE EDMUNDS STREET PROPERTY IN MORE DETAIL.

FIGURE 2 SHOWS THE VARIOUS POTENTIAL SOURCES OF CONTAMINATION WITHIN THE

EDMUNDS STREET PROPERTY. THIS DOCUMENT CONCERNS ONLY ONE OF THEM, THE AREA SURROUNDING THE MONITORING WELL LABELED SV-10. THE AREA AROUND SV-10 IS CALLED THE DRAINAGE PIT AREA. THIS AREA IS A LOW SPOT ON THE PROPERTY AND MUCH OF THE DRAINAGE FOR THE PROPERTY FLOWS TO THIS SPOT. SIGNIFICANT LEVELS OF INDUSTRIAL SOLVENTS HAVE BEEN FOUND WHEN SOIL SAMPLES FROM THIS DRAINAGE PIT HAVE BEEN ANALYZED IN LABORATORIES.

AN INVESTIGATION INTO THE CONTAMINATION PROBLEMS AT THE EDMUNDS STREET PROPERTY RESULTED IN THE INSTALLATION OF THE GROUNDWATER MONITORING WELLS SHOWN IN FIGURE 2. ONE OF THE RESULTS OF THE INVESTIGATION WAS THE DISCOVERY OF A PLUME OF CONTAMINATED GROUNDWATER STARTING AT THE DRAINAGE PIT AREA AND EXTENDING TO THE EAST.

THE DRAINAGE PIT ITSELF, OTHER POTENTIAL SOURCES OF CONTAMINATION WITHIN THE EDMUNDS STREET PROPERTY, AND GROUNDWATER CONTAMINATION IN OTHER AREAS WILL BE HANDLED THROUGH LATER DECISION DOCUMENTS. THIS IS ONLY THE FIRST PHASE OF REMEDIATION FOR THE EDMUNDS STREET PROPERTY. THE SELECTED REMEDY MAY BE INCORPORATED INTO OR SUPERCEDED BY THE REMEDY FOR SOURCE CONTROL AND GROUNDWATER REMEDIATION MADE IN THE SUBSEQUENT RECORD OF DECISION FOR THIS PROPERTY.

#CSS
CURRENT SITE STATUS

AFTER THE EXISTENCE OF THE PLUME OF CONTAMINATED GROUNDWATER WAS DISCOVERED, A SEPARATE INVESTIGATION WAS LAUNCHED TO DISCOVER THE NATURE AND EXTENT OF THE GROUNDWATER PLUME. AS THE MORE DETAILED MAP IN FIGURE 3 SHOWS, ADDITIONAL GROUNDWATER MONITORING WELLS WERE DRILLED ALONG THE EASTWARD PATH OF THE GROUNDWATER PLUME TO DEFINE ITS BOUNDARIES. WATER SAMPLES WERE TAKEN FROM THE WELLS AND ANALYZED TO DETERMINE WHAT CHEMICALS WERE PRESENT AND AT WHAT LEVELS.

TABLE 1 SHOWS THE CONTAMINANTS THAT WERE FOUND IN THE GROUNDWATER MONITORING WELL SAMPLES AND

THE LEVELS AT WHICH THEY WERE DETECTED. AS CAN BE SEEN FROM THE TABLE, MOST OF THE CONTAMINANTS FOUND WERE INDUSTRIAL SOLVENTS. AS THIS DATA SHOWS, THE CONCENTRATION OF THE CONTAMINANTS FALLS AS THE PLUME MOVES TO THE EAST. THE MAJOR CONCERN AT THE MOMENT IS THE THREAT TO THE WATER SUPPLY FOR THE CITY OF ALBUQUERQUE. MAJOR WELLS FIELDS THAT PRODUCE WATER FOR THE CITY ARE IN THE MIGRATION PATHWAY OF THE CONTAMINANT PLUME. THE NEAREST WELL IN THE MIGRATION PATHWAY IS MILES WELL #1, LESS THAN ONE MILE TO THE NORTHEAST.

#SR
SITE RISKS

THIS RECORD OF DECISION IS CONCERNED WITH A SINGLE CONTAMINATED MEDIA, GROUNDWATER. IT IS, THEREFORE, THE GROUNDWATER ROUTE OF EXPOSURE WHICH IS OF GREATEST CONCERN. TABLE 1 PRESENTS THOSE CONTAMINANTS FOUND IN THE GROUNDWATER. THERE ARE NO CURRENT GROUNDWATER USERS FOR THE CONTAMINATED WATER IN THE CONTAMINANT PLUME OF CONCERN, BUT THERE IS A CITY OF ALBUQUERQUE WATER SUPPLY WELL IN THE PATH OF THE PLUME MIGRATION. THE LEVEL OF CONTAMINANTS APPEARS TO BE TO LOW FOR TOXIC EFFECTS, BUT THERE IS RISK ASSOCIATED WITH CHRONIC CARCINOGENIC EFFECTS OF 2 X 10-2. ATTACHMENT 1 SHOWS THE CALCULATIONS INVOLVED IN REACHING THIS NUMBER.

#EA
ENFORCEMENT ANALYSIS

THERE IS A LIST OF SEVERAL POTENTIALLY RESPONSIBLE PARTIES (PRPS) FOR THE PROPERTY ON WHICH THIS GROUNDWATER CONTAMINATION ORIGINATES. THESE INCLUDE PAST AND PRESENT OWNERS AND OPERATORS OF THE PROPERTY. THE PRIMARY PRPS FOR THE PURPOSES OF THIS DOCUMENT ARE VAN WATERS AND RODGERS, THE CURRENT OPERATOR, AND AMERIGAS, THE PROPERTY OWNER. THESE TWO PRPS HAVE EXPRESSED WILLINGNESS TO IMPLEMENT THE SELECTED REMEDY. NEGOTIATIONS WILL BE CONDUCTED IN AN ATTEMPT TO MEMORIALIZE AGREEMENT FOR PRP CONDUCT OF THE REMEDIAL ACTION UNDER TERMS OF A CONSENT ORDER.

#CR
COMMUNITY RELATIONS

THERE HAS BEEN SOME MEDIA INTEREST IN THE OVERALL SOUTH VALLEY SUPERFUND SITE, BUT THE INTEREST FROM INDIVIDUAL CITIZENS HAS BEEN LOW. NOTICE TO POTENTIALLY AFFECTED PERSONS AND THE PUBLIC WAS PROVIDED THROUGH A PRESS RELEASE ON MAY 10, 1988 ACCOMPANIED BY A DIRECT MAILING TO INDIVIDUALS AND GROUPS ON THE SITE MAILING LIST. THE MAILING INCLUDED A FACT SHEET DESCRIBING THE SITE PROBLEM, ALTERNATIVES FOR CLEANUP AND THE PROPOSED PLAN FOR REMEDIATION. THE PUBLIC COMMENT PERIOD ON THE REMEDIAL ALTERNATIVES RAN FROM MAY 16 TO JUNE 17, 1988. A PUBLIC MEETING ON REMEDY SELECTION WAS HELD IN ALBUQUERQUE ON MAY 26, 1988. THE RESPONSE TO SIGNIFICANT COMMENTS OR CRITICISMS SUBMITTED DURING THE PUBLIC MEETING AND DURING THE COMMENT PERIOD ARE PRESENTED IN THE RESPONSIVENESS SUMMARY AT THE END OF THIS DOCUMENT.

#OU
OPERABLE UNITS

THE SOUTH VALLEY SITE HAS BEEN DIVIDED INTO FOUR OPERABLE UNITS. THESE ARE EDMUNDS STREET GROUNDWATER, EDMUNDS STREET SOURCE CONTROL, AIR FORCE/GE SOURCE CONTROL, AND THE OVERALL OFFSITE PORTION. THE DIVISION OF THE SITE INTO THESE PARTS FOLLOWS FROM THE NATURE OF THE SITE. THE SOUTH VALLEY SITE IS A LARGE AREA SURROUNDING THE CITY WELL SAN JOSE #6. WITHIN THIS LARGER AREA ARE A NUMBER OF INDUSTRIAL PROPERTIES OWNED AND OPERATED BY DIFFERENT GROUPS AND INDIVIDUALS. EACH OF THE TWO SOURCE CONTROL OPERABLE UNITS WILL DEAL WITH A SINGLE INDUSTRIAL PROPERTY THAT THROUGH THE INVESTIGATION PROCESS HAS BEEN SHOWN TO HAVE CONTAMINATION THAT NEEDS TO BE CORRECTED. THE OVERALL OFFSITE OPERABLE UNIT IS INTENDED TO DEAL WITH THE SITE AS A WHOLE, LEADING TO A DECISION ABOUT THE LARGER GROUNDWATER PROBLEM THAT CAUSED THIS AREA TO BECOME A SUPERFUND SITE, WHILE THE SOURCE CONTROL OPERABLE UNITS ELIMINATE THE SOURCES OF GROUNDWATER

CONTAMINATION.

THE FOURTH OPERABLE UNIT, THE EDMUNDS GROUNDWATER OPERABLE UNIT WHICH IS THE SUBJECT OF THIS DOCUMENT, DEALS WITH A SPECIFIC PROBLEM WHICH DOES NOT APPEAR TO DIRECTLY AFFECT THE LARGER SOUTH VALLEY PROBLEM. THE EDMUNDS GROUNDWATER PROBLEM DOES START WITHIN THE EDMUNDS STREET PROPERTY, HOWEVER, AND NEEDS TO BE DEALT WITH DURING RESOLUTION OF THE GREATER SOUTH VALLEY SUPERFUND SITE PROBLEMS. THE OVERALL OFFSITE OPERABLE UNIT AND THE TWO SOURCE CONTROL OPERABLE UNITS SHOULD BE RESOLVED WITHIN THREE MONTHS, FOLLOWING COMPLETION OF REPORTS DETAILING ADDITIONAL INVESTIGATIONS IN THE INDIVIDUAL INDUSTRIAL PROPERTIES AND THE OVERALL SITE.

#AE
ALTERNATIVES EVALUATION

THE ALTERNATIVES SEEK TO ELIMINATE THE SINGLE ROUTE OF CONTAMINATION OF ISSUE FOR THIS RECORD OF DECISION, GROUNDWATER. THE SOURCE OF THE CONTAMINATION WILL BE HANDLED THROUGH A SEPARATE DECISION DOCUMENT. AS STATED IN THE DECLARATION, THIS IS ONLY A FIRST ACTION CONCERNING THIS PROPERTY AND IS NOT THE FINAL GROUNDWATER RELATED REMEDIAL ACTION.

THIS DECISION WILL BE LIMITED TO THE SPECIFIC GROUNDWATER PLUME MOVING TO THE EAST AS PREVIOUSLY DESCRIBED. ANY OTHER GROUNDWATER CONTAMINATION ORIGINATING FROM THE SAME SOURCE WILL BE CONSIDERED IN A SEPARATE DOCUMENT. THE GROUNDWATER SOURCE IN QUESTION, THE SANTA FE FORMATION WILL BE TREATED AS A SOLE SOURCE AQUIFER. IT IS THE SOURCE FOR DRINKING WATER FOR THE CITY OF ALBUQUERQUE AND NO ALTERNATE SOURCE IS AVAILABLE. THE SANTA FE FORMATION CONSISTS OF UNCONSOLIDATED SANDS, GRAVELS, SILTS AND CLAYS TO AN APPROXIMATE 2000 FOOT DEPTH. THE CONTAMINANT PLUME APPEARS TO BE CURRENTLY CONTAINED ABOVE A LOWER PERMEABILITY LAYER FOUND AT APPROXIMATELY 180 FEET IN DEPTH. HOWEVER, IN BORINGS FARTHER IN THE DIRECTION OF MIGRATION, THE LOWER PERMEABILITY LAYER CANNOT BE FOUND. ONE PURPOSE OF THIS EFFORT WILL BE TO HALT MIGRATION OF THE PLUME BEFORE IT MOVES BEYOND THE LOWER PERMEABILITY LAYER AND DEEPER INTO THE AQUIFER. THE CONTAMINANT PLUME POSES A DIRECT THREAT TO THE WATER SUPPLY FOR THE CITY OF ALBUQUERQUE. THE CONTAMINANT PLUME IS MOVING TOWARD THE CITY WELL FIELDS, WITH WELL MILES #1 THE NEAREST WELL THREATENED. TIME FOR IMPLEMENTATION IS SHORT. THEORETICAL CALCULATIONS SHOW THAT THE CONTAMINANTS COULD HAVE ALREADY REACHED MILES #1, THOUGH SAMPLING OF THE WELL SHOWS THAT IT HAS NOT YET BEEN CONTAMINATED.

OF THE DECISION ELEMENTS LISTED ABOVE, TIME POSES THE GREATEST CONSTRAINTS ON THE SELECTION OF REMEDY. ANY REMEDY SELECTED WILL HAVE TO HALT MIGRATION OF THE CONTAMINANT PLUME WITHIN A VERY SHORT PERIOD OF TIME. GIVEN THE CONSTRAINTS JUST DISCUSSED, THE SCREENING PROCESS RAPIDLY ELIMINATED IN-SITU TREATMENT AS AN OPTION AS IT WOULD INVOLVE TOO LONG A PERIOD OF IMPLEMENTATION. EXTRACTION AND TREATMENT REMAINED AS THE ONLY VIABLE ALTERNATIVE.

#AL
ALTERNATIVES

EACH ALTERNATIVE WAS EVALUATED ON THE FOLLOWING CRITERIA:

1. SHORT-TERM EFFECTIVENESS: PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT DURING CONSTRUCTION AND IMPLEMENTATION.

2. LONG-TERM EFFECTIVENESS AND PERMANENCE: EFFECTIVENESS AFTER CONSTRUCTION AND IMPLEMENTATION IS COMPLETE.

3. REDUCTION OF TOXICITY, MOBILITY, OR VOLUME: ANTICIPATED PERFORMANCE OF THE SPECIFIED TREATMENT TECHNOLOGIES,

4. IMPLEMENTABILITY: TECHNICAL AND ADMINISTRATIVE FEASIBILITY OF ALTERNATIVES AND THE AVAILABILITY OF REQUIRED RESOURCES.

5. COST: COST OF CONSTRUCTION AND OPERATION AND MAINTENANCE.

6. COMPLIANCE WITH ARARS: COMPLIANCE WITH APPLICABLE OR RELEVANT AND APPROPRIATE STANDARDS (ABBREVIATED AS ARARS) FROM EXISTING LAWS AND REGULATIONS. THESE ARE STANDARDS OR REGULATIONS THAT EITHER DO APPLY OR AT LEAST SHOULD BE CONSIDERED WHEN LOOKING AT AN ALTERNATIVE.

7. OVERALL PROTECTION OF HUMAN HEALTH AND ENVIRONMENT: HOW THE ALTERNATIVE AS A WHOLE PROTECTS AND MAINTAINS PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT.

8. STATE ACCEPTANCE: THE STATE'S PREFERENCES OR CONCERNS ABOUT THE ALTERNATIVES.

9. COMMUNITY ACCEPTANCE: THE COMMUNITY'S PREFERENCES OR CONCERNS ABOUT THE ALTERNATIVES.

ALL OF THE ALTERNATIVES WITH THE EXCEPTION OF NO ACTION REQUIRE THE EXTRACTION AND TREATMENT OF THE CONTAMINATED GROUNDWATER TO EXISTING STANDARDS. THIS AUTOMATICALLY MEETS THE REQUIREMENTS FOR BOTH SHORT AND LONG-TERM EFFECTIVENESS AND PERMANENCE. THE WATER WILL BE TREATED TO ARAR STANDARDS MEETING THE CRITERIA FOR REDUCTION OF TOXICITY, MOBILITY, AND VOLUME AND COMPLIANCE WITH ARARS THROUGH THE REMOVAL OF THE CONTAMINANTS FROM THE GROUNDWATER. THIS REDUCES THE COMPARISON OF THE ALTERNATIVES TO IMPLEMENTABILITY, COST, OVERALL PROTECTION AND STATE AND COMMUNITY ACCEPTANCE CRITERIA.

THE BASIC ALTERNATIVES AND THEIR COMPONENTS ARE:

1. NO ACTION: NO ACTION WOULD BE TAKEN. THE SITE WOULD REMAIN IN ITS CURRENT CONDITION. THE PLUME OF CONTAMINATED GROUNDWATER WOULD CONTINUE TO MIGRATE TOWARD THE CITY OF ALBUQUERQUE WELLS.

2. RECOVERY: ALL OF THESE ALTERNATIVES INVOLVE THE EXTRACTION OF GROUND-WATER THROUGH PUMPING WELLS SCREENED IN THE PORTION OF THE AQUIFER CONTAMINATED. THE EXTRACTION WELLS ARE PLANNED TO BE 8-INCH DIAMETER WELLS WITH STEEL CASING HAVING STAINLESS STEEL SCREENS. THE SCREENS WILL BE POSITIONED IN THE UPPER PORTION OF THE AQUIFER TO RECOVER THE CONTAMINATED GROUNDWATER. PRELIMINARY DESIGN CALLS FOR WELLS CAPABLE OF YIELDING 50 TO 100 GALLONS PER MINUTE (GPM). THE PUMPING SYSTEM WILL BE DESIGNED WITH SUFFICIENT WELLS AND PUMPING CAPACITY TO RECOVER THE CONTAMINATED GROUNDWATER COMING FROM THE EDMUNDS STREET PROPERTY ABOVE THE LIMITS DEEMED NECESSARY TO PROTECT HUMAN HEALTH AND THE ENVIRONMENT. THESE LIMITS ARE DISCUSSED MORE FULLY IN THE STATUTORY DETERMINATIONS SECTION OF THIS SUMMARY.

   PRELIMINARY DESIGNS INDICATE THAT TWO WELLS LOCATED NORTH AND SOUTH OF THE MONITORING WELL CLUSTER GM11 SHOULD BE SUFFICIENT WHEN PUMPING AT A COMBINED RATE OF 75 GPM. ACTUAL RATES OF PUMPING AND THE ADEQUACY OF TWO WELLS WILL BE DETERMINED DURING REMEDIAL DESIGN AND ONCE THE SYSTEM IS IN PLACE AND ITS PERFORMANCE CAN BE MONITORED.

2-A. GROUNDWATER EXTRACTION WELL SYSTEM: THIS OPTION WOULD USE PUMPING WELLS ALONE TO CONTAIN AND RECOVER THE CONTAMINATED GROUNDWATER.

2-B. WELL SYSTEM AND PARTIAL SLURRY WALL: THIS OPTION WOULD COMBINE A PUMPING WELL SYSTEM WITH A SLURRY WALL IN FRONT OF THE MIGRATING PLUME SLOWING FURTHER MIGRATION.

2-C. WELL SYSTEM AND COMPLETE SLURRY WALL: THIS OPTION WOULD COMBINE A PUMPING WELL SYSTEM AND A SLURRY WALL THAT COMPLETELY SURROUNDED THE AREA OF CONTAMINATED GROUNDWATER.

3. TREATMENT OF CONTAMINATED GROUNDWATER: ONCE THE CONTAMINATED GROUNDWATER WAS RECOVERED IT WOULD BE TREATED BY ONE OF THE FOLLOWING METHODS.

3-A. TREATMENT WITH PACKED COLUMN AERATION.

3-B. TREATMENT WITH CARBON ADSORPTION.

3-C. TREATMENT AT A PUBLICLY OWNED TREATMENT WORKS (POTW).

4. DISCHARGE: ONCE THE WATER HAS BEEN TREATED, THE TREATED WATER MUST BE HANDLED. TWO OPTIONS WERE EXAMINED.

4-A. SURFACE DISCHARGE.

4-B. RESTORATION OF WATER TO THE AQUIFER THROUGH INFILTRATION GALLERIES.

COMPARATIVE ANALYSIS OF ALTERNATIVES

THE FOLLOWING IS A DESCRIPTION OF THE ANALYSIS OF THE VARIOUS ALTERNATIVES USING THE REMAINING CRITERIA FOR COMPARISON.

	IMPLEMENT-ABILITY	COST	OVERALL PROTECTION	STATE ACCEPTANCE	COMMUNITY ACCEPTANCE
1	+	+	-	-	-
2-A	+	+	+	+	+
2-B	-	-	+	+	+
2-C	-	-	+	+	+
3-A	+	+	+	+	+
3-B	+	-	+	+	+
3-C	-	+	+	-	-
4-A	+	+	+	-	-
4-B	+	-	+	+	+

+ BEING A FAVORABLE EVALUATION
- BEING A NEGATIVE EVALUATION

IMPLEMENTABILITY - ALL OF THE OPTIONS USE PROVEN READILY AVAILABLE TECHNIQUES. THE SLURRY WALL OPTIONS (2-B AND C) FACE DIFFICULTIES DUE TO THE PRESENCE OF AN INTERSTATE HIGHWAY AND A PETROLEUM PIPELINE IN THE AREA OF CONSTRUCTION AS WELL AS DOUBTS ABOUT CONSTRUCTION AT 180 FOOT PLUS DEPTHS. THE CITY POTW DESIRES TO RESERVE ITS AVAILABLE TREATMENT CAPACITY, THEREFORE THE

USE OF ITS PLANTS FOR THE POTW TREATMENT OPTION (3-C) WAS ELIMINATED.

COST - USING A 10 YEAR PROJECT LIFE, A COST COMPARISON WAS DEVELOPED FOR EACH OF THE THREE PARTS OF THE ALTERNATIVES: EXTRACTION, TREATMENT, AND DISCHARGE. MORE EXTENSIVE COST INFORMATION IS PRESENTED IN ATTACHMENT 2. ALL THE EXTRACTION OPTIONS INVOLVE PUMPING WELLS AND A COLLECTION SYSTEM ESTIMATED AT $615,000. A PARTIAL SLURRY WALL WOULD COST $1,923,336. COSTS FOR A FULL SLURRY WALL COULD NOT BE DEVELOPED AS ENGINEERING COSTS FOR DESIGN AND CONSTRUCTION COULD NOT BE ESTIMATED. PACKED TOWER AERATION WAS ESTIMATED TO COST $205,200. CARBON ADSORPTION WAS ESTIMATED AT $708,500 MAINLY DUE TO HIGHER OPERATION AND MAINTENANCE COSTS. DISCHARGE OF THE TREATED WATER TO THE SURFACE WAS ESTIMATED AT $27,000. USING INFILTRATION GALLERIES WAS ESTIMATED AT $54,000.

OVERALL PROTECTION - NO ACTION OFFERS NO PROTECTION. PACKED TOWER AERATION AND CARBON ADSORPTION BOTH WOULD TREAT TO THE SAME GROUNDWATER STANDARDS. THE AIR RELEASE ASSOCIATED WITH PACKED TOWER AERATION POSES NO ESTIMATED HEALTH THREATS. THE THREAT OF THE CONTAMINATED CARBON FROM CARBON ADSORPTION VARIES DEPENDING ON THE METHOD OF DISPOSING OF THE SPENT CARBON. DISCHARGED WATER WOULD BE OF SIMILAR QUALITY IN EITHER DISCHARGE METHOD.

STATE AND COMMUNITY ACCEPTANCE - PRESERVATION OF USABLE WATER IS PREFERRED GIVING INFILTRATION A HIGHER LEVEL OF ACCEPTANCE THAN DISCHARGE TO THE SURFACE. INFILTRATION WOULD ALSO ELIMINATE CONCERNS OF DOWNSTREAM USERS OF SURFACE WATERS.

#SR
SELECTED REMEDY

THE SELECTED REMEDY CONSISTS OF THE FOLLOWING PARTS: CONTAINMENT AND COLLECTION OF THE CONTAMINATED GROUNDWATER THROUGH THE USE OF AN EXTRACTION WELL SYSTEM, TREATMENT OF THE RECOVERED GROUNDWATER THROUGH PACKED TOWER AERATION, AND RETURN OF THE TREATED WATER TO THE AQUIFER THROUGH INFILTRATION GALLERIES.

THE RISK LEVEL ATTAINED AT COMPLETION OF THE RESPONSE ACTION IS DISCUSSED IN THE FOLLOWING STATUTORY DETERMINATIONS SECTION.

NO ACTION WAS REJECTED AS IT DID NOTHING TO MITIGATE THE POTENTIAL IMPACTS OF THE CONTAMINATED GROUNDWATER. OF THE COLLECTION OPTIONS, PUMPING ALONE WAS SELECTED SINCE A SYSTEM OF PUMPING WELLS ALONE IS CAPABLE OF CONTAINING AND RECOVERING THE CONTAMINATED GROUNDWATER. THIS ELIMINATES THE NEED FOR CONSTRUCTION OF SLURRY WALLS WITH THE ASSOCIATED RISKS OF EXPOSURE DURING CONSTRUCTION AND IMPLEMENTATION DIFFICULTIES. PACKED TOWER AERATION WAS SELECTED FOR THE TREATMENT METHOD DUE TO GREATER EASE OF OPERATION AND LOWER OPERATION AND MAINTENANCE COSTS OVER CARBON ADSORPTION. REINFILTRATION OF THE TREATED WATER WAS CHOSEN OVER SURFACE DISCHARGE DUE TO A DESIRE TO PRESERVE THE WATER THAT COULD BE LOST THROUGH EVAPORATION DURING SURFACE DISCHARGE AND THE BENEFICIAL EFFECTS OF RECYCLING THE TREATED WATER THROUGH THE CONTAMINATED AREA OF THE AQUIFER. THE ADDITIONAL BENEFITS INCLUDE THE FLUSHING ACTION OF THE RECYCLED WATER AND THE CONTAINMENT AND RETREATMENT OF ANY WATER EXITING THE TREATMENT SYSTEM ABOVE STANDARDS FOR CLEANUP.

#SD
STATUTORY DETERMINATIONS

UNDER SECTION 121 OF CERCLA, THE SELECTED REMEDY MUST SATISFY CERTAIN STATUTORY REQUIREMENTS SPECIFIED WITHIN THAT SECTION. THIS SECTION WILL DISCUSS EACH OF THESE REQUIREMENTS ONE AT A TIME. THE SELECTED REMEDY MUST:

1. BE PROTECTIVE OF HUMAN HEALTH AND THE ENVIRONMENT.

2. ATTAIN ARARS

3. BE COST-EFFECTIVE

4. UTILIZE PERMANENT SOLUTIONS AND ALTERNATIVE TREATMENT TECHNOLOGIES OR RESOURCE RECOVERY TECHNOLOGIES TO THE MAXIMUM EXTENT PRACTICABLE.

5. ADDRESS WHETHER THE PREFERENCE FOR TREATMENT THAT REDUCES TOXICITY, MOBILITY, OR VOLUME AS A PRINCIPLE ELEMENT IS SATISFIED.

THE FIRST STATUTORY REQUIREMENT, THAT THE SELECTED REMEDY BE PROTECTIVE OF HUMAN HEALTH AND THE ENVIRONMENT CAN BE EXAMINED THROUGH EXAMINATION OF THE TWO PATHWAYS FOR EXPOSURE, INGESTION OF CONTAMINATED GROUNDWATER AND INHALATION OF VOLATILIZED CONTAMINANTS. THE FIRST OF THESE WILL BE ADDRESSED THROUGH THE GOALS FOR TREATMENT OF THE CONTAMINATED GROUNDWATER. THE TREATMENT GOALS WILL BE BASED PRIMARILY ON TWO CRITERIA, MAXIMUM CONTAMINANT LEVELS (MCLS) DEVELOPED UNDER THE SAFE DRINKING ACT AND THE STATE OF NEW MEXICO WATER QUALITY CONTROL COMMISSION (NMWQCC) REGULATIONS FOR DISCHARGES ONTO OR BELOW THE SURFACE OF THE GROUND WHICHEVER OF THE TWO IS MORE STRINGENT. THESE GOALS ARE GIVEN IN TABLE 2.

THIS LEADS DIRECTLY TO THE DISCUSSION OF APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS), THE SECOND STATUTORY DETERMINATION. THE TWO REGULATIONS MENTIONED ABOVE ARE THE PRIMARY STANDARDS INVOLVED FOR GROUNDWATER. THERE IS A THIRD NMWQCC STANDARD THAT MAY APPLY. IT IS GENERAL PROVISION 1-101.UU WHICH CALLS FOR CONTROL OF "TOXIC POLLUTANT"(S) WHICH WOULD CREATE A LIFETIME CANCER RISK OF MORE THAN ONE CANCER PER 100,000 EXPOSED PERSONS. ATTACHMENT 1 SHOWS THE LIFETIME CANCER RISK POSED BY CONTAMINANTS DETECTED IN THE CONTAMINATED GROUNDWATER. ATTACHMENT 1 ALSO INDICATES THOSE CONTAMINANTS WHICH ARE INCLUDED IN THE NMWQCC LIST OF TOXIC POLLUTANTS. WATER BEING REINFILTRATED WILL NEED TO MEET THIS STANDARD. IN ADDITION TO THESE GROUNDWATER REGULATIONS, THE USE OF PACKED TOWER AERATION ALSO INVOLVED COMPLIANCE WITH AIR REGULATIONS. AIR DISPERSION MODELING USING TWO EPA CERTIFIED MODELS, ISC AND VALLEY, WAS DONE TO DETERMINE AIR IMPACTS. THERE APPEARS TO BE NO SIGNIFICANT HEALTH IMPACTS ASSOCIATED WITH USE OF PACKED TOWER AERATION. CALCULATIONS OF THESE IMPACTS ARE SHOWN IN ATTACHMENT 3. THE TWO AIR ARARS MOST APPLICABLE ARE THE CLEAN AIR ACT AND THE AMBIENT AIR QUALITY STANDARDS AND AIR QUALITY CONTROL REGULATIONS FOR ALBUQUERQUE/BERNALILLO COUNTY. THE EMISSION RATE FROM THE PACKED TOWER AERATION SYSTEM IS WELL BELOW THE REGULATED RATES FROM BOTH OF THESE SETS OF AIR REGULATIONS. THE CALCULATIONS ARE SHOWN IN ATTACHMENT 4. A FULL LIST OF ALL ARARS CONSIDERED CAN BE FOUND IN ATTACHMENT 5.

THE THIRD CRITERIA, COST EFFECTIVENESS, IS MET BY THE SELECTED REMEDY. PACKED TOWER AERATION IS THE MOST COST EFFECTIVE OF THE TREATMENT METHODS WHICH ARE PROTECTIVE OF HUMAN HEALTH. THE FOURTH CRITERIA, PERMANENCE, CAN BE RELATED TO THE RECOVERY AND TREATMENT OF THE CONTAMINATED GROUNDWATER. THE SELECTED REMEDY WILL RESTORE THE CONTAMINATED WATER TO A FULLY USABLE CONDITION AND THE WILL RESTORE THE TREATED WATER TO THE AQUIFER.

THE FINAL CRITERIA IS THE PREFERENCE FOR TREATMENT THAT REDUCES TOXICITY, MOBILITY, OR VOLUME AS A PRINCIPLE ELEMENT. THE SELECTED REMEDY STOPS MIGRATION OF THE CONTAMINATED GROUNDWATER PLUME AND TREATS THE CONTAMINATED GROUNDWATER TO REDUCE ITS TOXICITY. THIS ELIMINATES THE PRIMARY ROUTE OF EXPOSURE TO THE PUBLIC. THE AIR EXPOSURE ASSOCIATED WITH THE SELECTED REMEDY HAS BEEN EXAMINED AND APPEARS TO POSE NO SIGNIFICANT THREAT TO HUMAN HEALTH.

#SCSA
SIGNIFICANT CHANGES IN THE SELECTED ALTERNATIVE

THERE WAS NO CHANGE IN THE RECOMMENDED ALTERNATIVE PRESENTED TO THE PUBLIC DURING THE PUBLIC COMMENT PERIOD AND AT THE PUBLIC MEETING AND THAT RECOMMENDED ALTERNATIVE IS THE SELECTED REMEDY.

#TAM

VOLATILE ORGANIC CONTAMINANTS
TABLE ONE

TABLE ONE

PARAMETER IN MICROGRAM PER LITER	MONITORING WELL				
	GM-1	GM-2	GM-7	GM-8	GM-9
CARBON TETRACHLORIDE	4.1	4.2	-	-	-
CHLOROFORM	7.7	22	-	-	-
1,2 DICHLOROETHANE	26	-	-	-	-
TRANS-1,2 DICHLOROETHENE	-	1.6	-	-	-
1,1 DICHLOROETHENE	8.3	140	-	58	910
METHYLENE CHLORIDE	-	-	-	-	440
TETRACHLOROETHENE	51	420	-	760	4400
1,1,1-TRICHLOROETHANE	-	73	-	200	1000
TRICHLOROETHENE	-	170	-	210	1400
ACETONE				250	15000

SEPTEMBER 1987, SAMPLING EPISODE DATA FROM THE REPORT "FEASIBILITY STUDY FOR PLUME STABILIZATION AND EXTRACTED GROUND-WATER AT 3301 EDMUNDS STREET, ALBUQUERQUE, NEW MEXICO."

VOLATILE ORGANIC CONTAMINANTS
TABLE ONE

PARAMETER IN MICROGRAM PER LITER	MONITORING WELL			
	GM-9D	GM-10	GM-11	GM-11D
CARBON TETRACHLORIDE	-	-	-	-
CHLOROFORM	-	19	3.5	-
1,2 DICHLOROETHANE	-	130	-	22
TRANS-1,2 DICHLOROETHENE	-	-	3.4	-
1,1 DICHLOROETHENE	-	-	110	-
METHYLENE CHLORIDE	-	-	-	-
TETRACHLOROETHENE	-	38	360	-
1,1,1-TRICHLOROETHANE	-	-	38	-
TRICHLOROETHENE	-	10	110	-
ACETONE	77	-	8.2	-

SEPTEMBER 1987, SAMPLING EPISODE DATA FROM THE REPORT "FEASIBILITY STUDY FOR PLUME STABILIZATION AND EXTRACTED GROUND-WATER AT 3301 EDMUNDS STREET, ALBUQUERQUE, NEW MEXICO."

VOLATILE ORGANIC CONTAMINANTS
TABLE ONE (CON'T)

PARAMETER IN MICROGRAM PER LITER	MONITORING WELL		
	GM-12	GM-13	I-1
CARBON TETRACHLORIDE	-	-	-
CHLOROFORM	-	-	7.5
1,2 DICHLOROETHANE	-	-	30
TRANS-I,2 DICHLOROETHENE	-	10	3.4
1,1 DICHLOROETHENE	-	85	16
METHYLENE CHLORIDE	5.8	-	-
TETRACHLOROETHENE	-	450	150
1,1,1-TRICHLOROETHANE	-	-	7.9
TRICHLOROETHENE	-	120	37
ACETONE	-	-	-

TABLE 2

CONTAMINANT	CLEANUP GOAL IN PART-PER-BILLION	*REGULATION
CARBON TETRACHLORIDE	5	MCL
CHLOROFORM	100	NMWQCC
1,2 DICHLOROETHANE	5	MCL
TRANS-1,2 DICHLOROETHENE	70**	MCLG
1,1 DICHLOROETHENE	5	NMWQCC
METHYLENE CHLORIDE	100	NMWQCC
TETRACHLOROETHENE	20	NMWQCC
1,1,1-TRICHLOROETHANE	60	NMWQCC
TRICHLOROETHENE	5	MCL
ACETONE	-	-

* MCL - FOR THE MAXIMUM CONTAMINANT UNDER THE SAFE DRINKING WATER ACT NMWQCC - FOR THE NEW MEXICO DISCHARGE REGULATIONS
* THIS STANDARD IS A MAXIMUM CONTAMINANT LIMIT GOAL (MCLG)

ATTACHMENT ONE

CARCINOGENIC RISK FROM CHRONIC EXPOSURE TO CONTAMINATED GROUNDWATER

THE FOLLOWING CALCULATIONS INVOLVE THE USE OF CERTAIN STANDARD ASSUMPTIONS. THESE ASSUMPTIONS INCLUDE THE FOLLOWING: CONSUMPTION OF 2 LITERS OF WATER A DAY FOR 70 YEARS AT A BODY WEIGHT OF 70 KILOGRAMS. THE VALUES USED FOR THE CONCENTRATIONS OF CONTAMINANTS ARE A COMBINATION OF VALUES FOR TWO WELLS. MOST OF THE CONCENTRATIONS COME FROM A SAMPLE FROM MONITORING WELL GM-9, THE MONITORING WELL WITHIN THE PLUME HAVING THE HIGHEST LEVEL OF CONTAMINATION. HOWEVER, THIS WELL DOES NOT CONTAIN ALL OF THE CONTAMINANTS OF CONCERN. FOR THOSE THAT DID NOT APPEAR IN THE SAMPLE FROM GM-9, VALUES WERE TAKEN FROM A SAMPLE FOR WELL GM-1.

THE CALCULATIONS WERE DONE AS FOLLOWS:

CONCENTRATION OF CONTAMINANT (PART PER MILLION) X 2 LITERS DAY X CANCER POTENCY FACTOR = INCREASED LIFETIME CANCER RISK

70 KILOGRAMS BODY WEIGHT

IT SHOULD BE NOTED THAT THERE ARE NO CANCER POTENCY FACTORS FOR TRANS 1,2 DICHLOROETHENE, 1,1,1 TRICHLOROETHANE, OR ACETONE.

CONTAMINANT	CONCENTRATION (PART PER BILLION)	CANCER POTENCY FACTOR	RISK
CHLOROFORM	7.7	8.1 X 10-2	1.8 X 10-5
1,2 DICHLOROETHANE	26	9.1 X 10-2	6.8 X 10-5
1,1 DICHLOROETHENE	910	0.6	1.6 X 10-2
METHYLENE CHLORIDE	440	7.5 X 10-3	9.4 X 10-5
TETRACHLOROETHENE	4400	5.1 X 10-2	6.4 X 10-3
TRICHLOROETHENE	1400	1.1 X 10-2	4.4 X 10-4
		TOTAL	2.3 X 10-2

ATTACHMENT 2

COST ESTIMATES

THE COST ESTIMATES BELOW WERE CALCULATED ASSUMING THAT INSTALLATION COSTS WOULD BE 1.5 TIMES THE CAPITAL COSTS, THAT ENGINEERING COSTS WOULD BE TWENTY PERCENT OF THE CAPITAL COSTS, THAT THE PROJECT WOULD HAVE A TEN YEAR LIFE AND THE CALCULATIONS USED A 7% DISCOUNTED RATE.

EXTRACTION WELLS AND PUMPS

CAPITAL COSTS	50,000		
PIPELINES	100,000		
INSTALLATION & ENGINEERING	255,000		
OPERATION & MAINTENANCE			
MATERIALS & POWER AT 15,000/YEAR			
LABOR AT 15,000/YEAR	210,000	TOTAL	615,600

PARTIAL SLURRY WALL

CAPITAL COSTS	1,680,000		
ENGINEERING	336,000		
SAVINGS FROM REDUCED PUMPING	-92,664	TOTAL	1,923,000

COMPLETE SLURRY WALL

NO CALCULATION WAS DONE FOR THIS OPTION. THE FIGURE FOR THE PARTIAL SLURRY WALL CAN BE USED AS A MINIMUM. IN ADDITION TO THOSE COSTS WOULD BE AN UNKNOWN ADDITIONAL COST FOR FURTHER INVESTIGATION OF THE CONFINING LAYER INTO WHICH THE WALL WOULD BE BASED AND SUBSEQUENT GREATER EXTENT OF THE SLURRY WALL.

PACKED AERATION COLUMN

CAPITAL COSTS	50,000		
OPERATION AND MAINTENANCE	70,200		
INSTALLATION AND ENGINEERING	85,000	TOTAL	205,200

CARBON ADSORPTION UNIT

CAPITAL COSTS	150,000		
SAND FILTERS	50,000		
INSTALLATION AND ENGINEERING	340,000		
OPERATION AND MAINTENANCE AT 24,000/YEAR	240,000	TOTAL	780,000

SURFACE DISCHARGE

PIPE	10,000		
INSTALLATION AND ENGINEERING	17,000	TOTAL	27,000

INFILTRATION GALLERIES

CAPITAL COSTS	20,000		
INSTALLATION AND ENGINEERING	34,000	TOTAL	54,000

ATTACHMENT 3

AIR IMPACTS

HEALTH IMPACTS FROM PACKED TOWER AERATION

THE CALCULATIONS THAT FOLLOW ON THE HEALTH IMPACTS OF PACKED TOWER AERATION ARE BASED ON THE AIR DISPERSION MODELING DETAILED IN THE REPORT ENTITLED, "AIR DISPERSION MODELING ANALYSIS FOR A PACKED AERATION COLUMN, VAN WATER AND ROGERS, INC., EDMUNDS STREET SITE, ALBUQUERQUE, NEW MEXICO." THREE MODELS WERE USED IN THIS REPORT. THE CALCULATIONS BELOW ARE BASED ON THE ONE KNOWN AS VALLEY, THE MORE CONSERVATIVE OF THE MODELS FOR COMPLEX TERRAIN. IN ADDITION, TWO CONSERVATIVE ASSUMPTIONS WERE MADE. THE FIRST INVOLVED THE QUALITY OF THE WATER ENTERING THE COLUMN. THE LEVEL OF CONTAMINANTS IN THE INCOMING WATER IS EXPECTED TO RISE FOR APPROXIMATELY TWO YEARS AND TO THEN BEGIN TO DECLINE. THE PEAK PREDICTED CONTAMINANT VALUES WERE USED FOR THE CALCULATION EVEN THOUGH THIS CONDITION WILL BE SHORT-LIVED. THE SECOND CONSERVATIVE ASSUMPTION INVOLVED THE USE OF SUMMER INVERSION METEOROLOGICAL CONDITIONS. THIS IS THE WORSE CASE FOR VALLEY CONDITIONS AND WAS USED EVEN THOUGH THIS CONDITION WILL NOT OCCUR FOR MOST OF THE YEAR. FINALLY, THE VALUES USED TO CALCULATE EXPOSURES FOR THE TWO NEAREST RESIDENTIAL AREAS CAME FROM POINTS BETWEEN THE PROPOSED TOWER LOCATION AND THE RESIDENTIAL AREA. THIS GIVES HIGHER LEVELS THAN WOULD OCCUR AT THE ACTUAL LOCATIONS. THE KIRTLAND ADDITION IS 1500 METERS NORTH/NORTHEAST OF THE COLUMN LOCATION SO THE 1373 METER VALUE WAS USED. THE HOUSES ALONG WESMECO ARE 850 METERS NORTHWEST OF THE SITE, SO THE 686 METER VALUE WAS USED. THE TABLE THAT FOLLOWS SHOWS THAT EVEN WITH THESE COMBINED CONSERVATIVE CONDITIONS, THE RISK POSED BY THE AERATION COLUMN IS VERY SMALL.

CONTAMINANT	MAXIMUM CONCENTRATION IN WATER	UNIT CONCENTRATION WESMECO BLVD.	UNIT CONCENTRATION KIRTLAND ADDITION	CONTAMINANT CONCENTRATIONS (MG/CUBIC METER) WESMECO	CONTAMINANT CONCENTRATIONS (MG/CUBIC METER) KIRTLAND
	UG/LITER				
KIRTLAND					
BENZENE	5.1	0.72	5.84	2.3 X10-8	1.9 X10-7
CHLOROFORM	6.2			2.8 X10-8	2.3 X10-7
TRANS 1,2 DICHLOROETHENE	6.0			2.7 X10-8	2.2 X10-7
1,1 DICHLOROETHENE	193.6			8.7 X10-7	7.1 X10-6
TETRACHLOROETHENE	633.6			2.8 X10-6	2.3 X10-5
TRICHLOROETHENE	193.6			8.7 X10-7	7.1 X10-6
1,1,1 TRICHLOROETHENE	66.9			3.0 X10-7	2.4 X10-6
1,2 DICHLOROETHANE	66.9			3.0 X10-7	2.4 X10-6
ACETONE	16.7			7.5 X10-8	6.1 X10-7
TOTAL	1188.6				

- THIS INDICATES THAT NO CARCINOGENIC RISK WAS CALCULATED AS NO CANCER POTENCY FACTOR WAS AVAILABLE.

CONTAMINANT	INCREASED CARCINOGENIC RISK WESMECO	KIRTLAND
BENZENE	2 X10-10	2 X10-9
CHLOROFORM	6 X10-10	5 X10-9
TRANS 1,2 DICHLOROETHENE	-	-
1,1 DICHLOROETHENE	3 X10-7	2 X10-6
TETRACHLOROETHENE	2 X10-9	1 X10-8
TRICHLOROETHENE	3 X10-9	3 X10-8
1,1,1 TRICHLOROETHENE	-	-
1,2 DICHLOROETHANE	8 X10-9	6 X10-8
ACETONE	-	-

- THIS INDICATES THAT NO CARCINOGENIC RISK WAS CALCULATED AS NO CANCER POTENCY FACTOR WAS AVAILABLE.

ATTACHMENT 4

THE CLEAN AIR ACT LIMITS AIR EMISSION FROM HYDROCARBON SOURCES TO 100 TONS PER YEAR. USING THE ESTIMATED WORST QUALITY OF WATER EXPECTED TO ENTER THE AERATION COLUMN (1628 TOTAL MICROGRAMS PER LITER CONTAMINANTS) AND A 100 GALLON PER MINUTE FLOW RATE OF WATER, THE FOLLOWING CALCULATION WAS PERFORMED FOR ANNUAL EMISSIONS:

8400 HOURS	4500 GALLONS	1628 UG	1 G.	1 LB.	3.785 LITER
YEAR	HOUR	LITER	10	454 G	GALLON

=513 POUNDS PER YEAR OR 0.25 TONS PER YEAR.

THE AMBIENT AIR QUALITY STANDARDS AND AIR QUALITY CONTROL REGULATIONS FOR ALBUQUERQUE/BERNALILLO COUNTY HAVE A MAXIMUM CONCENTRATION OF 100 UG/M3 IN AMBIENT AIR FOR NON-METHANE HYDROCARBONS. THE AIR MODELING USING THE VALLEY MODEL SHOWED THE MAXIMUM IMPACT WOULD OCCUR NORTH/NORTHEAST OF THE COLUMN AT A DISTANCE OF 229 METERS.

CHEMICAL	CONCENTRATION IN MICROGRAMS PER CUBIC METER	
	10.7 METER STACK	13.7 METER STACK
BENZENE	0.00076	0.00075
CHLOROFORM	0.00092	0.00091
TRANS-1,2 DICHLOROETHENE	0.00089	0.00088
1,1-DICHLOROETHENE	0.02886	0.02859
TETRACHLOROETHENE	0.09446	0.09355
1,1,1 TRICHLOROETHENE	0.00997	0.00988
1,2 DICHLOROETHANE	0.00997	0.00988
ACETONE	0.00249	0.00247
	---	---
TOTALS	0.14832	0.14691

THE TOTAL CONCENTRATIONS ARE WELL BELOW THE 100 UG/M3 REQUIRED UNDER THE ALBUQUERQUE/ BERNALILLO COUNTY AIR REGULATIONS.

ATTACHMENT 6

STATE OF NEW MEXICO CONCURRENCE

JUNE 27, 1988

ALLYN DAVIS, DIRECTOR (6H)
HAZARDOUS WASTE MANAGEMENT DIVISION
U.S. EPA, REGION VI
1445 ROSS AVE.
DALLAS, TX 75202-2733

DEAR MR. DAVIS:

EID CONCURS WITH THE REMEDY PROPOSED BY EPA FOR THE EDMUNDS STREET GROUNDWATER OPERABLE UNIT OF THE SOUTH VALLEY SUPERFUND SITE, WITH THE UNDERSTANDING THAT THIS DECISION RELATES ONLY TO THE PLUME OF CONTAMINATED GROUND WATER THAT EXTENDS EASTWARD FROM THE 3301 EDMUNDS STREET PROPERTY IN ALBUQUERQUE. YOUR STAFF HAS DONE EXCELLENT WORK ON THIS PROJECT.

WE STRESS THAT THIS OPERABLE UNIT CONCERNS ONLY A SMALL PART OF THE SITE AND ONLY A PART OF THE EDMUNDS STREET PROPERTY. AS WE DISCUSSED WITH YOUR STAFF ON JUNE 15, SELECTION IMPLEMENTATION OF A COMPREHENSIVE REMEDY FOR THE SOUTH VALLEY SITE DEMANDS MULTI-AGENCY COORDINATION. EID TRUSTS EPA, THE LEAD AGENCY FOR THIS SITE, TO PROVIDE THE NECESSARY COORDINATION AND TO WORK WITH THE REST OF US TOWARD A VIABLE REMEDY. EID ALSO EXPECTS EPA TO FOLLOW THROUGH WITH PAST COMMITMENTS TO DEFINE THE EXTENT OF CONTAMINATION BY CERCLA WASTES TO THE NORTH AND EAST, DURING REMEDIAL DESIGN IF NECESSARY.

SINCERELY,

KIRKLAND L. JONES
DEPUTY DIRECTOR

ATTACHMENT 8

RESPONSIVENESS SUMMARY

3301 EDMUNDS STREET
SOUTH VALLEY SUPERFUND SITE
COMMUNITY RELATIONS RESPONSIVENESS SUMMARY

THIS COMMUNITY RELATIONS RESPONSIVENESS SUMMARY HAS BEEN PREPARED TO PROVIDE WRITTEN RESPONSES TO COMMENTS SUBMITTED REGARDING THE PROPOSED PLAN OF ACTION AT 3301 FUNDS STREET, SOUTH VALLEY HAZARDOUS WASTE SITE. THE SUMMARY IS DIVIDED INTO TWO SECTIONS:

SECTION I: BACKGROUND OF COMMUNITY INVOLVEMENT AND CONCERNS. THIS SECTION PROVIDES A BRIEF HISTORY OF COMMUNITY INTEREST AND CONCERNS RAISED DURING THE REMEDIAL PLANNING ACTIVITIES AT SOUTH VALLEY.

SECTION II: SUMMARY OF MAJOR COMMENTS RECEIVED. THE CENTS (BOTH ORAL AND WRITTEN) ARE SUMMARIZED AND EPA'S RESPONSES ARE PROVIDED.

I. BACKGROUND OF COMMUNITY INVOLVEMENT

DUE TO THE POSSIBILITY OF CONTAMINATION OF THE ENTIRE SAN JOSE WELL FIELD, THE SOUTH VALLEY SITE HAS RECEIVED EXTENSIVE MEDIA ATTENTION. HOWEVER, BECAUSE OF THE HEAVILY INDUSTRIALIZED NATURE OF THE SITE AREA AND THE LACK OF EXPOSURE, CITIZEN CONCERN HAS BEEN VERY LIMITED.

ALTHOUGH NO CITIZEN GROUPS HAVE BEEN FORMED TO DEAL SPECIFICALLY WITH THE PROBLEMS POSED BY THE SOUTH VALLEY SITE, SEVERAL GROUPS HAVE EXPRESSED A GENERAL INTEREST REGARDING OVERALL ENVIRONMENTAL CONCERNS IN THE ALBUQUERQUE AREA. NO SPECIFIC INTEREST HAS BEEN NOTED INVOLVING THE EDMUNDS STREET PROPERTY.

II. SUMMARY OF MAJOR COMMENTS RECEIVED

THE PRESS RELEASE AND PROPOSED PLAN FACT SHEET ANNOUNCING THE PUBLIC COMMENT PERIOD AND PUBLIC MEETING WERE DISTRIBUTED ON MAY 10, 1988. THE COMMENT PERIOD BEGAN ON MAY 16, 1988 AND WAS EXTENDED UNTIL JUNE 17, 1988. A PUBLIC MEETING WAS HELD FOR THE AREA RESIDENTS AND LOCAL OFFICIALS ON MAY 26, 1988 AT THE RADISSON HOTEL. THE PURPOSE OF THIS MEETING WAS TO EXPLAIN THE RESULTS OF THE REMEDIAL INVESTIGATION AND TO OUTLINE THE VARIOUS ALTERNATIVES PRESENTED IN THE FEASIBILITY STUDY. APPROXIMATELY 43 PEOPLE FROM THE AREA ATTENDED THE MEETING, AND 5 RESIDENTS MADE ORAL STATEMENTS OR ASKED QUESTIONS. NO WRITTEN COMMENTS OR QUESTIONS WERE RECEIVED.

OVERALL, THE RESIDENTS AND LOCAL OFFICIALS DO NOT OPPOSE THE PROPOSED REMEDY. DURING THE PUBLIC BENT PERIOD, THERE WERE COMMENTS/QUESTIONS REGARDING THE FOLLOWING:

QUESTION 1: WHAT ABOUT CONTAMINATION OUTSIDE THE AREA DESCRIBED IN THIS OPERABLE UNIT?

RESPONSE: THIS IS ONLY THE FIRST OF SEVERAL OPERABLE UNITS. THERE WILL BE FUTURE MEETINGS AND COMMENT PERIODS ON OTHER PORTIONS OF THE LARGER SOUTH VALLEY SITE. RESULTS OF OTHER REMEDIAL INVESTIGATIONS AND CLEANUP PLANS WILL BE AVAILABLE TO THE PUBLIC IN THE NEXT FEW MONTHS. THOSE WHO ATTENDED THE PUBLIC MEETING AND REGISTERED OR MADE COMMENTS DURING THE PUBLIC COMMENT PERIOD WERE ADDED TO THE MAILING LIST AND WILL RECEIVE INDIVIDUAL NOTICES CONCERNING THESE ADDITIONAL OPERABLE UNITS.

QUESTION 2: DO YOU EPA HAVE A LIST OF THE COMPOUNDS THAT YOU HAVE IDENTIFIED AS CONTAMINANTS IN THE AREA?

RESPONSE: YES, THE LIST IS INCLUDED IN THE REPORTS AT THE PUBLIC REPOSITORIES, SPECIFICALLY IN TABLE 1 OF "FEASIBILITY STUDY FOR PLUME STABILIZATION AND EXTRACTED GROUND-WATER AT 3301 EDMUNDS STREET, ALBUQUERQUE, NEW MEXICO."

QUESTION 3: DO YOU HAVE ANY PRELIMINARY TECHNICAL DATA INVOLVING THE EFFICIENCY OF THE TWO PROPOSED METHODS, THE AIR STRIPPING PROCESS OR CARBON ADSORPTION?

RESPONSE: YES, THERE IS INFORMATION AVAILABLE THROUGH THE USEPA OFFICE OF DRINKING WATER ON THE EFFICIENCY OF AIR STRIPPING FOR THE MAJORITY OF COMPOUNDS THAT WE FOUND AT THE SITE. NO INDIVIDUAL STUDIES WERE DONE USING WASTE FROM THIS SITE. ONCE THE CLEANUP DECISION IS MADE, SUCH A STUDY WILL HE PERFORMED AS A PART OF THE DESIGN PROCESS.

QUESTION 4: ARE COPIES OF THE REMEDIAL INVESTIGATION AND FEASIBILITY STUDY AVAILABLE?

RESPONSE: YES, THEY ARE AVAILABLE AT THE FOUR REPOSITORIES IN NEW MEXICO WHICH ARE LISTED IN THE FACT SHEET AND AT THE EPA OFFICES IN DALLAS.

QUESTION 5: THE ESTIMATE FOR CLEANUP TIME IN THE PROPOSED PLAN WAS FIVE YEARS. IS THIS A REALISTIC ESTIMATE?

RESPONSE: THE FIVE YEAR TIME IS A MINIMUM. GROUNDWATER CONTAMINATION GENERALLY TAKES A LONG TIME TO CLEAN UP. EPA DOES NOT WISH TO UNDERSTATE THE CLEANUP TIME.

QUESTION 6: AVAILABILITY OF THE DOCUMENTS SEEMS TO BE A PROBLEM, PARTICULARLY AT THE ALBUQUERQUE PUBLIC LIBRARY. IS THIS THE ONLY REPOSITORY?

RESPONSE: NO, THERE ARE TWO OTHERS IN ALBUQUERQUE, THE UNIVERSITY OF NEW MEXICO LIBRARY, AND THE CITY COUNTY BUILDING. A CHECK WILL HE MADE AT THE ALBUQUERQUE PUBLIC LIBRARY TO SEE IF THERE WAS A PROBLEM IN AVAILABILITY OF THE DOCUMENTS.

QUESTION 7: ARE THERE ANY CONTAMINANTS THAT WOULD NOT HE REMOVED THAT ARE FOUND ON THE EDMUNDS STREET PROPERTIES?

RESPONSE: NO. IT IS A REQUIREMENT THAT ALL OF THE CONTAMINANTS THAT ARE FOUND IN THE GROUNDWATER BE REMOVED TO LEVELS THAT ARE BELOW THOSE SET BY THE SAFE DRINKING WATER ACT OR THE NEW MEXICO WATER CONTROL COMMISSION REGULATIONS.

QUESTION 8: THIS METHOD, THE AIR STRIPPING METHOD, WOULD RELEASE CONTAMINANTS INTO THE AIR. IS THERE ANY DATA AVAILABLE TO THE PUBLIC ON THE ESTIMATED AMOUNT OF CONTAMINATION TO BE RELEASED?

RESPONSE: YES. ONE OF THE DOCUMENTS IN THE PUBLIC REPOSITORIES TITLED, "AIR DISPERSION MODELING ANALYSIS FOR A PACKED AERATION COLUMN, VAN WATERS & ROGERS, INC., EDMUNDS STREET SITE, ALBUQUERQUE, NEW MEXICO" INVOLVES AN AIR MODEL THAT WAS USED TO PREDICT THE LEVELS OF CONTAMINATION THAT COULD BE EXPECTED IF THE AIR STRIPPING METHOD IS USED.

QUESTION 9: WILL YOU ALSO BE MONITORING AIR QUALITY IF THAT METHOD, AIR STRIPPING, IS USED?

RESPONSE: YES, WE WOULD NOT USE THE AIR STRIPPING METHOD UNLESS WE COULD MONITOR FOR AIR QUALITY. REGULAR AIR MONITORING WILL BE REQUIRED TO ENSURE THAT THE AIR STRIPPING METHOD IS OPERATING PROPERLY.

QUESTION 10: GIVEN THE FACT THAT THE CITY OF ALBUQUERQUE IS UNDER SANCTION FOR VIOLATIONS OF THE CLEAN AIR ACT, HAS THE PROPOSAL FOR AIR STRIPPING BEEN CLEARED THROUGH THE CITY?

RESPONSE: THE CITY IS UNDER SANCTION FOR VIOLATIONS OF THE CARBON MONOXIDE STANDARDS. THE CONTAMINANTS ASSOCIATED WITH THIS CLEANUP WOULD HAVE NO EFFECT ON THIS SITUATION. USE OF THE AIR STRIPPER FALLS WITHIN THE STANDARDS SET BY THE ALBUQUERQUE/BERNALILLO COUNTY AIR REGULATIONS AND THE CLEAN AIR ACT.

QUESTION 11: DID YOU CONSIDER THE CUMULATIVE EFFECTS OF OPERATING THE AIR STRIPPER?

RESPONSE: YES, WE EXAMINED BOTH THE SHORT-TERM EFFECTS AND LONG-TERM EFFECTS OF AIR RELEASES DURING USE OF THE STRIPPER AND FOUND THAT THEY WOULD NOT POSE A HEALTH THREAT EITHER TO WORKERS ONSITE OR NEARBY RESIDENTS.