Final Environmental Impact Statement Aptus Industrial and Hazardous Waste Treatment Facility

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FINAL ENVIRONMENTAL IMPACT STATEMENT

APTUS INDUSTRIAL AND HAZARDOUS WASTE TREATMENT FACILITY
TOOELE COUNTY, UTAH

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
SALT LAKE DISTRICT OFFICE
SALT LAKE CITY, UTAH

JUNE 1988
COMPLETED

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TOOELE COUNTY, UTAH

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Salt Lake City, Utah

June 1988

Kemp Conn
Acting State Director
Bureau of Land Management
APLUS INDUSTRIAL AND HAZARDOUS WASTE TREATMENT FACILITY

( ) DRAFT  (X) FINAL

Lead Agency: U.S. Department of the Interior
Bureau of Land Management
Salt Lake District
Salt Lake City, Utah

Federal Cooperating Agency: U.S. Environmental Protection Agency

Counties That Could be Directly Affected: Tooele County, Utah

Date Draft EIS made available to EPA and public: February 26, 1988.

Date Final EIS made available to EPA and public: July 1, 1988.

ABSTRACT

Aptus proposes to construct and operate an industrial and hazardous waste transfer, storage, and incineration facility in Tooele County, Utah. The incinerator would be designed to thermally destruct both "hazardous" chemical waste materials, as defined under the Resource Conservation and Recovery Act (RCRA) and "toxic" chemical waste materials, as defined under the Toxic Substances Control Act (TSCA). The proposed facility would incinerate up to 10 tons of wastes per hour at approximately 7,000 operating hours per year. The transfer and storage area would operate 365 days a year, 24 hours a day. While the actual facility is proposed to be constructed on private land, the transportation and utility corridors would cross federal land administered by the Bureau of Land Management (BLM).

The Environmental Impact Statement (EIS) for the proposed Aptus industrial and hazardous waste treatment facility analyzes the environmental impacts of the proposed transfer, storage, and incineration facility, and the transportation and utility corridors through construction, operation, and closure. The Draft and Final EISs used as a set address the impacts of Aptus's Proposed Action, the Aragonite Alternative; two alternative locations, the Skunk Sidge Alternative and the Clive Alternative; and the No Action Alternative.
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Aptus (formerly National Electric, Inc.) proposes to construct an industrial and hazardous waste transfer, storage, and incineration facility in Tooele County, Utah, 68 miles west of Salt Lake City.

1.1 Purpose and Need

In July 1985, the Congressional Budget Office (CBO) estimated that United States (U.S.) industries generated about 266 million metric tons of hazardous waste in 1983 (Journal of the Air Pollution Control Association 1985). The CBO estimated that if industry did not alter waste production rates, the volume of waste generated could grow by 6 percent (to 280 million metric tons) in 1990. However, while the amount generated is increasing, disposal options have become more limited.

The 1984 Hazardous and Solid Waste Amendments to the Resource Conservation and Recovery Act (RCRA) state that land disposal should be the least favored method for managing hazardous waste. Given the accompanying cradle-to-grave liability, the use of landfills will become more constrained. In addition, the regulations requiring the destruction of polychlorinated biphenyls (PCBs) under the Toxic Substances Control Act (TSCA) mandate thermal treatment or detoxification rather than landfilling. The 1984 Amendments adopted a regulation under the Safe Drinking Water Act (SDWA) which bans the disposal of hazardous waste by underground injection into or above any formation that contains a potential underground source of drinking water, if the distance between the well and the aquifer is within 0.25 mile.

Thus, two disposal options that were available to hazardous waste generators have been seriously constrained. Under the Superfund Amendments Reauthorization Act of 1986 (SARA Title III), each state must certify by November 1989 that it has adequate capacity to dispose of its own wastes for the next 20 years. This can be accomplished either through providing waste treatment within the state's own boundaries, or entering into specific compacts with other states for proper disposal.
The Environmental Protection Agency (EPA) estimated that given the 1984 RCRA amendments, the demand for new land-based incinerators for liquids only would be the equivalent of 82 additional units (20,000 metric tons/year; average capacity) (EPA 1985). Of the nation’s 13 existing commercial incinerators, none are located in the Rocky Mountain region. Thus, waste produced in Utah is either landfilled at the U.S. Pollution Control, Inc. (USPCI) landfill in Tooele County or shipped out-of-state for incineration or disposal. Approximately 1 million tons of hazardous waste per year is generated in Utah by 400 major generators and another 300 small quantity generators; of the 1 million tons per year, approximately 30,000 tons are incinerable. This estimate of Utah incinerable waste does not include PCP waste, Superfund (CERCLA) waste, or waste from small quantity generator who produce less than 2,200 pounds per month of hazardous waste. Based on Aptus’ proposed operating rate of 50,750 metric tons per year, Aptus could process all the incinerable wastes produced by all Utah generators; however, it is unlikely that Aptus could capture all of the Utah market. This is a decision that can be made only by the generators, based on free-market considerations. It has been estimated that approximately 80 percent of the wastes (or 40,600 tons per year) transported to the proposed Aptus incinerator would be from California, Oregon, Washington, Idaho, Wyoming, and Colorado. The other 20 percent (or 10,150 tons per year) would potentially be from Utah.

The proposed Aptus facility is intended to accept industrial solid and liquid wastes and dispose of them by carefully controlled burning. Aptus is a private company that would accept wastes from private companies or other generators for the purpose of financial profitability.

1.2 Description of the Proposed Action

Aptus is a Pennsylvania general partnership between National Electric, Inc. (NEI) and Westinghouse Specialty Services. Aptus (formerly NEI) proposes to construct an industrial and hazardous waste transfer, storage, and incineration facility, designed to thermally treat RCRA and TSCA-regulated chemical waste materials. The proposed Aptus treatment facility site, known as the Aragonite site, is located approximately 34 miles northwest of Grantsville in Tooele County, Utah, adjacent to Interstate-80 (I-80) in T.1S, R.10W, W1/2 Sec. 9, SN1/4 Sec. 4, E1/2SE1/4 Sec. 5, and Sec. 16.

The proposed Aragonite site occupies one section of private land (Section 16) on which Aptus holds an option to purchase and partial sections of federal land (in Sections 4, 5, and 9) managed by the Bureau of Land Management (BLM). Aptus would acquire title to the public land through a land exchange with BLM. The proposed exchange is currently not consistent with BLM’s Tooele Management Framework Plan (MFIP). A plan amendment would be required before the proposed exchange could occur. This Environmental Impact Statement (EIS) analyses the impacts of a plan amendment and will constitute analysis for the amendment under the National Environmental Policy Act of 1969 (NEPA). Aptus would also be required to obtain rights-of-way (ROWs) permits from the BLM and the Utah State Division of Lands and Forestry for the linear facilities that would cross public and state land, respectively, to reach the Aragonite site.

The Aptus treatment facility would occupy approximately 15.3 acres of the 1,200 acres that have been proposed to be acquired. Construction of the facility would entail clearing and grading of the 15.3 acres and construction of a slagging rotary kiln, gas cleaning train, bulk liquid storage tank farm, drum storage building, transfer building, sludge and bulk handling system, and analytical laboratory. Construction would require a work force of about 75 on-site personnel.

In addition to the facilities located on the site, linear facilities to provide utilities (electricity, natural gas, telephone) and transportation (access road and rail spur) to the Aragonite site would be required. Approximately 7.6 miles of the existing transmission line from the Lakeside military exit would be upgraded to 25 kilovolts (kV) utilizing wood-pole structures on the existing ROW, and a 25-kV electrical tap and telephone service tap would extend 2.4 miles from the junction located north of I-80. A 4-inch natural gas pipeline tap would extend 21.3 miles across the Lakeside Mountains from northwest of Rowley, Utah. Trucks would reach the facility via a new two-lane paved access road extending 2.2 miles from the I-80 interchange to the site.
A 1.5-mile rail spur from the Union Pacific mainline to the facility is planned for construction during the first four years of facility operation.

Following construction, all disturbed areas that would not be occupied by facilities or paved to collect and contain storm runoff water would be restored. Some areas on the 15.3-acre facility site would be landscaped while others would be revegetated to aid in inhibiting the invasion of noxious weed species. RCMs would be restored in a manner consistent with BLM requirements and to the standards of the BLM Authorized Officer.

All materials transported to and from the treatment facility would be transported by truck or rail. Prior to treatment, waste would be stored in either the tank farm or container feed building at the incinerator site. The waste generated onsite would be slag from the incineration of solids and flyash from the baghouse. This waste byproduct would be transported offsite and disposed of at an existing EPA-approved disposal facility.

The operations work force would total approximately 76 personnel. The Aptus treatment facility would be expected to operate indefinitely with the application of proper maintenance procedures. The facility is designed to process up to 10 tons per hour of waste at approximately 7,000 operating hours per year (50,750 tons per year). Final closure of the facility is anticipated in 2020 or after 30 years of facility life. An option, or sub-alternative, to the Aragonite Alternative as it is proposed would be the granting of the RCMs by BLM, but no land exchange would occur.

1.3 Alternatives

Skunk Ridge Alternative

The Skunk Ridge Alternative would differ from the Proposed Action only in the location of the waste treatment facility and the distances required for the linear facilities to provide utilities and transportation. Project components, construction, operation, and closure would all be the same as described for the Proposed Action. The Skunk Ridge site is located in T.1N, R.9W, Sec. 4 in Tooele County, Utah. This section is public land managed by the BLM. A land exchange with BLM and RCMs grants would also be required for this alternative. Linear facilities to the Skunk Ridge site would require a 25-kV electrical tap, and a telephone service tap would extend 0.4 mile from the mainlines to the site. The natural gas pipeline tap would extend 10.9 miles from the main junction; 2.3 miles of access roads would require upgrading; and the rail spur would extend 0.3 mile to the Skunk Ridge site.

Clive Alternative

The Clive Alternative would differ from the proposed action only in the location of the waste treatment facility and the required linear facilities to provide utilities and transportation. Project components, construction, operation, and closure would all be the same as described for the proposed action. The Clive site is located in T.1S, R.11W, Sec. 30 and 31 of Tooele County, Utah. These sections are public land managed by the BLM. A land exchange and RCMs grants would also be required for this alternative.

Approximately 14.8 miles of transmission line upgrade to 46-kV would be required; the upgrade would be necessary due to the greater distance of the Clive site from the Marblehead substation. A 46-kV electrical tap and a telephone service tap would extend 2.1 miles from the mainline. The natural gas pipeline tap would extend 28.0 miles from the main junction; 1.7 miles of access roads would require upgrading, and the rail spur would extend 0.1 mile to the Clive site. It would also be necessary to deliver potable water to the site.

Clive-Aragonite Alternative

The Clive-Aragonite Alternative would be a combination of the Clive Alternative and the Aragonite Alternative. It is assumed that the industrial and hazardous waste incinerator would be constructed at only one of the sites, and lands at the other site may eventually be used for other future purposes, not yet identified, but consistent with Tooele County zoning. Any future development would be subject to applicable federal, state, and county requirements.
No Action Alternative

Under the No Action Alternative, BU1 would not issue the ROMs grants nor proceed with the land exchange necessary for Aptus to develop its industrial and hazardous waste treatment facility as proposed. No action would preclude Aptus from developing the facility utilizing public land as proposed; however, it would not preclude Aptus from identifying an alternative site and ROMs on private land and proceeding with their proposal. If private land were utilized, BU1 would have no permitting authority. However, the facility would still require approval from the State of Utah, Tooele County, and EPA. Impacts associated with the No Action Alternative are discussed in Section 4.5 of the Draft EIS.

1.4 Issues and Concerns

Prior to preparation of the Draft EIS, public scoping meetings were held in Grantsville and Salt Lake City, Utah to identify major issues and concerns that should be addressed in the EIS. The results of the scoping meetings were compiled in a Scoping Summary Document. The comments were assigned, as appropriate, to one of the following three categories: comments identifying alternatives to the proposed project; issues and concerns to be addressed in the EIS; and statements of opinion. The following is a listing by category or discipline of major issues and concerns submitted by commenters a minimum of five times or more that are addressed in the Draft EIS. Parenthetical number designations following each comment indicate the number of times the issue/concern was mentioned.

Purpose and Need

- The number of incinerators and landfills needed in Tooele County. (6)
- Location of an incinerator in Utah versus other states. (5)

Air Quality

- Contamination of surrounding areas from toxic stack emissions. (13)

Water Resources

- Cumulative air quality impacts from mining and other incinerator operations. (7)
- Monitoring and regulation of air quality during facility operation. (6)
- Need for sophisticated air quality modeling. (5)

Geology/Soils

- Contamination of soils from spills, air emissions, and fly ash. (6)
- Probability and magnitude of an earthquake and seismic protection measures. (5)

Biological Resources

- Effects on vegetation and wildlife. (8)

Transportation

- Accidents involving trucks or trains carrying hazardous waste. (12)

Socioeconomics

- Employment concerns including number of workers, local hires, union representation, pay scale, and job categories. (15)
- Economic benefits to Tooele County including property tax, hazardous waste fee, and increased employment. (8)
- Positive and negative effects on industrial growth due to the presence of the hazardous waste incinerator in Tooele County. (5)

Land Use/Recreation

- Conflicts with existing land uses including industry, grazing, farmland, wildlife, off-road vehicle use, and wilderness. (11)

Health and Safety

- Existing emergency response capabilities of Tooele County and surrounding areas. The need to upgrade those capabilities. (8).
Adequate inspection and monitoring of the facility to protect the public. (7)
Disposal of slag, flyash, etc., in an offsite landfill. (6)
Qualifications of state/federal personnel who would monitor the facility. (6)
Liability in the event of a spill. (5)

1.5 Significant Impact Conclusions
Impacts and concerns associated with the Proposed Action (the Aragonite Alternative), the Skunk Ridge Alternative, the Clive Alternative, the Clive-Aragonite Alternative, and the No Action Alternative are summarized in Table 1-1. For each alternative, significant impacts could potentially occur to emergency response personnel, bystanders, sensitive biological resources, and water resources in the event of a spill along a transportation route. A large spill of PCBs with a resulting fire could require the evacuation of people in the immediate vicinity of the accident. However, the probability of a toxic spill occurring at a sensitive location is extremely low, so significant impacts to these sensitive resources are not anticipated.

No significant impacts were identified regarding transportation concerns; however, the lack of a direct freeway interchange to the Clive site has been noted in the Draft EIS. Tooele County and the Utah Department of Transportation (UDOT) are pursuing the construction of an interchange at Clive. Construction could begin as early as 1989; however, funding for this project has not been secured and no construction schedule has been established. UDOT has agreed to leave the temporary west-bound off-ramp and east-bound on-ramp at Clive in place for use by authorized vehicles until a final decision on whether an interchange will be constructed has been made. The Skunk Ridge site is not located within Tooele County’s West Desert Hazardous Industry Area. Further, a potential impact to groundwater would occur at the Skunk Ridge site if the capacity of existing wells near the site were affected by a new production well. Impacts associated with the project’s linear facilities would be the same for the three alternative sites and would not be significant.

### Table 1-1

<table>
<thead>
<tr>
<th>Alternatives</th>
<th>Aragonite (Proposed)</th>
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<th>Clive</th>
<th>Aragonite/ Clive</th>
<th>No Action</th>
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<tr>
<td>Air Quality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compliance for criteria pollutants under NAAQS</td>
<td>Y²</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Compliance for non-criteria (toxic) pollutants</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Geology and Soils</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Site located within 200 feet of Holocene Fault</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>NA</td>
</tr>
<tr>
<td>Disturbance to mineral or paleontological resources</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
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<tr>
<td>Disturbance to erode soils that could not be subsequently restabilized</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Significant impact to soil productivity following a spill and cleanup</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
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<tr>
<td>Water Resources</td>
<td></td>
<td></td>
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<tr>
<td>Surface water quality or quantity reduced below standards or affected existing users</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
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<tr>
<td>Construction within 100-year floodplain</td>
<td>N</td>
<td>N</td>
<td>N</td>
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<td>Groundwater use affecting existing water rights</td>
<td>N</td>
<td>Y</td>
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<tr>
<td>Groundwater quality modified by spill to affect established users</td>
<td>N</td>
<td>N</td>
<td>N</td>
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<td>Biological Resources</td>
<td></td>
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<tr>
<td>Inadequate revegetation cover to prevent erosion</td>
<td>N</td>
<td>N</td>
<td>N</td>
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1-8
<table>
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<tr>
<td>Inadequate revegetation cover to support land uses</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
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<tr>
<td>Rare, unique, or sensitive habitat, species, or communities lost due to construction, spills, or emissions</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Known critical ranges for game species affected during season of use or critical periods</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Threatened, endangered, or candidate species affected</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Toxic spill into Great Salt Lake or surface streams</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
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</table>

**Transportation**

| Traffic volume on I-80 increasing so that the roadway volume-to-capacity relationship results in the traffic operating Level of Service falling below Level of Service | N | N | N | N |
| Traffic volume on I-80 increasing so that change in Level of Service indicates a corresponding increase in accident frequency | N | N | N | N |
| Roadway facilities requiring upgrading and capital expenditures to mitigate vehicle flow and/or safety deficiencies that are beyond the fiscal capabilities of the responsible agency | N | N | N | N |

**Socioeconomics**

| Deterioration and related maintenance costs of area roadways accelerating beyond those scheduled by the responsible agency | N | N | N | N |
| Rail/Highway at-grade crossing leading to the site generating more than three train/vehicle accidents during the life of the project | N | N | N | N |

**Land Use, Grazing, Recreation, and Wilderness**

<p>| Consistent/compatible with land use plans, regulations, or controls for: | N | Y | Y | Y |
| Site located within the West Desert Hazardous Industry Area | Y | N | Y | Y |
| Significantly decrease the number of grazing AUMS per acre within the Aragonite and North Cedar Mountains grazing allotments | N | N | N | N |
| Significant impact to designated wilderness or wilderness study areas | N | N | N | N |</p>
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<thead>
<tr>
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<th>Clive</th>
<th>Aragonite/No Clive Action</th>
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<td><strong>Visual Resources</strong></td>
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<tr>
<td>Visual contrasts exceeding BLM's visual quality objectives</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td><strong>Cultural Resources</strong></td>
<td></td>
<td></td>
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<tr>
<td>Effects on sites eligible for, or listed on, the NRHP</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td><strong>Health and Safety</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Increased cancer risk exceeding $10^{-6}$ per lifetime, resulting from small spills during transport of hazardous wastes</td>
<td>Y$^3$</td>
<td>Y$^3$</td>
<td>Y$^3$</td>
<td>Y$^3$</td>
</tr>
<tr>
<td>Probability of exposures from incomplete combustion of hazardous wastes exceeding that of similar facilities</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

1. Impact summary includes the implementation of the mitigation measures presented in Section 4.1.
2. Y = Yes
   N = No
3. Such an event is not predicted to occur during the life of the project.
4. The Aragonite Alternative without the land exchange (Aragonite Sub-Alternative) would be consistent with the BLM's Tooele Management Framework Plan.
5. Impacts to cultural resources cannot be specifically determined until intensive surveys are completed.
6. The analysis presented in Appendix B in the Draft EIS indicates that exposure of people in the immediate area of a large spill of PCBs with an ensuing fire could be significant and could require the evacuation of people within 650 feet (200 m).

Selection of the No Action Alternative would have no adverse impacts on the resources discussed above; however, employment opportunities and income that would result from implementation of the proposed project would not occur, nor would the opportunity to provide a hazardous waste incinerator for generators in the western region of the United States occur.

1.6 Agency Preferred Alternative

In accordance with NEPA and CEQ guidelines (40 CFR 1502.14), federal agencies are required in the Draft and Final EISs to identify the preferred alternative for the proposed project. The preferred alternative is not a final agency decision; it is rather an indication of the agency's preliminary preference. BLM's final decision will be contained in a Record of Decision prepared for Aptus' proposal and based on the information contained in the Draft and Final EIS. The alternative identified below is the BLM's preferred alternative following review of all information relevant to Aptus' proposed action.

The BLM preferred alternative is the Clive-Aragonite Alternative.
2.0 CONSULTATION AND COORDINATION

2.1 Draft EIS Review

In the course of preparation of the Draft and Final EISs and Plan Amendment for the Aptus industrial and hazardous waste treatment facility, the BLM has communicated with and received input from many federal, state, and local agencies; elected representatives; environmental and citizens groups; industries; and individuals.

Although BLM administered public lands are involved, the major issues of air, water, and public health and safety most directly involve the EPA and state and county government levels. Consequently, a steering committee composed of a representative from each federal, state, and county entity which has a specific authorizing action in conjunction with the proposed project was established. The function of the steering committee was advisory in nature and acted as a forum of ideas and concerns to provide guidance to the BLM, EPA, State, and Tooele County officials. The committee provided an avenue of communication and coordination between each of the concerned and involved governmental entities, assisted in identifying issues and sharing data sources and analysis in support of the EIS effort, and reviewed related applications for proposed projects and other documents as necessary. The steering committee reviewed the Preliminary Draft, Draft, and Preliminary Final EISs and subsequently provided comments to the BLM. BLM as the lead federal agency for NEPA compliance had the following basic responsibilities: 1) preparation of the EIS to comply with the requirements of NEPA, CEQ regulations, and departmental requirements; and 2) to the extent practical and allowed by departmental requirements, prepare the EIS to meet the needs of state and county governmental entities who have major authorizing actions so as to avoid duplication of effort.

As part of the consultation effort during the preparation of the Draft EIS, BLM contacted both the State Historic Preservation Office (SHPO) concerning cultural resources, as required by the National Historic Preservation Act (NHPA), and the U.S. Fish and Wildlife Service (USFWS) in accordance with Section 7 of the Endangered Species Act of 1973. Copies of the Draft EIS were sent to the SHPO and USFWS, who
subsequently responded with Comment Letters 6 and 11, respectively. In addition, Appendix 4.2 contains the letters related to threatened or endangered species consultation. The Draft EIS was structured to analyze potential impacts to any threatened or endangered species and serve as the Biological Assessment for sensitive species occurring within the project area.

Approximately 700 copies of the Draft EIS were distributed by mail to various individuals, organizations, and government agencies. During the 60-day public comment period, many of those who received copies of the Draft EIS have submitted written comments and/or presented verbal comments at the public hearings held in Tooele and Salt Lake City, Utah on March 16 and 17, 1988, respectively. Those comments are presented and responded to in the following sections.

The following is a listing of the agencies, groups, and organizations who previously received copies of the Draft EIS in February 1988.

Federal Agencies

Department of Agriculture
- Forest Service
- Soil Conservation Service

Department of Defense
- Army Corps of Engineers
- Boeing Air Force Base
- Edwards Air Force Base
- Hill Air Force Base
- Tooele Army Depot

Department of Energy
- Western Area Power Administration

Department of Interior
- Bureau of Land Management
- Bureau of Mines
- Bureau of Reclamation
- Fish and Wildlife Service
- Minerals Management Service
- National Park Service
- Natural Resource Library
- Office of Environmental Project Review
- Office of Public Affairs
- Regional Solicitors' Office
- U.S. Geological Survey

Department of Transportation
- Information Assistance Office
- Environmental Protection Agency
  - EIS Review Office
  - Emergency Response Branch

Federal Agencies (Continued)

- Hazardous Waste Section
- Policy and Management Division Region 8
- Toxic Substances Branch
- Federal Emergency Management Agency
- Disaster Assistance Programs Division
- Federal Energy Regulatory Commission
- Oak Ridge National Laboratory Receiving Section
- Occupational Safety and Health Agency
- U.S. Government Printing Office

State of Utah Agencies

- Attorney General Office
- Board of Industrial Development
- Board of State Lands/Forestry & Fire Control
- Department of Agriculture
- Environmental Quality Section
- Department of Community and Economic Development
- Division of State History
- Department of Health
- Bureau of Air Quality
- Bureau of Solid and Hazardous Waste
- Bureau of Water Pollution Control
- Permitting Branch
- Department of Natural Resources and Energy
- Division of Oil, Gas, & Mining
- Division of Parks and Recreation
- Division of State Lands & Forestry
- Division of Water Resources
- Division of Water Rights
- Division of Wildlife Resources
- Department of Public Safety
- Department of Transportation
- Division of Comprehensive Emergency Management
- Division of Safety
- Planning Office
- Office of the Legislative Fiscal Analyst
- Planning Coordinator's Office
- Utah State Energy Office
- Utah State Engineer
- Division of Water Rights
- Utah State Geological and Mineral Survey
- Utah State Job Service
- Labor Market Information Services Division
- Utah State Office of Planning and Budget
- Utah State Tax Commission
- Utah Statewide Planning Office

State of Nevada Agencies

- Division of Hazardous Wastes
### State of Colorado Agencies

#### Colorado Department of Health

#### Regional Agencies

- Bear River Association of Governments
- Central Utah Water Conservation District
- Five-County Association of Governments
- Mountainlains Association of Governments
- Upper Colorado River Commission
- Utah Lake & Jordan River Commission
- Wasatch Front Regional Council
- Weber Basin Water Conservation District

#### County Agencies

- Box Elder County Commission
- Davis County Commission
- Davis County Planning Commission
- Grand County Commission
- Salt Lake County Commission
- Salt Lake County Health Department
- Salt Lake County Water Conservation District
- Tooele County Attorney
- Tooele County Auditor’s Office
- Tooele County Commission
- Tooele County Conservation Office
- Tooele County Department of Development Services
- Tooele County Department of Environmental Health
- Tooele County Economic Development Office
- Tooele County Health Department
- Tooele County Industrial Development Office
- Tooele County Library
- Tooele County 208 Planner
- Tooele County Planning & Zoning Commission
- Tooele County School District
- Tooele County Sheriff
- Utah County Commission
- Weber County Commission
- Weber County Department of Purchasing and Contract Management
- Weber County Planning Commission

### Local Agencies

- Board of Water Resources
- Citizen City Council - Grantsville
- Metro. Water District of SLC
- Salt Lake City Corporation Fire Department
- Salt Lake City Public Library
- Salt Lake City Public Works Division
- Salt Lake City Hazardous Materials Response Team
- Tremonton City corporation
- West Valley City C.D.

### Elected Officials

**Congressman Jim Hannon**

**Congressman Howard C. Nielson**

**Mayor of...**

- Brigham City
- City of Bountiful
- City of Centerville
- City of Grantsville
- City of Lehi
- City of North Salt Lake
- City of Orem
- City of Provo
- City of Salt Lake
- City of Tooele
- City of Tremonton
- City of Wendover
- City of West Bountiful
- City of West Valley
- City of Woods Cross

**Representative Jim M. Skousen**

**Representative Beverly J. White**

**Senator Jake Garn**

**Senator Orrin Hatch**

**Senator Karl Swann**

### Organizations

- American Fisheries Society
- American Lung Association of Utah
- American Motorcycle Association
- American Right-of-Way Association
- Archaeological Society of Utah
- Association of Four Wheel Drive Clubs
- Box Elder County Wildlife Federation
- Bridgerland Audubon Society
- Bridgerland Wildlife Federation
- Brigham Young University
- Center for Environmental Studies
- Department of Zoology
- Lee Library
- Raptor Research Foundation
- Colorado State University Library
- Council on Utah’s Resources
- Crossroads Urban Center
- Davis County Wildlife Federation
- Defenders of Our Utah Streams & Environment
- Desert Foxes Motorcycle Club
- Ducks Unlimited
- El Nautica Boat Club
- Golden Spike Gem & Mineral Society
- Intermountain Water Alliance
- League of Women Voters
- League of Women Voters of Grand County
- MIT Center of Technology, Policy, and Industrial Development
Organizations (Continued)

Mountain States RES
National Wildlife Federation
Nature Conservancy
Natural Resources Defense Council
Recreation Vehicle Advisory Council
Salt Lake Community Action Program
Salt Lake County Fish & Game Association
Salt Lake Citizen’s Congress
Salt Lake Motorcycle Club
Save Our Rivers Committee
Sierra Club
Sierra Club Southwest
Stonefly Society
Tooele County Board of Realtors
Tooele County Historical Society
Tooele County West Desert Advisory Committee
Tooele County Wildlife Federation
United States Auto Club
University of California
  Department of Geography
  Department of Land, Air, and Water Resources
University of Utah
  Biology Department
  Bureau of Economic Research and Development
  Department of Chemical Engineering
  Medical Center
Utah Audubon Society
Utah Cattlemen’s Association
Utah Chapter of the Sierra Club
Utah County Wildlife Federation
Utah Desert Foxes
Utah Environmental Center
Utah Farm Bureau Federation
Utah Geological Association
Utah Heritage Foundation
Utah Mining Association
Utah Native Plant Society
Utah Nature Study Society
Utah Recreation & Parks Assn.
Utah Salt Flats Racing Association
Utah Sportsman’s Association
Utah State University
  College of Natural Resources
  Department of Chemistry
Utah Travel Council
Utah Water Resources
Utah Water Users Association
Utah Wildlife Federation
Utah Wildlife and Outdoor Recreation Federation
Utah Wilderness Association - Wildlife Board
Wasatch Gem Society
Weber River Water Users Association

Organizations (Continued)

Weber State College
  Department of Geology & Geography
  Department of Zoology
Western States Water Council
The Wilderness Society
Wildlife Society Utah Chapter

Industries

AMAX Magnesium
AMAX Exploration, Inc.
American Salt Company
AXT Long Line
Continental Line Inc.
Cryogen Technology
Diamond Crystal
EGG Idaho, Inc.
Great Salt Lake Minerals
Kaiser Chemicals
Kennecott-UT COP UV
Martin Marietta Astronautics Group
Morton Salt Company
Mountain Bell
Mountain Fuel Resources, Inc.
Mountain Fuel Supply Company
Northwest Pipeline Services
Sol-Aire
Union Pacific Corporation
Union Pacific Railroad
U.S. Pollution Control, Inc.
Utah Power and Light
Westinghouse Electric

Other

Associated Press
Basin Land and Livestock
Box Elder News - Journal
Clearfield Bulletin
Daily Universe - BYU
Deseret News
Ebasco Services
Eckoff, Watson, & Preator Eng.
Ecology and Environment, Inc.
El Dorado Engineering Inc.
Engineering-Science, Inc.
ENSCO
EnviroSearch
Envirosphere Co.
EMAP
FNA News
Ford Bacon and Davis
Grantsville Gazette
2.2 Written Comments and Responses

The BLM received 21 letters addressing the Draft EIS during the 60-day public comment period. All letters were reviewed and the substantive comments (those addressing the accuracy or completeness of the Draft EIS) contained in each letter were identified. Responses have been prepared for the 128 substantive comments identified; these responses are presented in this section. Other comments have been reviewed and considered by the BLM in determining the preferred alternative for the proposed project.

Table 2-1 lists each of the 21 comment letters by author and reference number assigned to the letter. All letters have been reproduced in their entirety, and all material has been reviewed and considered. The complete public Comment Record containing all letters and public hearing transcripts is available for review at the BLM Salt Lake District Office in Salt Lake City, Utah.

Following Table 2-1, the comment letters and responses are presented. Each substantive comment is identified by a bracket and reference number keyed to the letter reference number. Thus, Comment 4-3 refers to the third comment in Letter 4. The response to each comment accompanies the letter and is identified by the reference number of the respective comment (e.g., Response to Comment 4-3).

The reader is reminded that this being an abbreviated Final EIS, it is necessary to use the Draft EIS in conjunction with the Final EIS in order to fully understand the analysis that was conducted for the proposed Aptus waste treatment facility.
TABLE 2-1
COMMENT LETTERS

<table>
<thead>
<tr>
<th>Reference Number</th>
<th>Source of Letter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Utah Bureau of Water Pollution Control (state agency)</td>
</tr>
<tr>
<td>2</td>
<td>Hank N. Knox, Sr. (citizen)</td>
</tr>
<tr>
<td>3</td>
<td>Utah Department of Wildlife Resources (state agency)</td>
</tr>
<tr>
<td>4</td>
<td>Utah Environment Center (organization)</td>
</tr>
<tr>
<td>5</td>
<td>Wasatch Mountain Club (organization)</td>
</tr>
<tr>
<td>6</td>
<td>Utah Division of State History (state agency)</td>
</tr>
<tr>
<td>7</td>
<td>Utah Nature Study Society (organization)</td>
</tr>
<tr>
<td>8</td>
<td>USDI Bureau of Mines (federal agency)</td>
</tr>
<tr>
<td>9</td>
<td>USDI Bureau of Land Management, Colorado State Office (federal agency)</td>
</tr>
<tr>
<td>10</td>
<td>USDI Bureau of Reclamation (federal agency)</td>
</tr>
<tr>
<td>11</td>
<td>USDI Fish and Wildlife Service (federal agency)</td>
</tr>
<tr>
<td>12</td>
<td>Utah Sierra Club (organization)</td>
</tr>
<tr>
<td>13</td>
<td>H. B. Harvey (citizen)</td>
</tr>
<tr>
<td>14</td>
<td>City of Wendover (local government)</td>
</tr>
<tr>
<td>15</td>
<td>American Lung Association of Utah (organization)</td>
</tr>
<tr>
<td>16</td>
<td>Department of the Air Force (federal agency)</td>
</tr>
<tr>
<td>17</td>
<td>Department of the Air Force (federal agency)</td>
</tr>
<tr>
<td>18</td>
<td>M. John Pilny (citizen)</td>
</tr>
<tr>
<td>19</td>
<td>United States Environmental Protection Agency (federal agency)</td>
</tr>
<tr>
<td>20</td>
<td>Utah State Planning Coordinator's Office (state agency)</td>
</tr>
<tr>
<td>21</td>
<td>Nevada Division of Environmental Protection (state agency)</td>
</tr>
</tbody>
</table>
On a somewhat separate issue, no information is provided on the disposal of wastewater generated from on-site employees. It is important that more detail be included to indicate how this waste will be properly disposed of. If you wish further information contact Mack Croft (BMPC), 538-6146.

Sincerely,

[Signature]

Don A. Ostler, Director
Bureau of Water Pollution Control

cc: Tooele Co. Health Department
    Brent Bradford - Bureau of Solid & Hazardous Waste
    Ken Akema - Division of Environmental Health
    Joseph A. Urbanik - Tooele County

MC/ag
3918y-15
March 16, 1988

Hank M. Knox, Sr.
10 North Cooley Street
Grantsville, Utah 84029

Mr. Deane M. Zeller
District Manager
BLM Salt Lake District
2370 South 2300 West
Salt Lake City, Utah 84119

SUBJECT: RESPONSE TO ARTUS EIS

I have been a resident of Tooele County for the past sixteen (16) years. I am a District Director of the Utah Wildlife Federation and also an officer in the Tooele County Wildlife Federation, however, the following comments are from the private concerned citizens.

Of the alternatives listed in the Draft Environmental Impact Statement, I am in favor of the NO ACTION Alternative.

I feel that the DEIS is incomplete and biased for the petitioner.

In the DEIS it states that the State of Utah must certify by November 1989 that it has adequate capacity to dispose of its own hazardous waste for the next twenty (20) years. This is fine and could be accomplished, however, the influx of hazardous waste from California, Oregon, Washington, Idaho, Wyoming, Colorado and even to Kansas is proposition. I think the hazardous waste should be disposed of at onsite locations. Companies that generate waste should build disposal units on site to handle this, then there would be no need of transporting by truck and rail to various places in the United States.

The projected accident rate of .62 or over the proposed life of the facility (30 years) is 1.79 that is projected to one (1) major spill in seventeen (17) years. One (1) major spill is one (1) to many, should this occur on a watershed to the streams or lake beds.

I noted in the DEIS that the average temperature is 75° while in the area proposed some 40 plus days are above 90°. In winter time with the inversion that so often occurs, the stack emissions could only add to the poor air quality.

The wind direction charts from the Salt Lake Airport have very little to tell us about the area under consideration. Why wasn't Hill Air Force range listed for some of these? The wind currents in the area are totally different than Salt Lake.

In section 3.2.4, Biological Resources Section, Wildlife.

The EIS preparers conducted an intensive search of available meteorological data for the area. The data required for characterizing atmospheric transport and dispersion are quite specific and are not normally available at all wind monitoring sites. No data meeting our criteria were located for the Utah Test and Training Range. The preparers recognize the limitations of the modeling using Salt Lake City data and provided a discussion of this issue for each alternative. Please refer to Pages 4-14 through 4-16, 4-53, and 4-60 of the Draft EIS.
Letter 2 Continued

(Cont'd)
March 16, 1988

The pronghorn antelope is in abundance in the proposed area of Skunk Ridge, Aragonite, and range as far west as Clive. These animals do not like the presence of humans and the amount of increased traffic as stated in other section, of the DEIS would be detrimental to wildlife.

In summation we are asked to trust Aptus to monitor their air quality, notify public officials when they have accidents with hazardous waste. Their record in Coffeyville, Kansas on citations are not that clear. Their notary kiln must operate at negative pressure while feeding some ten (10) tons per hour. I don't think we need anymore additions to Tooele County that seem to imply we are the dumping ground or out-house for the western states.

Respectfully,

Hank N. Knox, Sr.


Response to Letter 2 Continued

Citations received by Aptus in Coffeyville, Kansas were for the transfer and storage facility. As stated in the Draft EIS, the incinerator has not been found in violation. In September 1985, the Coffeyville facility was inspected and cited for three violations. Aptus was subsequently fined $3,900. The violations related to record keeping, labeling, and transformer oil that was present on the facility floor. EPA reinspected the facility December 1985 and acknowledged that the situations had been corrected and that no further violations existed. In June 1986, Aptus was cited by the EPA for recycling solvents with greater contamination levels than those specified in the permit, failing to collect air samples within the plant at the specified frequencies, storing two drums of contaminated materials (i.e., gloves, suits, etc.) longer than the authorised time, and record-keeping violations. Aptus corrected the situations, paid a fine of $30,000, and took precautions to ensure that the violations did not occur again.
March 18, 1988

Dean H. Zeller
District Manager
BLM Salt Lake District
2370 South 2300 West
Salt Lake City, Utah 84119

Subject: Aptsus Industrial and Hazardous Waste Treatment Facility Tooele County, Utah, DEIS.

Dear Dean:

We have reviewed the subject DEIS and feel it is adequate in addressing identified issues and concerns of the proposed project, the affected environment and environmental consequences thereof. The proposed mitigation measures appear adequate in mitigating anticipated impacts from a wildlife resources standpoint.

Based on the Superfund Amendments Reauthorization Act of 1986 (SARA Title III) (Page 1-5, Paragraph one of the DEIS), it seems apparent that Utah must deal with disposing of its own industrial and hazardous wastes for the next 20 years, thus ruling out the No Action Alternative. From a wildlife value standpoint, we have ranked the remaining four alternatives in ascending order of importance as follows:

1. Clive Alternative
2. Clive - Aragonite Alternative
3. Aragonite Alternative
4. Shunk Ridge Alternative

The fewest wildlife impacts would occur with the Clive Alternative and the most impacts would occur with the Shunk Ridge Alternative. We prefer and recommend the Clive Alternative over the other three.

Specific comments on the DEIS are as follows:

Page 2-14, Paragraph 3 - All disturbed areas should be reseeded. Allowing disturbed areas to revert to natural vegetation on their own will result in noxious weed invasion with the most likely species being halogen and Russian thistle.

Dean H. Zeller
March 18, 1988
Page 2

Page 3-1, Paragraph 4 - One peregrine falcon egg was produced at the Timpie Springs VHA hatch site in 1987, however, it did not hatch.

Thank you for the opportunity to review and comment on this action.

Sincerely,

William H. Geer
Director

It is agreed that noxious weed invasion could occur from the grading of the proposed facility site. For this reason, Mitigation Measure D found in Section 4.1 of this Final EIS was developed to reduce the possibility of the invasion of species such as halogen and Russian thistle. Also, please refer to Section 3.1 in the Modifications and Corrections chapter of this Final EIS regarding site reclamation.

Based on your comment, text revisions to Page 3-17 in the Draft EIS are included in Section 1.1 of this Final EIS. In conversation with Bob Benton of the U.S. Fish and Wildlife Service (USFWS), April 1988, it has been confirmed that an actively breeding pair of peregrine falcons are currently inhabiting the Timpie Springs hatch site.

BEST COPY AVAILABLE
UTAH ENVIRONMENT CENTER
232 University Street
Salt Lake City, UT 84102
(801) 583-0220

17 March 1985

Mr. Deane H. Zeller
District Manager
BLM Salt Lake District
2300 South 2300 East
Salt Lake City, UT 84119

Re: Draft EIS for Aptus Industrial and Hazardous Waste Treatment Facility

Please accept these comments to be included in the EIS for the Aptus Incinerator siting alternatives.

This document's first glaring questionable statement appears in the Summary on page 3 and again in the main text of the document:

"...The other 20 percent (or 10,150 tons per year) would be from Utah. Based on the proposed Aptus capacity and transport scenario, three such incinerators would be required in Utah to incinerate Utah's annual 30,000 tons of incinerable waste."

(4-1) What are you saying? That you do not know even grade school mathematics? Or, are you implying that two other potential incinerator companies encouraged to add this statement to your document? Perhaps your goal is not to do an impact statement at all but to encourage the Utah population to accept the wastes from the entire Rocky Mountain Region (and to include, of course, the state(s) mentioned of California, Oregon, Idaho, Washington and Colorado).

Although the credibility of this whole document is in question, I shall still attempt to respond to some of the specifics.

UNDER PURPOSE AND NEED

On page 1-4 the disposal options for hazardous waste are addressed. And, of course, the advantages of incineration are addressed and include (4) "minimizing the "cradle-to-grave" liability from re-surfacing in the future." Here, you have hit onto the real reason for incineration. The companies that generate the wastes do not want the responsibility for the end product; they do not want the liability or the expense of clean-up. But, worse, they do not want to be sent back to the drawing board in search of products that generate a cleaner waste stream.

On page 1-10 a mention was made of 'previously received citations for minor violations in the Coffeyville, Kansas, transfer and storage facility.' These violations should be spelled out. If we are going to boast an incinerator for 30 years in this state, we need to know what problems are already being noticed at a plant only two years of age.

(4-2) ALTERNATIVES

After studying all the alternatives and visiting the three proposed sites, only one of these can be recommended in favor of the other two by the Utah Environment Center membership: that is the Clive site.

BLM agrees that this section of the Draft EIS is confusing and misleading. Aptus was asked what percent of the capacity of their proposed incinerator would be filled by Utah-generated waste. Aptus made the conservative assumption that they could capture one-third of the Utah market for incinerable hazardous wastes or about 10,000 tons per year. Obviously, the Aptus incinerator with a capacity of about 50,000 metric tons per year could accommodate all of Utah's incinerable hazardous waste estimated at 30,000 tons per year if all generators chose to use the Aptus facility. Aptus has stated that they could process all the incinerable wastes produced by all Utah generators; however, it is unlikely that Aptus could capture all of the Utah market. This is a decision that can be made only by the generators, based on free-market considerations. The assumption was made in the Draft EIS that no single incinerator could capture more than one-third of the Utah market. This assumption was misleading and has been deleted (see Section 3.1 in this Final EIS). It must be noted that the number and size of hazardous waste incinerators located in the State of Utah would be determined by a complex set of market forces and not by state or federal regulations. Also, please refer to Response to Comment 1-1-2 for further clarification of incinerable waste in Utah.

Please refer to Response to Comment 2-1-2 for a discussion of the record of citations for the Coffeyville, Kansas facility.

BEST COPY AVAILABLE
Letter 4 Continued


tnus Incinerator Sites

SAUKA RIDGE in Paddle Valley is too close to Toole, Grantsville, and the Salt Lake County population. It hosts a pronghorn population and is a nesting area for bald eagles. It has an available water supply that should not be diverted to the rotary kiln incineration cooling process.

ARGONITE site next to a Wilderness Study Area in the Cedar Mountains. As we walked around the proposed site two Saturdays ago, we noticed droppings that identified wildlife in the area.

CLIVE is the least objectionable from a visual impact, an environmental impact, and from a goodly distance from populated areas. Already there are other beauties there: USPCI to the North of the freeway, the Vitro uranium mill tailings, and a proposed low-level radioactive dump site.

UNDER FACILITY SITE

2-14 first full paragraph mentions a water supply well for the waste treatment facility. Will a study be done to identify all the water sources in this arid desert? Will there be monitoring wells around the main site to check on the potential for groundwater contamination. Although this is not potable water, it does have uses for flora and fauna of the desert.

AFFECTED ENVIRONMENT

Under Air Quality it has been stated (3-3) that no site-specific wind data are available for any of the alternative sites. But, yet you have attempted to graph a wind rose. The mention has even been that the wind speed and wind direction frequencies from Dugway are also available but these data are not separated into stability classes, as required for detailed climate characterization and for air quality modeling.

I am encouraged, however, to note that a baseline air quality sampling has been conducted near the Clive site for TSP. What about potential air toxics?

The discouragement is that the Utah legislature did not see fit to fund air toxics monitoring - even with the knowledge that hazardous waste incinerators, chemical munitions incinerators, and Pershings burns were being drafted - all in the Tooele Valley.

POPULATION NUMBERS FOR SALT LAKE, TOOLE COUNTY

4-6 A bunch of hogwash (3-20). In citing statistics for Salt Lake City instead of Salt Lake County, you are begging the question. As the air enters the Salt Lake Valley from the west, the Oquirrh Range is the first impacted area with its communities of Magna, Herriman, Lark, West Valley City, Kearns, Jordan, West Jordan, Riverton, Talavera-Bencent. From Salt Lake City proper the wind is dispersed to Holladay (uninc), Murray, Midvale, Sandy, White City, and Draper. But you have chosen to mention only the population of Salt Lake City itself.

4-7 Once again your credibility and tactics are in question. This is used for computer modeling on 'downwind populations'?

Response to Letter 4 Continued

4-3 Please refer to Sections 3.2.3, 3.3.1, and 3.4.1 in the Draft EIS for discussions of groundwater resources at the three alternative sites. The Utah State Engineer was contacted to identify the locations of all wells in the vicinity of each site. Since runoff from all waste storage and transfer areas would be to concrete-lined sumps, groundwater contamination at the incinerator site is not anticipated, and monitoring wells are not required by state or federal regulations and are not proposed by Agius in their permit application. Tooele County may require groundwater monitoring as part of its conditional use permit.

4-4 The wind roses given on Page 3-4 of the Draft EIS are for Salt Lake Airport and Dugway. These data are the best available to use in characterizing site conditions.

4-5 No monitoring of air toxics has been conducted to date near any of the proposed incinerator sites. However, until some of the possible air toxic sources described in your comment go into operation, the expectation is that baseline concentrations of air toxics would be quite low.

4-6 On Page 3-20 (Table 3-5) of the Draft EIS, population numbers for Salt Lake City, Tooele County, and its communities are presented as part of Section 3.2.6, Socioeconomics. This information is presented as part of the baseline description of the study area addressed in the Draft EIS under the discussion of area populations.

The population of Salt Lake County would have been appropriate to present in this table also, and is provided below:

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>458,607</td>
</tr>
<tr>
<td>1980</td>
<td>619,066</td>
</tr>
<tr>
<td>1984</td>
<td>675,000</td>
</tr>
</tbody>
</table>

2 BLM 1986.

4-7 The areas and population numbers presented in Section 3.2.6 were not used in the air quality modeling discussed in Chapter 4 of the Draft EIS. The standard atmospheric dispersion models used for the evaluation of air quality impacts identified concentration levels at sensitive receptors that are identified on Table 4-4 and shown on Map 2-2. Sensitive receptors were located in Grantsville, Tooele, Magna, and downtown Salt Lake City to assess potential impacts on downwind populations.

BEST COPY AVAILABLE
Letter 4 Continued

Aptus Incinerator Sites

ENVIRONMENTAL CONSEQUENCES

The air toxics information appears to be based on a modelling for cancer risk only. I addressed this issue once before, in a discussion with Eric Johnson of EPA Region VIII, that cancer is only one risk of exposure. Pneumonia, other lung diseases, neurological problems, liver and kidney damages, are also results of exposure to hazardous chemicals. Yet no modelling is done for any of these problems.

Which, of course, brings up the question of "modelling" itself. After listening to Kay Medi of Region VIII at a Tooele County meeting talking about modelling and the proposed alternatives for Aptus hazardous waste incinerator - I felt very angry and quite insecure. Using computer models takes the element of humanity out of the risk factor and also takes human reactions out of the model components. Will the model human population used be standing on an asphalt parking lot for 70 years without moving?

Page 4-9 discusses the "Estimated Incinerator Emissions" and states that "upset conditions last for approximately 5 minutes as residual material is burned out." I don't believe that -- but this issue is being addressed by a representative for the Sierra Club who has a background in chemical engineering.

Regarding details (page 4-12), the first question is why there is no metal emission data for Coffeeville site during the trial burns. Can this be considered a trial burn without all the data? Will Utah be treated the same way? An inadequate trial burn followed by nothing else?

The Upset Conditions would unrealistic. A worst-case upset would be controlled in only five minutes. "Give me a break!"

CLOSURE FUNDS

Since any facility that treats hazardous wastes could become a hazardous waste site under RCRA or CERCLA, the financial stability of the company operating such a facility is most important. Specifically, with the insurance company being based in the United States. How about the banks used? Will they be in the U.S. or even in the State of Utah? Will it be possible to access funds needed for clean-up, spills, or closure expenses in excess of those anticipated in this document?

INCLUSION

It is important for the residents of Utah to realize that the same folks that brought the state-of-the-art hazardous waste landfills across the country that are now leaking (indeed some like Lowry Landfill in Denver are Superfund sites), are the same folks that are pushing for the "landfill in the sky" alternative.

We need to approach this incinerator proposal with caution and "respect" instead of contempt for chemicals. If industry is not forced to reduce at the source, recycle its products or exchange them, then Utah could indeed one day have the unfortunate negative impression of being the "dumping grounds of the U.S."

Aptus Incinerator

3-1

At the Utah are charging so little ($6.00 to $9.00 per ton) but getting so much (wastes from at least six states).

Respectfully submitted,

John Wickham
Utah Environmental Center

Response to Letter 4 Continued

As discussed on Pages 4-1 through 4-5 of the Draft EIS, the significance criteria for air resources were established at levels that represent the lowest concentration levels at which adverse health or ecological effects are known to occur. For six air pollutants (criteria pollutants), these levels are established by the National Ambient Air Quality Standards (NAAQS). These concentrations are set by law designed to protect public health and welfare (see Table 4-1 in the Draft EIS). Pollutants not regulated by NAAQS (non-criteria pollutants) include pollutants referred to as "air toxics." Of the important non-criteria pollutants that may be emitted by the proposed incinerator, two (PCBs and dioxins) were noted as probable carcinogens.

To establish acceptable levels of ambient air exposure to non-criteria pollutants, Threshold Limit Values (TLVs) and Short-term Exposure Limits (STELs) were used, and then a safety factor of 100 (or 1,000 for known or suspected carcinogens) was applied to produce a more stringent concentration threshold. TLV is based on chronic exposure without adverse effect, and STEL is based on short-term exposure without suffering from irritation, chronic or irreversible tissue damage, or carcinosis of sufficient degree which increases the likelihood of accidental injury.

The commenter's statement that the air toxics information appears to be based on a modelling for cancer risk only is incorrect.

EPA and the Utah Department of Health will set the conditions for the trial burn in the TSGA and RCRA permits.

In a worst-upset, further disposal of waste to the incinerator kiln would be stopped. The 6-hour time period is the estimated time needed to destroy the waste in the chamber at the time of the upset. Gases would be released to the atmosphere through the emergency vents, bypassing downstream pollution control equipment. Also refer to Response to Comment 5-5.

Please refer to Section 4.2.10 in the Draft EIS for a discussion of liability issues. As stated in this section, EPA and the State of Utah have not determined whether the estimated closure costs and trust fund method of financial assurance proposed by Aptus in their permit applications are adequate to meet RCRA and TSCA requirements. However, adequate financial assurance for both spill clean-up and closure must be demonstrated by Aptus before the EPA and State would issue required permits for the incinerator. Tooele County will also consider financial assurance as part of its Conditional Use Permit. Public review and comment is encouraged as part of each of these permitting actions.

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Response to Letter 5

The data sources used to prepare the Draft EIS do not contain the data on daily maximum and minimum temperatures requested by the comment. Please refer to Pages L-1 through L-5 in the Draft EIS for a list of EIS preparers and their qualifications.

The Salt Lake wind rose was prepared from the 1985 hourly observations used by the EIS team in the air quality modeling analysis. The Dugway data are a composite of about 20 years of data from Micales Army Air Field obtained from the National Climatic Data Center. The description of the figures on Page 3-4 is correct. Our analysis of Dugway is that the northwest-southeast pattern described by the comment is evident. The percentage of calm winds is 3 percent at Salt Lake and 25 percent at Dugway. Calms were distributed into the wind rose according to the observed frequency of the lowest wind speed category.

The EIS preparers concur with your comment that a representative wind field is a prerequisite to a valid air quality study. The approach selected for this Draft EIS was to follow approved EPA and Utah Department of Health regulatory procedures as closely as possible. These procedures contain specific models which are to be used in regulatory applications. The models cited by your comment have not been approved for general use by the regulatory agencies.

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Letter 5 Continued

Wind analyses are needed to determine the fate of effluent under dominant flow regimes. A good flow analysis is central to an adequate air quality analysis, and may define the positioning of site monitors and the possible need for emissions limitation procedures. Such analyses are not found in this draft. Dr. Jan Peagle of the U of Utah Meteorology Dept has developed a numerical model for mesoscale winds in the Salt Lake area. Other models also exist. Modeling is needed for the West Desert Hazardous Industry Area, and this EIS is a logical document to contain modeling results. We recommend that a thorough mesoscale wind flow analysis be included in this EIS.

5-3 Table 3-1: 1965 Annual Frequency Distribution of Pasquill Stability Classes is presented without reference to the procedure used to calculate stability classes. There is also no diurnal or seasonal breakdown of stability class distribution. The stability class distribution at Dugway exhibits strong diurnal and seasonal variations. During the spring, summer, and fall, stability at Dugway swings from stable or extremely stable at night to unstable or extremely unstable during the day, except during storms when neutral conditions predominate. In the winter, conditions typically vary from neutral to extremely stable. Table 3-1 indicates that stability is neutral for a majority of the time, which is very unlikely. The data and stability class determination procedure need review.

Stability analysis should include thorough analysis of winter air stagnation episodes. Ventilation is generally poor during winter months, and major air stagnation episodes occur as strong inversions set in for weeks at a time. Effluent trapped within the inversion layer during these episodes cause air quality problems. An emissions limitation program may be needed.

5-4 The role of the State Bureau of Air Quality (BAQ) in monitoring the AEP site is unclear in the draft. Will the BAQ monitor AEP compliance with emissions standards? If so, how? Will AEP be asked to cease operations during major air stagnation conditions?

5-5 Major emission control system failure scenarios are not considered in the risk assessment. Modeling of emission control system failure is needed. How quickly can the process be shut down in the event that a precipitator or other emission control systems cease to operate efficiently? What criteria will be used to determine the need for shutdown? Who monitors failure detection instrumentation, and will there be reporting to the BAQ?

Response to Letter 5 Continued

The method used to calculate stability class from the Salt Lake Airport data is from Turner as published in the February 1964 Journal of Applied Meteorology. This method is approved by EPA and the Utah Department of Health and has wide acceptance in the scientific and regulatory community. The data reported for 1985 and used in the modeling are consistent with other data on the frequency of stability class in western Utah (see Page 1-5 of the Draft EIS).

Winter air stagnation episodes do occur in the valleys of western Utah. However, the Draft EIS air modeling study included concentration predictions for all hours of the year, including those related to stagnation episodes.

5-4 The EPA, Utah Department of Health, and Tooele County have the right to require that AEP conduct whatever monitoring is determined to be needed to reach a permit decision and test for compliance. The monitoring schedules have not been determined at this time. These decisions will be made by the three agencies mentioned above upon completion of their permitting processes. Please refer to Pages 1-6 through 1-8 in the Draft EIS and Comment 19-1 and Response to Comment 19-1 for more details.

5-5 A worst-case upset of a power failure with the kiln full of solids is described on Page 4-13 of the Draft EIS. All pollution control equipment is bypassed in this situation. RCRA and TSCA permit specifications require that incinerator operation be halted if operating parameters exceed specified limits. The Utah Bureau of Solid and Hazardous Wastes (UBSW) has indicated that the RCRA permit will specify minimum and maximum operating conditions. The RCRA permit operating conditions will be based on the conditions in which the facility successfully demonstrated the required Destruction and Removal Efficiency (DRE) during the initial burn. AEP will be required to maintain the minimum permit operating conditions (e.g., temperature, flame, combustion air) at all times there is waste in the kiln to assure compliance. In addition to maintaining the minimum afterburner temperature, all waste feed will be automatically cutoff during plant upset conditions. Thus, as indicated in the DEIS, the organic emissions should not increase.

The RCRA permit will not allow the emergency vent to open unless the facility has demonstrated through a risk assessment that the estimated emergency vent emissions, would not exceed the incremental lifetime cancer risk of $10^{-5}$ to the potential maximum exposed individual or exceed the reference air concentrations for noncarcinogens to the potential maximum exposed individual. The risk assessment would be based on estimated HCl, Appendix VIII metals (antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, and thallium), and particulates emissions at maximum chlorine, metals, and ash feed rates. Opening of the emergency vent, even during a situation to prevent fire or melt down (e.g., damage to air pollution control equipment, threat to employee safety), would result in a permit violation and may be subject to enforcement action.

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Response to Letter 5 Continued

5-6 The APLC reference was listed under U.S. Air Force Logistics Command; in the references on Page 8-7 of the Draft EIS. The Vitro Tailings EIS, from which the Clive site total suspended particulate (TSP) data were taken, does not specify whether the annual average is an arithmetic or geometric mean.

5-7 The Draft EIS on Pages 4-13 through 4-15 contains considerable detail on the model inputs.

5-8 Please refer to Response to Comment 5-2 for a discussion of the wind field used in the air quality modeling.

5-9 The expected facility emissions would be less than 250 tons per year for all pollutants. As such, the source will not be subject to Prevention of Significant Deterioration (PSD) rules. However, the impacts do comply with Class II PSD increments at all alternative site locations.

5-10 The ERT study mentioned was conducted as part of this Draft EIS and is not a separate report. The text on page 4-20 has been clarified in this regard (see Section 3.1 in this Final EIS).

Letter 5 Continued

6 Some minor points

5-6 Page 3-5 The reference for APLC 1985 is missing. Also, are TSP data reported in arithmetic or geometric means?

5-7 P 4-13 Dispersion model inputs should be listed

5-8 P 4-16 Because of the proximity of the Salt Lake Airport site to the lake, the use of these data to draw conclusions about Cedar Mtn sites is inappropriate. Proper modeling of the wind field is needed.

5-9 P 4-17 Table 4-5 should compare with Class II PSD increments for sulphur dioxide and particulates rather than NAAQS.

5-10 P 4-20 The ERT study should be referenced.

Thank you for the opportunity to review this document. We hope you will find our comments useful in the preparation of the final EIS.

Christopher A Bittolf Conservation Co-Director

Mary C G Fleming Conservation Co-Director

BEST COPY AVAILABLE
March 22, 1988

Kent Conn
Acting State Director
Bureau of Land Management
Salt Lake District Office
2370 South 2300 West
Salt Lake City, Utah 84119

RE: APUUS Industrial and Hazardous Waste Treatment Facility DEIS, Tooele County

In Reply Please Refer to Case No. K935

Dear Mr. Conn:

The Utah State Historic Preservation Office has received for consideration the above listed project. We understand that the results of a Class III intensive level survey of all proposed development sites will be submitted to your office, and we look forward to receiving that. Until the results of the Class III intensive level survey are received, we have no further comments on this project at this time.

The above is provided on request as outlined by 36 CFR 800 or Utah Code, Title 63 1B 37. If you have questions or need additional assistance, please contact me at (801) 533-7039, or 533-6017.

Sincerely,

[Signature]

A Kent Powell
Deputy State Historic Preservation Officer

AKK.K935/5272V OR

Thank you for your letter.
Mr. Don R. Zeller, District Manager
BLM Salt Lake District
2370 South 2300 West
Salt Lake City, Utah 84119

April 6, 1988

Dear Mr. Zeller:

Concerning the Draft EIS of Aptus Industrial and Hazardous Waste Treatment Facility:

We of the Issues Committee of Utah Nature Study Society strongly object to the statements that Utah will need three incinerators to burn its approximate 30,000 tons of hazardous waste Utah generates per year. Please answer:

1) Why, if Aptus capacity is 50,750 tons per year and Utah generates only 30,000 tons per year does Utah need three incinerators?
2) How did this decision get made?
   a) Was this decision made at some level of State or Federal bureaucracy?
   b) Was this decision made at some legislative branch of government?
   c) Was this decision made at some executive branch of government?
3) Why can Aptus be required to burn all of Utah’s incomerable waste?
4) Since the radius of handling waste is a 500 mile distance, what are the states in this radius using with hazardous waste?
   a) What hazardous waste proposals are occurring in each of these states and what is the capacity?
   b) What hazardous waste is each state producing that could be incinerated?
5) Is Utah being selected as a hazardous waste center of the West?
   a) Is this because there has never been regulation of industry in Utah?
   b) Is this because Utah can burn hazardous waste?

None of the above questions were addressed in the Draft Environmental Impact Statement. Yet there now appears to be three proposals for large scale incineration in Utah: the Moab site by an e-official of the Environmental Protection Agency; the Milford-Jon County site by the scandalous Pollins Engineering; and the Tooele County site by Aptus. A mere coincidence?

It is interesting that Kennecott can produce 80,000 tons of sulfur dioxide a year; that Watts can produce 60,000 tons of chlorine gas and 7,000 tons of hydrochloric acid a year and yet there is no effort in Utah to reduce these amounts. Now more production, albeit in much less quantities is being proposed. It seems that Utah should reduce its present pollution before

Please refer to Response to Comment 4-1 for a discussion of the number of incinerators needed in Utah.

Aptus could receive wastes from any generator, as long as the incinerator is permitted to incinerate those wastes and the wastes are properly manifested. It is the generator’s determinations on how his wastes will be disposed of, whether to contract with an outside firm, and which outside firm to contract with for disposal. Being an independent private business, Aptus cannot be required to accept wastes from any generator, nor can any generator be required to contract with Aptus.

There are no state or federal regulations which could require all of Utah’s incomerable wastes to be burned in the Aptus incinerator. Refer also to the preceding response.

The status of hazardous wastes generation and disposal in each of the states within an 800-mile radius of the Tooele County site is a highly complex problem that is subject to political uncertainties and not directly related to the analysis of the potential impacts of the proposed Aptus incinerator. Thus, it is beyond the scope of this EIS.

Please refer to Section 1.1.3 in the Draft EIS for a discussion of the regulations that apply to the proposed Aptus incinerator.
any further additions are made. Then there is the old Geneva Steel plant in Provo which produces toxic gases and there is no effort to get the pollutants under control. In fact, the pollutants can obtain special utility rates that are not available to residential and small business and agricultural consumers and these rates are approved of by State government. Yet will State government appreciate large billboards in Arizona, Colorado, Nevada, Idaho, and Wyoming announcing the Hazardous Waste and Industrial Pollution capital of the west? Yet these decisions are being made and

7-6 The Draft Environmental Impact Statement goes to great length in showing that such incinerators are safe and that Aptus has a good record. Perhaps the Draft EIS should explain what happen to Rollins Engineering in Louisiana and Texas and state how this could not occur in Utah. Assurances are given for intensive environmental monitoring. Yet we can not even operate nuclear power plants or the space shuttle program, Where are the trained personnel coming from? What will be the qualifications? Will they be allowed to sleep and take drugs on the job? There is mention of monitoring drivers of the hazardous waste trucks for alcohol? Will they be monitored for drugs also? At this time it appears that instrumentation has exceeded the technicians ability to run the machines.

7-7 On page 4-7, the version of the plant is double the size at Coffeyville. Is this large plant in operation elsewhere? It seems that the nuclear power industry began to fall when the plant size increased.

7-9 Would the hazardous waste facilities locate in Utah is there were a $10 per ton commercial disposal fee? What do the states in the West charge?

7-10 One page 4-71, there is mention of Biological Resource mitigation. Utah Nature Study Society recommends that Measure D be added. A thorough biological survey analysis will be conducted to determine the presence of previous unknown plants or genetic variants of existing plants. The survey will include repeated visits through one growing season by a recognized authority on Intermountain flora. The rationale for the request is that the Great Basin is the home of more matile native plants than any other comparable region of North America. Likewise, the common native plants are evolving into new forms and new species at a very high incidence.

7-11 An accident scenario that should be discussed is a single truck rollover in which all the contents of hazardous waste end up in Mountain Dell reservoir at night and the contents end up in Salt Lake City's drinking water the next morning.

7-12 Perhaps the most alarming aspect of this entire proposal is the efforts at assuring the public that no accidents will occur. Yet if this is the case, these incinerators do not have to be located in the middle of nowhere but in urban areas as by the oil refineries in North Salt Lake. Just why are these facilities located in the middle of nowhere?

7-13 Members of Utah Nature Study Society recognize the need to get the toxic material out of the environment. It recommends that burning on site occur at the site of location and production first. Second, it recommends that in the case of Utah, only one incinerator handle all of Utah's production. And third, it recommends that synthesis of toxic material cease.

There is no indication from the State of Utah or Tooele County that the Aptus incinerator facility would receive "special tax breaks."

Existing state and EPA regulations mandate close scrutiny and monitoring of commercial incinerators. Aptus' track record and policy is to abide by or exceed the regulations. Aptus has no intention of relaxing its vigilance toward the safe handling and treatment of hazardous waste.

7-8 All Aptus employees are screened periodically and randomly for alcohol, illegal drugs, and prescription drug abuse. Aptus has an internal training program. All employees must participate in orientation training; plant process employees must take safety and compliance training within 90 days of hire. Annual refresher training is also mandatory. It is possible that the Utah personnel will be trained at the Aptus Coffeyville, Kansas facility. In 1986, the supervisors and operators for the new Kansas plant were trained at a similar plant at GSB near Munich, West Germany.

A 100-million British thermal unit (Btu) system is proposed for Utah. This is a typical size commercial incineration system. There are two identical plants in operation in West Germany, one is located at Herren and one at BARG in Ludwigshafen. Chemical plant incinerators currently in operation in the United States range in size up to 160-million Btu. Cement kilns are larger than the proposed Aptus incinerator in terms of throughput. There has been no discussion of the correlation between size of kiln and safety.

7-9 The analysis in the Draft EIS was based on a $3/ton commercial fee for hazardous waste that was imposed recently by the State of Utah. Please note in Comment 20-8 that the Utah Bureau of Solid and Hazardous Wastes (UBSHW) has indicated that Utah's fees have been increased to $6/ton for in-state hazardous waste and $9/ton for out-of-state hazardous waste. Ten percent of this fee goes to the county for overall compliance activities which can include monitoring. Please refer to Section 3.1 of this Draft EIS for additional information on the fee structure.

7-10 Your comment regarding an additional mitigation measure for vegetational survey analyses is noted. The vegetational communities located at the three alternative sites are not considered unique to the West Desert. Legislation currently protects plant species listed as threatened or endangered or those proposed for listing, according to the Endangered Species Act of 1973. As stated in the Draft EIS, no federal or state-listed threatened, endangered, or candidate plant species are known to occur within the proposed project area.
Members of Utah Nature Study Society also know that what starts off as a
well-run industry at Aptus suggests...of itself can end up as a subsidiary
of a poorly run but highly profitable company as Rollins Engineering.
Thus we have in Utah no assurance of environmental protection and improvement
or that the Aptus incinerator will be operated with diligent hands.

Sincerely,

Peter Novingh, Issues Chairman
Utah Nature Study Society

The probability of a spill of hazardous wastes into Mountain Dell Reservoir, or any other water supply reservoir, as a
result of a truck accident is extremely remote (see Response to Comment 21-6). For this reason, Mountain Dell Reservoir
was not specifically discussed in Section 4.2.1 of the Draft
EIS. However, if such a spill were to occur, the effects of
that spill would depend on a large number of factors, such as
the volume of waste spilled, the toxicity of the waste, the
solubility of the waste, the specific gravity of the waste, the
breakdown of the waste in water, etc. Following a spill,
the State Highway Patrol would coordinate the spill response,
Salt Lake City and Aptus would dispatch their spill response
teams to the location, and spill containment and cleanup
procedures appropriate for the type of material spilled would
be implemented. It would take the Salt Lake City Hazardous
Materials Team approximately 15 minutes to respond to a spill
(Blythe 1988). Water quality samples would be taken to
determine if state drinking water quality criteria were
exceeded for any parameters related to the spill. If criteria
were exceeded, steps would be taken to prevent introduction of
contaminated water into the municipal water supply system.
The water could not be used for domestic supply until it met
state criteria; the length of time required could be several
days to several weeks. Aptus would be responsible for
cleaning up the spill, ensuring that the water is properly
tested, and working with the affected water utility to provide
alternative sources of water, if required.

In other states and other countries, incineration facilities
have been located closer to urban areas. Tooele County,
through its citizens and elected officials, designated an area
around two existing landfills (Vitro and USPFC) as...hazardous waste (see Map 1-1 in the Draft EIS).
The remote
location of this area was thus selected by Tooele County.
However, Tooele County did not select any of the three
alternative sites for the Aptus facility. Two of these sites
are located in Tooele County's West Desert Hazardous Industry
Area.
Response to Letter 8

Best Copy Available
April 13, 1988

Memorandum

To: District Manager, Salt Lake District (UT-020)

From: Air Resource Specialist, Colorado State Office (CO-933)

Subject: Apts Industrial and Hazardous Waste Treatment Facility EIS

Bil Hawks and Shelia Barber of Apts recently described their proposed project to a meeting of the Rocky Mountain States Section of the Air Pollution Control Association. The following individuals asked me to have copies of the Draft and Final Environmental Impact Statements mailed to them.

Larry D. Fasher
Environmental Manager
Martin Marietta Astronautics Group
P.O. Box 179
Denver, CO 80201

Raylan M. Roetman
Associate
5655 South Yosemite Street
Suite 104
Englewood, CO 80111

J. Louis York
Consultant
3557 South Ivanhoe Street
Denver, CO 80237

Clifford J. Lewis
Technical Director
Continental Lime Inc.
P.O. Box 356
6677 West Colfax Avenue
Lakewood, CO 80214

Frank A. Rogers
Senior Air Pollution Control Spec
Colorado Department of Health
4210 East 11th Avenue
Denver, CO 80220

Thank you for your assistance.

Thank you for your letter.

BEST COPY AVAILABLE
Memorandum

To: Mr. Deane H. Zeller, District Manager, BLM Salt Lake District
   2370 South 2300 West, Salt Lake City, Utah 84119

From: Acting Regional Director
       Bureau of Reclamation

Subject: Review of Aptus Industrial and Hazardous Waste Treatment Facility,
         Draft Environmental Impact Statement, Tooele County, Utah (DES 88-8)
         (Environmental Impact Statement Review)

We have no comment concerning the subject document.

Thank you for your letter.

cc: Commissioner
    Attention: WD-150

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MEMORANDUM

TO: District Manager, Salt Lake District, Bureau of Land Management, Salt Lake City, Utah

FROM: State Supervisor, Fish and Wildlife Enhancement, Fish and Wildlife Service, Salt Lake City, Utah


The Fish and Wildlife Service has no comments on the Draft Environmental Impact Statement for the Aptos Industrial and Hazardous Waste Treatment Facility.

cc: BFA (ERT)/Washington, D.C.

Thank you for your letter.

Claudia Johnson

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Letter 12

Mr. Deane H. Zeller
District Manager
BLM Salt Lake District
2370 South 2300 West
Salt Lake City, UT
84119

April 20, 1988

Dear Mr. Zeller,

The following are comments on the:
Draft environmental impact statement for
Aptus Industrial and Hazardous Waste Treatment Facility

General comments:
The Aragonite site is not suitable for the siting of a hazardous waste incinerator. The Aragonite site is just one mile from the scenic Cedar mountains WSA. At times, the maximum ground level pollution will occur within the WSA. Considering the amount of toxins that will be released from this facility over its lifetime, I feel that siting it so close to pristine country to be foolish. Also the views from the WSA will be impaired by the plume emitting from the incinerator. At the Clive site, these impacts are much less. Also, the Vitro tailings are adjacent to the Clive site and are a much better neighbor for such a facility.

A major deficiency of the EIS is that virtually no work was done to evaluate possible process upset impacts. Only one process upset was even mentioned; loss of power. The conclusion that a loss of power would not result in any added emissions of toxics is not supported in the EIS. With the loss of the main fan, what evidence is there that the toxic gases would remain in the kiln for the 2-second dwell time at 2200 degrees F? The system would be operating at a positive

Response to Letter 12

In the RCRA/TSCA permit application, a discussion of process upsets is mandated. The Draft EIS assessed the worst possible case, which is loss of power, where a time delay of 5 minutes might occur before the diesel-fired standby generator could come online. Aptus has indicated that a more typical time would be approximately 2.5 minutes. Other process upsets are detailed in the permit application and summarized on Table 3-1 in Section 3.2 of this Final EIS. The USDBM and EPA may require that additional upset conditions be analyzed by Aptus prior to granting a permit.

In the event of power loss, the gases that are in the system would flow from the kiln to the afterburner where auxiliary fuel would be used to maintain temperature at 2200°F. The gases would continue to flow through the system as the hot duct creates a chimney effect. The automatic system is programmed to start the standby generator, combustion air fan, and auxiliary fuel burner in under 2 minutes to avoid the pyrolytic conditions.

Review of upset conditions and appropriate responses by the incinerator operator is the responsibility of the EPA and USDBM for the TSCA and RCRA permit applications, respectively. Public review and comment related to upset conditions or any other aspect of these permit applications is encouraged.
pressure, what would prevent gases from exiting at the kiln ends? As soon as the power was lost the oxygen supply would deplete quickly, leading to pyrolytic combustion which would not completely burn the organic materials. The conclusion that a loss of power would not result in a release of toxic compounds is false. Further study of this condition is certainly warranted.

Perhaps even more importantly, it points out that the environmental impacts of non-steady state operation were not even considered. A properly operating kiln does a pretty good job of hazardous waste destruction. However an improperly operating kiln is a genuine hazard. A study of abnormal operating conditions and their environmental impacts is sorely needed. Examples of abnormal operating conditions include: Rupture of one or more bag filters releasing increased particulates (toxins and heavy metals) and/or reducing the efficiency of downstream gas cleaning components.

Nearby lightning strike temporarily scrambles electronic control systems. Fuel supply is interrupted to burners. Rapid flash of combustible material causes pressure spike in kiln. Water supply to Quench tower is interrupted. All of these conditions are possible and could lead to a release of toxic and hazardous materials. The potential for these releases along with the effects should be evaluated further in the EIS.

I feel that the continued grazing close to such a facility is unwarranted. The land is of only marginal value, I suggest that a larger portion of the section be closed to grazing. The land should be fenced off to prevent both domestic livestock and wildlife from using this area. How large of an area should be fenced? The data from the particulate deposition study should provide an answer.

These comments indicate why the incinerator facility is "over-designed." For example, 4 seconds residence time is provided versus 2 seconds required by TSCA, and normal excess air in the kiln during operation is 100 percent while design is 150 percent. Pressure spikes in the kiln are monitored and are controlled through the interlock system which cuts off waste feed to the burners, or takes other measures as the interlock system logic dictates. The interlock system is designed to minimize the impact of upset conditions and to prevent the release of hazardous materials. The RCRA/TSCA permit application also discusses automatic cutoff equipment associated with failure of the baghouse filters, fuel interruption to the burners, quench tower water supply interruption, and other scenarios of equipment failure.

As noted in Response to Comment 12-16, that follows, the particulate matter released to the atmosphere from the incinerator would be small in size and would not be subject to significant deposition. Therefore, fencing of the area to restrict grazing would be unnecessary.
Letter 12 Continued

Response to Letter 12 Continued

12-4 A system for monitoring the DRE should be established. Also some blind testing of the lab on a continuing basis seems prudent.

12-5 The EIS only addresses the DRE of n specific compounds, it does not take into account that other toxic compounds are actually produced during the incineration process.

I disagree with the statement on page 111 that three incinerators are necessary to dispose of Utah's hazardous waste. With this incinerator alone, Utah will become a net IMPORTER of incinerable wastes! Utah will be burning 20 tons more incinerable waste than it produces.

12-6 The facility must perform field audits (performance or system audits) during the trial burn. System audits attempt to assure that the trial burn sampling is being performed in accordance with the methods specified in the approved trial burn plan and the approved quality assurance performance plan. Performance audits check the preparation of known solutions of analytes to be submitted for analysis and the accuracy/reproducibility of analytical results. The Utah Department of Health requires all analytical data submitted to the Division of Environmental Health to be performed by a laboratory certified by the Utah Department of Health Laboratory. Each laboratory must be recertified on an annual basis. Please refer to Comment 19-1 and Response to Comment 19-1 and the response to the statement by Nancy Fox (Section 2.1 in this Final EIS) for further discussion of monitoring.

The principal organic hazardous constituents (POHCs) evaluated in the Draft EIS were selected based on the difficulty in incinerating the compound, anticipated presence in the waste in significant concentrations, and relative toxicity of the compound. EPA and the State of Utah may establish additional POHCs at their discretion for formal testing of destruction removal efficiency (DRE) in the trial burn.

12-7 The "pre-acceptance" procedures are a procedure used to verify that the waste is the same waste as indicated on the "Waste Characterization Form" and the manifest. The preacceptance procedures are outlined in the Waste Analysis Section of the permit application. A total of seven "Mandatory Analyses" beyond physical description are conducted: pH, water mix test, ignitable screen, waste compatibility, sulfide reactivity test, reactive c's, oxides screen, and radioactivity. The facility will also conduct "Supplemental Analysis" (e.g., quantification of heavy metal concentrations, viscosity, heat value, solids/ash content, organically bound chlorine, free sulfides, and specific compounds determined by a GC or GC/MS analysis. The "Supplemental Analysis" and any additional analyses specified in the permits will provide the information to enable the facility to store, treat, or dispose of the waste in accordance with the permit conditions (RCRA/TPCA/Air Quality). The RCHA permit (TPCA) will limit waste feed rate of PCBs) will specify a maximum total incinerator feed rate and also limit specific feed rates (e.g., ash, chlorine, fluorine, minimum heating value, etc.). The permit waste feed limits will be based on the waste feed rates demonstrated during the trial burn as meeting the performance standards. The RCHA permit will require the facility to quantify through analyses the concentrations of specified parameters (e.g., ash, chlorine, minimum heating value, etc.) for each batch feed to the incinerator. The dispersion modeling was done at design conditions which are greater than nominal feeds.

The spray dryer-baghouse is designed to remove particulates to 0.02 grains/dry standard cubic feet, corrected to 7 percent oxygen. The Coffeyville plant is currently designed to meet the RCRA standard of 0.08 grains/dry standard cubic feet, corrected to 7 percent oxygen.

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Letter 12 Continued

12-7 Cont.
high efficiency. Is what very high efficiency? What is the removal efficiency at the Coffeyville plant?

12-8 No mention is made of the materials of construction of the gas cleaning equipment. This is a very corrosive environment and the materials of construction are important to the integrity of the plant.

12-9 Section 2.7 Why isn't the electronic battlefield considered interrelated?

12-10 The analysis of the Skunk Ridge site did not include the workers at the Marblehead plant.

12-11 The peregrine falcon is discussed for the Clive site but it is never mentioned at the other sites. The peregrine is more likely to be a factor at the other sites because of the proximity of the Timple Springs hatch site.

12-12 What type of liquids would be burned in the afterburner?

12-13 Since it is impossible to characterize every compound that is emitted from the stack, is there available a general number that would indicate total carbon (except CO and CO2)? I am concerned that just because the POHC is destroyed, it doesn't create something that is also hazardous. How complete is the combustion of the organic material?

12-14 TSCA wastes are incinerated at a higher temperature, so why

Response to Letter 12 Continued

12-8 The materials of construction are outlined in the RCRA/TSCA permit application. Fiberglass-reinforced plastic and rubber-lined carbon steel are the dominant materials of construction.

12-9 The electronic battlefield proposal was considered, but it did not meet the criteria presented in Section 2.7 of the Draft EIS for interrelated projects. Specifically, it was determined that the proposal would not compete for the same resources and would not have overlapping effects that would cause it to interact with the Aptus proposal to generate cumulative impacts.

12-10 The Marblehead facility is identified as a sensitive receptor on Map 3-2 of the Draft EIS. The analysis of air quality impacts associated with the Skunk Ridge Alternative appears in Section 4.3 of the Draft EIS (Page 4-51 and following). The air quality impacts at sensitive receptors (including the Marblehead Plant for the Skunk Ridge Alternative) are shown on Table 4-8 on Pages 4-54 and 4-55.

12-11 Your statement concerning the peregrine falcon being of greater concern for the Aragonite and Skunk Ridge Alternatives than for the Clive Alternative, due to the proximity of the Timple Springs hatch site, is correct and was so addressed in the Draft EIS. Please refer to Pages 3-17 and 3-42 for descriptions of peregrine presence near the Aragonite and Skunk Ridge Alternatives, respectively. As discussed in Section 3.3.4 of the Draft EIS, peregrine falcon presence near the Clive site is unlikely due to the distance from the Timple Springs hatch site.

12-12 Atomizable liquids, aqueous waste, and auxiliary fuel are burned in the afterburner.

12-13 The Draft EIS considered emissions of dioxins and furans, which are products of incomplete combustions (PICs) formed during the incineration process. Dioxins and furans are generally accepted as the most toxic of potential PICs. The risk posed by any PIC emission depends on both the quantity and toxicity of the individual toxic components of the emissions.

RCRA will address the monitoring of PICs indirectly through the continuous monitoring and limitation of CO emissions as specified in the RCRA permit. CO has been determined the "best available" indicator of combustion efficiency and a "conservative" indicator of combustion upset. (Data has shown a general correlation between a deterioration in combustion efficiency during upset conditions and the increase in CO and total hydrocarbon emissions.) Available emission data indicates that PIC emissions do not pose significant risks when incinerators are operating under optimum conditions.
Letter 12 Continued

12-14
Cont.

Is thermal NOx values the same as for RCRA wastes?

12-15

p. 4-10 Do any other facilities achieve 90% SO2 reduction with this
gas cleaning set-up?

12-16

p. 4-14 The deposition of particulate matter was not evaluated in
the dispersion model. On pages 1-11,12 there were over 15 comments
during the scoping process that addressed this area specifically.
The deposition of particulate matter should be evaluated.

p. 4-23 Statement near top of page “Air emissions modeling (Section
4.2.1) indicate that soils would not be impacted significantly by
stack emissions.” See previous comment: The deposition of
particulate matter was never evaluated in the air emission model.
The conclusion reached in this section is not supported in the
referenced section.

p. 4-25 There appears to be an error in one of the probability
numbers shown in the first full paragraph (.065 spills is not
consistent with one chance in 160,000).

Response to Letter 12 Continued

Therefore, CO emissions will be limited to a specific RCRA
level which represents high combustion efficiency operations
to ensure operation under optimum conditions. Exceedance of
the RCRA CO emission limits will activate automatic waste feed
cutoff and other mitigating procedures. If the facility
cannot demonstrate compliance with the RCRA-specified CO
emission limits during the trial burn, the facility must
demonstrate through a risk assessment of unburned hydrocarbons
that the facility CO emission above the RCRA limit would not
pose a risk to public health.

12-14

The trial burns at Coffeyville measured 5 pounds per hour
(1lb/hr) thermal nitrogen oxides (NOx) while incinerating TSCA
waste. The value of 10 lb/hr for TSCA and RCRA wastes at the
Tooele County incinerator is a conservative estimate.

12-15

Overall design for sulfur dioxide removal is 94.1 percent of the
expected 300 lb/hr of SO2 gas inlet to the wet scrubbers.
The wet scrubber supplier will guarantee 90 percent removal,
and references are available.

12-16

The particulate matter released to the atmosphere from the
incineration stacks would be extremely small in size and not
subject to significant deposition. Current federal and state
hazardous waste regulations do not require particulate
deposition monitoring. However, Tooele County is considering
such monitoring as a condition of the County’s Conditional Use
Permit for the Aptus facility.

12-17

See Response to previous Comment 12-16

12-18

Based on your comment, text revisions to Page 4-25 in the
Draft EIS are included in Section 3.1 of this Final EIS.

Sincerely,

Mark D. Precup
Utah Sierra Club
3261 W. Royalwood Drive
Taylorsville, Utah 84118
(801) 969-4044

BEST COPY AVAILABLE
Letter 13

Response to Letter 13

Mr. Deane H. Zeller
District Manager
BLM Salt Lake District
2370 South 2300 West
Salt Lake City, UT 84119

Dear Sir:

I have reviewed the Aptus DEIS and have the following comments:

1. Emissions:

   a. No mention is made of day-in, day-out inversion fog conditions which frequently occur during the winter, as commuters to Dugway and TAD South Area can verify. Assuming the average incineration operation of more than 19 hours per day, the massive emissions would accumulate locally over days in much larger concentrations than are presented in the tables. Moreover, research last fall suggested that the affinity of pollutants to the minute droplets comprising fog forms a dangerous vapor that hovers at ground level, depositing the pollutants on all surfaces it contacts.

   b. The EPA dispersion models are not explained very well in the DEIS. I presume the concentrations at sensitive receptors presented in the tables are average concentrations. This DEIS should also present the predicted concentrations in worst-case climatic conditions, since any environmental and health risks associated with these conditions will be enhanced.

   c. No mention is made of the accuracy of the EPA dispersion models used. A model is useless unless it can reasonably approximate the real world.

2. Spills:

   a. The accident and conditional spill probabilities used by Aptus are assumed to be constant throughout the life of the project. My analysis of DOT figures on the number of accidents resulting in spills shows that these spills increased exponentially between 1975 and 1987 (P < .0001, r^2 = .90). The relationship between this exponential increase and the rate (assumed to be constant) per mile should be examined. If the total number of hazardous waste transport miles per year has increased at a rate less than exponential, then the assumption of constant accident-spill probability is violated and any forecasted probability derived from constant spill rates of the last few years will be underestimated.

13-1 Please refer to Response to Comment 5-3 for a discussion of impacts during wintertime stagnation periods.

13-2 The air quality impacts reported in the Draft EIS are for the maximum model prediction for each averaging time based upon 1 year of data. As such, the reported concentrations represent the worst-case conditions observed in that year.

13-3 It is generally accepted that the EPA models used in this study are conservative, that is, they over-predict the expected concentrations.

13-4 According to the U.S. Department of Transportation (DOT), Office of Information Assistance, there was a nationwide increase in the number of truck accidents that resulted in exposure (incident) involving hazardous wastes (versus hazardous materials) between 1982 and 1986; however, there was a decrease in the number of incidents involving hazardous materials during the same period. It is reasonable to assume that the number of loads of hazardous wastes increased steadily over these years resulting in an increase in the number of incidents. Thus, an increase in the rate of incidents involving hazardous wastes does not appear to be occurring and should not have affected the spill probability used in the Draft EIS.
b. The Department of Transportation's working rate of \( \dot{A} \times 10^{-6} \) hazardous waste accidents resulting in spills is 50 percent higher than the rate used by APTUS. If the rate of tanker truck accidents figure I have heard to be used by the American Petroleum Institute \( (1.4 \times 10^{-8}) \) is used and multiplied by DOT's working conditional probability of a spill given an accident \( (1.3) \), the resulting accident-spill rate is five times the rate reported by APTUS. Given these figures and assuming a constant probability of a spill (discussed in a), point estimates of 2.7 and 9 accident-induced spills would be computed for the life of the facility (one accident every 11.1 and 3.3 years) using DOT and American Petroleum Institute figures, respectively. Both figures are substantially greater than APTUS's rate, with the latter figure being especially alarming. In any case, use of DOT figures should be preferable to the use of APTUS's for consideration by a federal agency.

13-5

APTUS' actual operating experience using trucks designed and built to their specifications and drivers trained to their standards was felt to be the most appropriate basis for developing a spill frequency for the Draft EIS. Other hazardous material haulers (such as oil companies) would be expected to have higher rates of accidents resulting in spills because they take fewer precautions.

13-6

Thank you for your expansion on the spill probability. This additional information does not change the conclusions reached in the Draft EIS.

13-7

For the years 1985 through 1987, APTUS experienced one non-accident spill. The incident concerned an outside transporter truck that arrived at the APTUS Coffeyville parking lot with a leaking drum. PCB material was released onto the parking lot but was less than the reportable quantity; however, APTUS reported the spill to the appropriate authorities. APTUS then quarantined the truck, initiated cleanup procedures, and did not allow the truck to leave the facility until totally decontaminated. This gives a much lower non-accident spill average \((0.01\text{ spills per }100,000\text{ miles})\) than the DOT statistic you cited. APTUS' trucks and containers are specifically designed to prevent non-accident spills.

13-8

It is acknowledged that the probability of an accident resulting in a spill is greater in an urban area than in a rural area. In fact, the spill that APTUS experienced took place in an urban area. The spill frequency of 0.3 million vehicle miles traveled (VMT) is an average for all types of highway traveled and would tend to under-estimate the frequency in urban areas and over-estimate the frequency in rural areas. The statistics available to APTUS do not allow the refinement of spill probability by highway type.
Letter 13 Continued

13-9. I could find no reference to the size of a spill that would elicit a response; in reality, spills range on a continuum from microscopic to thousands of gallons.

13-10. A spill could occur at any point along a highway used by a hazardous waste transport truck. This EIS only addresses the incineration facility local area as the affected environment. Appendix B presents health risk assessments for humans. A similar appendix presenting a detailed spill risk to non-human biotic systems is appropriate.

13-11. Page 1-5, para 1, sent. 2: The statement that the high cost of transportation encourages illegal disposal is deceptive. CED's Environmental Quality, 1980 reports that hazardous waste incineration cost $75-2000/metric ton, by which the per-ton cost per trip is small in comparison, especially in relation to the upper figure (which I would guess has inflated in the last eight years). It is more plausible that the high cost of legal waste disposal in general encourages illegal disposal.

13-12. Page 2-36: paras 2-3 (unscheduled truck deliveries): The policy appears to be that Aptus is willing to accept shipments from sources with the only stipulations being a post-shipment contract and payment, and a cargo and source list. This raises the possibility that the driver would not have to be certified or trained in accident/incident management, per page 2-41, para 3. This policy encourages illegal or at least substandard transport, which is more likely to result in injurious spills. The document should address and explain this issue.

13-13. Page 4-31, para 1, last line: replace "prevent" by "minimize."

13-14. If the incineration facility is built at the Aragonite site, the close proximity of the massive cooling pond and plume will be a visual affront to the wilderness character of the Cedar Mountains WSA. If the conditions mentioned in comment 1 foster deposition of toxicants in this WSA, eventual impacts on the vegetation within the WSA will detract from the wilderness character of this WSA.

In conclusion, I suggest that a more rigorous quantitative analysis be conducted on transportation risks. The EPA dispersion model used is inadequately explained and supported as a decision-making tool. Most seriously, the DEIS fails to address worst-case environmental conditions in which emissions will locally accumulate and/or deposit. The risks that seem more likely to occur will have a greater impact on the environment, and merit attention in the FEIS.

Sincerely,

H. B. Harvey
Ecological Statistician

Response to Letter 13 Continued

13-9. Under RCRA, a spill is defined as 10 pounds. Under CERCLA and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), reportable quantities vary by material. The insecticide parathion has a one pound limit as a reportable quantity.

13-10. The potential affected environment along the possible transportation routes would extend for 800 miles from the alternative site. It was necessary to limit the area considered based on the ability to predict the frequency of trucks hauling wastes would pass through an area. For practical reasons, this was placed at Salt Lake City on the east and Wendover, Utah on the west, where transportation routes could divide. Potential impacts to sensitive resources (e.g., populated areas, wetlands) outside of this area were addressed in a generic, qualitative manner. Please refer to relevant resource sections and Appendix B in the Draft EIS. The low probability of a spill into a unique or sensitive biological system and the lower significance of potential impacts did not make the level of analysis given human receptors (e.g., increased cancer risk) warranted for non-human receptors. Please refer to the Response to Comment 7-12 for further discussion of procedures following a spill into a lake or reservoir, a potentially sensitive biological system.

13-11. The transportation distance between the generator and the incinerator has a direct influence on costs. Why some companies elect to illegally dispose is speculative. If cost is a factor, then the geographic placement of incinerators may assist in minimizing illegal disposal.

13-12. Aptus maintains its own truck fleet and owns drivers. All non-Aptus drivers must pass the requirements discussed on Pages 2-16 and 2-17 in the Draft EIS. All approved drivers are trained in accident/incident management, unscheduled truck deliveries. Aptus believes that the environment is better served by its willingness to hold a truck and verify its contents and destination than to discard it away. State officials are notified whenever an unscheduled vehicle arrives at the facility. Aptus has never had the type of "unscheduled truck delivery" which you allude to in your comment at its Coffeyville, Kansas facility.

13-13. Based on your comment, text revisions to Page 4-31 in the Draft EIS are included in Section 3.1 of this Final EIS.

13-14. Please refer to Response to Comment 5-3 for a discussion of impacts during wintertime stagnation conditions, and Response to Comment 12-16 for a discussion of the potential for particle deposition. Based on the visual resource assessment presented in Section 4.2.8 of the Draft EIS, the small water vapor plumes that would be visible at the incinerator facility only during very cold weather would not significantly affect the quality of the viewed from the Cedar Mountain Wilderness Study Area (WSA). The proposed stack would be about 100 feet above grade, while the proposed cooling tower would only be about 18 feet above grade. The plumes from the stack and cooling tower would be an estimated 100 to 300 feet long and would vary greatly depending on atmospheric conditions. Evaporation of any plumes is expected to be very rapid under most conditions. For comparison, the proposed cooling tower would be one-tenth the size of a typical power plant cooling tower and about the same size as the cooling tower currently in use at the Anza Magnesium plant at Rowley.
April 23, 1988

Mr. Deane H. Zeller
District Manager
BLM Salt Lake District
2370 South 2100 West
Salt Lake City, Utah 84119

RE: Comments on the EIS Draft

Dear Mr. Zeller:

I feel that you should hold a public hearing in Wendover for both Utah and Nevada residents. The citizens here need to be informed of the possible impacts of the Aptus Industrial and Hazardous Waste Treatment Facility.

The main hazards of toxic waste disposal seem to be associated with the transportation and handling of the hazardous wastes before being thermally disposed of in the incinerator. With this in mind I think that a possible alternative would be to build more incinerators closer to the origins of the toxic waste. This is what the military has done and might be a feasible alternative saving the cost and risks of transportation and handling of the wastes.

Thank You

Paul Wayman
City Council Wendover Utah
(b) 416-657-7727

Thank you for your letter. On May 20, 1988, a public meeting was held in Wendover, Nevada, per your request, to discuss the proposed Aptus facility.
Letter 15

Deane H. Sellier
District Manager
BFS Salt Lake District
170 South 2300 East
Salt Lake City, UT 84109
April 26, 1988

Dear Mr. Sellier,

On behalf of the American Lung Association of Utah I am submitting the following comments on the draft environmental impact statement for the Apto industrial and hazardous waste treatment facility. Some of our concerns raised at the March 17, 1986, hearing are reiterated and additional concerns are presented.

1. **STATEMENT OF NEED OF CAPACITY TO HANDLE UTAH-GENERATED HAZARDOUS WASTES**

The statement that three 30,000 TPF facilities are needed to handle Utah generated incinerable hazardous wastes given as 30,000 TPF needs to be elaborated upon or restated.

2. **THE AMOUNT OF UTAH GENERATED INCINERABLE HAZARDOUS WASTES**

The EIS should state the source of the 30,000 TPF estimate, especially since the figure was given as between 15,000 TPF and 30,000 TPF at the hearing. The EIS should specify what Utah generated incinerable wastes are included in the estimate. Does this figure include all incinerable hazardous wastes generated currently at all sources in Utah, including those generated and currently incinerated to Totee Army post? Does it include all wastes for which there are incinerator plans at Hercules, Dugway, Hill Air Force Base and additional ones at Totee Army post?

3. **HAZARDOUS WASTE MITIGATION: VIEWS OF CITIZENS**

It was stated on page 2-46 that alternative approaches including waste reduction or minimization were not analyzed in this ES because they are not relevant to Apto's proposed project. If more active hazardous waste reduction were to occur in this state and in the country, however, the amount of hazardous wastes to Utah for which incineration capacity is needed would be less and the market for burning wastes generated in other states would be tighter. New proposed Congressional legislation seeks to facilitate and stimulate the reduction of hazardous wastes, as was intended by Congress with RCRA. Economists will also no doubt play a role in reduction of wastes to be burned. The EIS should provide an estimate of the amount of Utah generated incinerable hazardous wastes if moderate reduction were to occur. The 1985 U.S. Congressional Budget Office report, "Hazardous waste management: recent changes and policy alternatives" provides estimates for the amount of U.S. incinerable wastes in 1990 given "waste reduction" and "no waste reduction".

4. **TAX AS A MEANS THAT MIGHT BE ATTACHED**

The Salt Lake area population, given as that of Salt Lake City (163,030) in 1990, is a very arbitrary figure that doesn't relate to the number of people living in the Salt Lake, Davis County area of the Wasatch Front. The Wasatch Front Regional Council gives a population figure for Salt Lake County and South Davis County as 798,956. In 1985, projected to grow to 1,060,195 in 2005. Additional population in Davis and Weber Counties should be included. This population figure is important. The draft EIS refers to the population at risk as that for which the numbers are listed in Table 3-5.
Letter 15 Continued

5. PROBLEMS WITH HAZARDOUS WASTE INCINERATION

A short list of advantages of incineration given on page 14. These advantages are in comparison to disposing of the wastes extracted in the ground. The fourth advantage, that of minimizing liability, is only an advantage to the company and not to the public. Certainly not to city, county and state officials and taxpayers who must pay for the clean-up of unattributed pollution or in terms of health effects. The problems of incineration and a true comparison of incineration to all approaches and methods of handling the country's hazardous waste problem are not mentioned.

6. Timothy Oppelt, in his 1987 paper, "Incorporation of hazardous waste: a critical review", Journal of the Air Pollution Control Association, 37(5): 599-606, referred to other reasons in the draft EIS, does clearly state that there are issues relating to the use of thermal destruction methods for disposing of hazardous wastes. These issues include:

(a) The unknown factor of destruction effectiveness on untested/unique wastes. Current standards and technology relate to the types of wastes currently being burned. However, the character of wastes which may be subjected to incineration in the near future will begin to change, perhaps dramatically." As the EIS acknowledges on page 4-5, the emissions will relate to the waste feed, whose precise characteristics cannot be presently determined and which would change depending on the source of the waste.

(b) Heavy metal emissions: Petals are not burned. Not much is known about actual emissions of metals nor are they currently directly regulated. The particulate emission limit "for proven difficult for a number of operating facilities to achieve." New regulations may not affect this facility and may not take care of the problem.

(c) Emissions of combustion by-products (PC's): New products are formed and emitted during combustion. The extent of the problem is not known. "The completeness of emissions data and, therefore, the adequacy of risk assessments performed using these data", has been questioned.

(d) Real-time performance assurance: None of the surrogates and indicators of incinerator performance being evaluated "is fully satisfactory and little evaluation has been done under true failure conditions." "None of the available real-time monitoring performance indicators appear to correlate with actual organic compound DRC." [p.562]

It would appear that there are many unknown factors with regard to hazardous waste incineration and its potential environmental effects.

6. PC's are not mentioned in the section on air emissions. Even though they are not known, the fact that there will be PC's should be mentioned in the EIS.

7. HEALTH RISK ASSESSMENT

The health risk assessment is too limited. It is given only for transporation related spills, and not for the worst-case spill of a large spill in the most populated area such as the Salt lake Valley. The assessment does not address other health effects than cancer and does not address other exposures such as from the continuous emissions of the operation or from upset conditions. The health assessment is, therefore, not complete.

8. TRANSPORTATION

The projection of the number of probable accidents does not appear to take into account the dramatic increase in vehicular miles travelled expected to occur for...

Response to Letter 15 Continued

15-5 Thank you for your comment. Your concerns will be considered in the final decision-making process. Please refer to Response to Comment 19-8 for a discussion of the disadvantages of incineration and Section 2.8 in the Draft EIS for a discussion of alternatives not considered in detail. There is no single approach that is the "best" for the treatment/disposal of all incinerable wastes, and it is beyond the scope of this EIS to analyze "all approaches and methods." Further, it is up to the waste generator to determine which approach(es) are suitable for his unique situation. These could range from waste minimization to the source of generation to terminal treatment technologies such as incineration. Hazardous waste incineration is an acceptable technology for disposal, and this method is expected to be used with increasing frequency across the country. Federal and state regulations do not identify a specific method to be used. During the preparation of the Draft EIS, the BLM, EPA, and USDHHS concurred that the incinerator proposed by Aptus was appropriate technology for the treatment of the wastes that Aptus has identified in their TSCA and RCRA permit applications. The problems associated with incineration, and Aptus' proposed facility in particular, will be examined in greater detail by EPA and USDHHS as part of their reviews of Aptus' permit applications.

15-6 Dioxins and furans are discussed throughout the air quality sections of the Draft EIS. These are PC's as referenced in your comment. Please refer to Response to Comment 12-11 for additional discussion on PC's.

15-7 Please refer to Appendix B, Health Risk Assessment, in the Draft EIS in which three different spill scenarios are discussed. The first scenario assumes risks from a 70-gallon spill of PCB's within the city limits of Salt Lake City. Also, please refer to Response to Comment 4-8 regarding cancer risk versus exposures from continuous emissions or upset conditions.

15-8 The spill probability was based on operating experience involving all types of roadways, many of which have higher traffic volumes than those currently exist in Salt Lake City. It is agreed that the probability of an accident would increase as traffic volume increases; however, the spill frequency used in the Draft EIS is felt to be representative for the Aptus proposal and adequately assesses impacts. Also refer to Response to Comment 11-8 for further discussion of accident rates.
Letter 15 Continued

all vehicles in the area in 2005 as opposed to 1985. Accident rates surely
relate to the number of all vehicle miles travelled on a road stretch and
not just to number of vehicle miles travelled by the incoming hazardous
waste trucks.

9. HCN EXPOSURE

On p. 4-16 it is stated that worker safety still not be threatened by plant
emissions because presumably the emissions are all going up a tall stack.
What about fugitive emissions? There is no mention of the existence of
fugitive emissions and worker exposure to them.

10. UPTIME CONDITIONS

There is not a thorough enough discussion of uptime conditions. The five
minute example during a specific condition does not relate to all possibilities.
Uptime conditions do occur and do cause problems in operating incinerators.
What will the real effects be of the different kinds and durations of
uptime conditions? The mention of the potential for affecting area populations
(Including the Salt Lake City area population of 160,000) on page 3-7
should be expanded upon.

11. CUMULATIVE IMPACTS

The statement on page 4-71 regarding the number of trucks and rail cars to
be used by USPCI indicates knowledge that USPCI is proposing a much larger
capacity even than that of Aptus (5 trucks per day for USPCI, 9 for aptus)
and yet on page 4-70 it is stated that USPCI emissions are assumed to be
of the same magnitude as Aptus'. This is a puzzling assumption since USPCI
is applying for a total capacity of burning 8 tons per hour as opposed to the
10 tons per hour proposed by Aptus.

...would, again, like to thank you for the opportunity to comment on this draft
EIS. This is the first EIS for a hazardous waste incinerator facility in Utah
and it does begin to shed some light on the issues relating to such facilities.

Sincerely,
Nina Doughtery
Chair, Environmental Health
Committee
American Lung Association of Utah

To further complicate the matter, the Marblehead incinerator site
proposed by USPCI is not within Tooele County's West
Desert Hazardous Industry Area (see Map 1-1 in the Draft EIS). Since
Tooele County would not accept a request for rezoning
outside of the designated area, it is expected that USPCI will
identify a new site within the area at some time in the
future. An incinerator at a new site would probably not use
the same technology that has been proposed for the Marblehead
site. Both these factors, location and technology, would
affect the type, quantity, and dispersion of emissions and thus
would change cumulative impacts. If and when USPCI
proposes a revised project, BLM, EPA, and/or the Utah
Department of Health would conduct a more formal evaluation of
cumulative impacts during their respective permit reviews and should
be able to make a more accurate assessment of this
issue at that time.

Fugitive emissions would be a violation of the RCRA permit
conditions. RCRA requires that the incinerator and all
incinerator-associated equipment be monitored daily for
fugitive emissions, in an effort to maintain compliance with the
RCRA standards. Aptus has indicated in the RCRA permit
application that the incinerator would be operated under
negative pressure to ensure that any fugitive emissions
would be drawn through the kiln, afterburner, and air pollution
control equipment. Aptus also indicated in the application
that fugitive emissions from storing and blending operations
would be drawn through the incinerator (under negative
pressure) during operation and would be drawn through a carbon
filter system when the incinerator is not operating. The
facility would be required to demonstrate that when loss of
air pollution control equipment occurs, the emissions from
waste remaining in the kiln, under worst-case situation, would
not pose a threat to human health or the environment. (See
Response to Comment 5-5 for further discussion of
upsset conditions).

Aptus would also maintain a health monitoring program that
follows the National Institute of Occupational Safety and
Health (NIOSH) protocols. All emissions, fugitive or stack,
would be monitored through the medical surveillance program.

The Draft EIS did not address an entire range of upset
conditions, however, the worst-case operating condition (power
loss) was assessed. A list of possible process upset
diagrams is included in the RCRA/TSOCA application. Please
refer to Response to Comment 12-1 and Table 3-1 of the Final
Draft EIS for their clarification of upset conditions. There was no reasonable scenario that was modeled
for the Draft EIS that indicated any significant impacts
to Salt Lake City. Please note that air quality sensitive
emissions were located at Grantsville, Tooele, Magna, and
Salt Lake City (see Map 2-1 in the Draft EIS) and no
significant air quality impacts were predicted at any of these
receivers for any of the alternatives (see Tables 4-6, 4-8,
and 4-10 in the Draft EIS).

Estimating emissions from hazardous waste incinerators is a
complex undertaking and is influenced by many factors
including the type of waste, concentrations of hazardous
constituents in the waste, effectiveness of pollution control
equipment, etc. The emission assumptions used in the
Cumulative Impacts Section (4.7) of the Draft EIS were
consistent with USPCI's permit application, which was the last
available information on the Marblehead incinerator at that
time. The tonnage of waste treated is not by itself a
reliable indicator of emissions. Because a great deal of the
waste USPCI proposes to incinerate would be contaminated soils
which are heavy in tonnage but contain a low percentage of
hazardous constituents. Since the details upon which to
reliably estimate the USPCI incinerator emissions were not
readily available, the qualitative procedure used to evaluate
cumulative air quality impacts in the Draft EIS was the best
procedure available.
DEPARTMENT OF THE AIR FORCE
HEADQUARTERS, U.S. AIR FORCE
WASHINGTON, D.C.

MR. DEAN ZELLER
DISTR. MAN, DM ATLANTIC DISTRICT
2300 S. 2300 W.
SALT LAKE CITY, UT 84119

Dear Mr. Zeller,

Several Air Force officials have reviewed the Draft Environmental Impact Statement (EIS) for the APTUS Industrial and Hazardous Waste Treatment Facility proposed to be constructed and operated in Tooele County, Utah. We have attached a copy of the letter expressing the concerns of organizations that reviewed the document. Please review these comments and consider them as you prepare the final EIS.

If you have any questions or require further information, please contact Mr. Bill Taylor, Chief, Environmental Planning Section, 2849 AB/DEVE, HILL AFB, UT, 84056 (801-777-8742).

Sincerely,

THAYNE H. JUDD, Col, USAF
Chief, Environmental Mgt Office

Response to Letter 16

BEST COPY AVAILABLE
Letter 17

DEPARTMENT OF THE AIR FORCE

Response to Letter 17

Threats - Draft Environmental Impact Statement (EIS) for Aptus Industrial and Hazardous Waste Treatment Facility

1. Review of the draft EIS shows no serious direct impact on the UTTR by this proposal.
   a. The Argonite Site is in the Tooele County industrial development area.
   b. The site does not directly interfere with South Range operations.
   c. The power/gas lines to be extended to the site should not pose a problem.

2. The Argonite Site is approximately 18 statute miles from the Wildcat Industrial Site, the initial TAC WESP Target. There should be no conflict.

3. The Clive Site should be addressed in its potential impact on the access road to the Wildcat/Kittycat Target Area. It appears to straddle the access road, Y-S would impact on our access if an accident occurs at the waste site. The Clive Site is only approximately ten miles from the industrial site. There could be conflict with use of this target area.

The Clive Site is under VR 1445/1446 and could provide some visual observation along these routes.

4. Table 2-6 should include an impact statement relating to the Air Force mission.

5. All references to the Wendover Bombing and Gunnery Range should be changed to the Utah Test and Training Range.

FRANCIS C. BATES

FRANCIS C. BATES, Maj, USAF
Long Range Planning

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Letter 18

April 26, 1988

Mr. Deana R. Sell, District Manager
BLM Salt Lake District
2378 South. 2300 West
Salt Lake City, Utah 84119

Subject: Comments on DRAFT ENVIRONMENTAL IMPACT STATEMENT; APTUS INDUSTRIAL AND HAZARDOUS WASTE TREATMENT FACILITY [February 1988].

Greetings:

The following are my comments for inclusion in the Final EIS. These comments require corrective action in the Final EIS and in the proposed incinerator activity:

1. EPA CONFLICT OF INTEREST

Two government agencies (BLM and EPA) have prepared this EIS for a private profit-motivated corporation [APTUS]. The EIS was created to be a referece on behalf of the public [ie the citizen] interest, but in this case the APA has been a cooperating agency in the preparation of this EIS. The APA should review the EIS, not prepare it. The APA review comments should be extremely significant to the pro or con decision, but in this case they have a conflict of interest as preparer of the EIS.

Normally, the proponent is a government agency with an identified mission which the proposed action supports. In this case, APTUS is the proponent, and the APTUS Corporation has paid the APA and BLM to assume the proponent's role. This is illegal because the APA and BLM do not have the mission to dispose of hazardous waste.

Since the APA and the BLM have a conflict of interest in this EIS, and the proposed incinerator, they can no longer be considered the protector of the public interest for this case, or be allowed to rule on this EIS and the proposed incinerator. Therefore this position should [must] be delegated to an organization[s] with demonstrated capability, fairness and moral responsibility for protecting the public interest in environmental matters. I recommend:

The Sierra Club
League of Woman Voters of Salt Lake City
Utah Senator Francis Farley
Conservation Dept. of the General Federation of Woman's Clubs.

2. SAFE OPERATIONAL CONTROL DATA

The EIS should (but does not) provide experience data from existing incinerators processing toxic and hazardous wastes, in order to demonstrate an efficiency [or compliance rate] for safe incineration of such wastes. The destruction of toxic and hazardous compounds by combustion into nontoxic and safe products must be strictly managed by operational controls over temperature, materials, fuel-air ratio, time duration, flame temperature, etc. These operational controls must be proven to provide safe results BEFORE approval is given for the EIS or the incinerator. The EIS must, before it is approved, demonstrate that the operational controls for all materials to be processed are known with high statistical confidence. Any other course would result in a conversation with toxic air for the people of Tooele and Salt Lake Counties to "no."

Response to Letter 18

Your comment regarding a potential conflict of interest by the EPA as a cooperating agency in preparation of the APTUS Draft EIS is noted.

EPA is obligated to administer aspects of the Toxic Substances Control Act (TSCA), the Resource Conservation and Recovery Act (RCRA), and the Clean Air Act (CAA) regarding the proposed action. Under regulations established by the Council on Environmental Quality (CEQ) to promote consideration of environmental issues concurrently by federal agencies, EPA has also participated as a cooperating agency with BLM during this EIS process. EPA is obligated under TSCA to "prevent unreasonable risk to public health and the environment", under RCRA to "protect human health and the environment", and under the CAA to comment in writing on EISs for which EPA has "jurisdiction by law or expertise."

EISs are written on proposed major federal actions which could have a significant impact on the human environment such as the proposed action. These actions can either be at the initiative of a federal agency or in response to a private party seeking federal agency determinations. In this case the EIS was needed to analyze the proposed land transfer and RMs across public lands as administered by BLM.

Although EPA does not have the mission to dispose of hazardous waste, EPA has informed the states of the need under the Superfund obligations for each state to obtain treatment capacity for hazardous waste produced or disposed in their state or obtain agreements with other states to do so by 1989. As a matter of national policy to comply with TSCA and RCRA, hazardous waste can be disposed in permitted facilities such as the one under consideration in the proposed action. In order for APTUS to obtain approval from EPA and the State of Utah, the company must obtain a RCRA permit from the State (subject to EPA oversight) and approval under TSCA from EPA. Both of these actions will be the subject of additional public review and comment. Proper disposal of hazardous waste in RCRA and TSCA permitted facilities adhering to the strict operational requirements should provide appropriate protection of the public health and the human environment consistent with EPA's statutory mission.

EPA and the BLM intend to meet their statutory obligations in the proposed manner described in the EIS. An EIS is not a justification document in the sense you infer. The National Environmental Policy Act requires the EIS to be an objective document on which a federal agency can base its decisions. Neither BLM nor EPA have a conflict of interest in preparation of the EIS, nor the future independent regulatory decisions necessary to implement the proposed action.

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Letter 18 Continued

3. REGULATIONS, REQUIREMENTS, INSPECTION, INSTRUMENTATION, PENALTIES/REWARDS

The incineration of toxic and hazardous wastes, of many and complex formulations, and in large volumes, with assured profit, is accepted as a high risk system. This system has in common with any planetary space program [also a high risk system] the fact that it cannot succeed without regulations, requirements, inspection, instrumentation, and penalties/rewards. The EIS is completely inadequate in these areas. At the Toxic Waste Incinerator Meeting meeting held by the Tooele Planning and Zoning Commission on November 9, 1983, the EPA representative stated that this incinerator would be safe if closely monitored and inspected. A few minutes later in this meeting, the EPA revealed that they are short of funds, that the local area is controlled by the EPA office in Denver (which covers six states with a small staff), and that the EPA plans to inspect this incinerator ONLY TWICE A YEAR. WITH ADVANCE NOTICE. The Utah Division of Public Health also stated that they would not inspect this incinerator at all. This lack of close inspection, unless completely corrected, makes approval of the EIS and the incinerator morally reprehensible. Voluntary compliance in conflict with the profit motive has not, does not, will not work, and could not work at the 99.9% level needed here. It would not be fair to place some middle manager in the squeeze between obvious cost and schedule documentation, versus long term health problems of children and the aged.

4. RISK BENEFIT ANALYSIS

The EIS must provide [but does not] a Risk Benefit Analysis [RBA]. The RBA must show, conclusively, that the benefit to the people of Tooele County, and also of Utah, [over a lifetime, or at least 20 years] outweighs the risks [to lifetime health, job potential, beauty of surroundings, etc.]. The RBA is not involved with the monetary benefits to the corporation operating the incinerator. The RBA can probably be simplified and yet be adequate if it is limited to the most susceptible 1% of the population. Since the greater Tooele City- Grantsville area includes about 25,000 people, this 1% would cover about 250 people who are expected to have a significantly greater health reaction to air pollution than the average person. The RBA should be performed at 50% and 95% confidence. Further, the RBA should be done for ideal operation and for typical operation where accidental and on-purpose violations occur, based on past experience. To claim that such violations will not occur would require the detail definition of the specific system of Regulations, Requirements, Inspections, Instrumentation, and Penalties/Rewards which can accomplish such a goal.

Response to Letter 18 Continued

18-2

The operational experience with incineration has been documented through a variety of EPA publications. One such publication is the EPA Handbook on Permit Writer's Guide to Test Burn Data [EPA 1986a]. Trial burn data from existing facilities are also available from the EPA.

The EIS process does not replace permit requirements under TSCA or RCRA. Not all permitting actions can occur simultaneously, therefore, the trial burn would follow the Record of Decision on the EIS. The trial burn is scheduled for February or March 1990 (see Revised Figure 2-1 in Section 3.2 of this Final EIS). The process by which the Apts incinerator would be permitted under TSCA and RCRA is as follows: The State of Utah’s Division of Environmental Health and the EPA review the engineering design and operations plan prior to facility construction. Public hearings are held on these permits. RCRA is by law a delegable program; thus, the Stace of Utah has primacy and, in conjunction with the EPA, determines that the operational controls are properly designed. The 3 to 6-day trial burn is analyzed by EPA and UBBA to determine if applicable DRE standards are met. If the trial burn is unsatisfactory, the facility cannot operate.

Please refer to Page 1-10 of the Draft EIS and Response to Comment 2-2 for discussions of Apts’ past history regarding compliance with TSCA permit limits for the existing Coffeyville, Kansas incinerator.

18-3

Please refer to Comment 19-1 and Response to Comment 19-1 and the response to the statement made by Nancy Fox (Section 2.1) in the Final EIS for further discussion of monitoring.

The Draft EIS represents the risk benefit analysis for the Apts incinerator proposal. Please refer to the air quality, transportation, health and safety, and socioeconomic sections and Appendix B in the Draft EIS for discussions of the risks and benefits to the people of Tooele County from the Apts proposal. The EPA and State of Utah will also consider risks and benefits as part of their permitting actions for the proposed facility.

18-4

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5. INCINERATION OF OUT OF STATE TOXIC AND HAZARDOUS WASTES,

Under the Superfund Amendments Reauthorization Act of 1986 (SARA Title III), each State must certify by November 1989 that it has adequate capacity to dispose of its own wastes for the next 20 years. This can be accomplished either through providing waste treatment within the state's own boundary, or by entering into specific compacts with other states for proper disposal. The EIS must identify which states are proposed to be served by the subject incinerator, with materials and quantities, in order to provide an accurate basis for the RISK BENEFIT ANALYSIS. The RBA will include transportation accidents.

It is expected that a correct RBA will identify a negative benefit to the people of Utah derived from out of state toxic and hazardous wastes; this indicates that UTAH SHOULD NOT ACCEPT OUT OF STATE TOXIC AND HAZARDOUS WASTES. Utah should not subsidize the APTUS Corporation by accepting out of state wastes with a negative risk benefit.

The Transportation of toxic and hazardous wastes should be regulated by the state of Utah, and final approval of this EIS and this incinerator should not be granted until these controls are in place, since this will greatly affect the risks. It is recommended that trucks carrying such wastes must be single units, must be limited to 55 MPH, must be specially inspected prior to each trip, must not be allowed inside cities with populations above 50 thousand, and must be insured for the maximum damage that could be caused.

M. John Pliny
685 Pioneer Ave.
Tooele, Utah 84074

The types and quantities of hazardous wastes received from specific states are dependent entirely on the waste generators that choose to utilize the Aptus facility. This cannot be accurately estimated for the EIS beyond the 70 percent west of facility and 30 percent east of facility suggested by Aptus' market research. Please refer to Response to Comment 21-5 for a discussion of transportation accidents in other states.

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Response to Letter 19

In accordance with our responsibilities under the National Environmental Policy Act (NEPA), Section 102 of the Clean Air Act (CAA), the Toxic Substances Control Act (TSCA), and the Hazardous and Solid Waste Act (HSWAA), the Region VIII Office of the Environmental Protection Agency has reviewed the Draft Environmental Impact Statement (EIS) for the Aptus Industrial and Hazardous Waste Treatment Facility, Tooele County, Utah.

EPA suggests that information for the Final EIS could be improved in several areas including changes in the dermal exposure aspects of the Health Risk Assessment, additional discussion on the options for EPA and Utah for facility inspections, aspects of USPCl's nearby project, and in the analysis of the proposed land exchange.

We have some attached detailed comments on the dermal exposure potential during the spill scenarios. EPA suggests additional references be reviewed and used to modify Appendix B (see the attached detailed comments).

Many of the public comments related to the type, frequency, and quality of inspections by the regulatory agencies. The final decisions on these matters rest with the Utah Department of Health (UDH) and EPA and will not be determined until the RCRA permit action is final. We will not be able to make these decisions in time for the final EIS. Nevertheless, the final EIS could describe the options available to UDH and EPA for inspection functions. Options under discussion include locating a full-time inspector in Tooele County under the UDH to inspect this proposed facility and other hazardous waste treatment facilities. Also under consideration is the possibility of connecting Aptus' plant operations by computer to UDH and/or EPA. Further opportunity would be provided for public consideration of the inspection procedure during the subsequent RCRA permit process. Under the TSCA approval process, EPA projects that two, announced or unannounced, inspections will be accomplished per year.

Thank you for your clarification. In addition to monitoring requirements imposed by EPA and the USGS. Tooele County is considering requiring monitoring of groundwater quality and soil contamination as part of its Conditional Use Permit. Public input into monitoring requirements is encouraged as a part of the review of each permit application by the responsible agency.
The draft EIS does not clearly define the need to exchange both the Aragonite site and the Clive site. Either the final EIS or a supplemental document should be provided to describe the lands that would become public lands for these exchanged parcels.

We suggest that the Final EIS briefly describe a related proposal by USPCI for hazardous waste fuel burning at the Marblehead Lime Facility. The attached detailed comments provide a summary of that proposal.

Based on the procedures EPA uses to evaluate the adequacy of the information in the EIS and the environmental impacts of the proposed action and alternatives, the Draft EIS for the Aptus Industrial and Hazardous Treatment Facility will be listed in the Federal Register in category LO-2. This means we have a lack of objections to the proposed action but do suggest additional information be included in the Final EIS as described in the attached detailed comments. Please contact Weston Wilson of my staff at 303/293-1620 for further explanation of these items. We look forward to participating in the Steering Committee's action to respond to the public comments received on this proposal.

Sincerely,

Robert R. DeSpain, Chief
Environmental Policy Branch
Office of Policy & Management

Enclosure

cc: Bill Sinclair, UDH, Salt Lake City
    Dave Koppa, UDH, Salt Lake City
    Sharla Barber, Aptus, Salt Lake City
    Drew Ludwig, BLM, Salt Lake City

Exchange of land at both the Aragonite and Clive sites has been requested by Aptus and is being reviewed by BLM. At the time the Clive site was proposed for the Draft EIS, it represented a suitable alternative to Aptus for the Aragonite site. It was within Tooele County's West Desert Hazardous Industry Area and would be a back-up to Aragonite if environmental or other problems arose there (e.g., Conditional Use Permit not issued or sufficient groundwater not available). Tooele County has recently ruled in favor of Aptus' request for rezoning the Aragonite site, but many unknowns still exist. Aptus proposes to use exchanged lands at Clive for this project if the need develops or for some undetermined future use. The initial results of BLM's review is presented in Section 1.6 (Agency Preferred Alternative) of this Final EIS. BLM's final decision will be presented in the Record of Decision that will be issued at least 30 days following release of the Final EIS. BLM intends to prepare a supplemental environmental document analyzing the lands that would become public lands as part of the exchange.
Letter 19 Continued

Response to Letter 19 Continued

Detailed Comments by the U.S. Environmental Protection Agency on the Draft Environmental Impact Statement Aptus Industrial and Hazardous Waste Treatment Facility Tooele County, Utah

As noted in the cover letter, we recommend that the EIS briefly describe in Section 2.7, Interrelationships with Other Projects, the proposed hazardous waste fuel burning under consideration by USPCI at the Marblehead Lime Facility. The following is a summary of that action:

Proposed Hazardous Waste Fuel Exemption Burning at USPCI's Marblehead Lime Facility

USPCI bought Marblehead Lime, near Delta, Utah, (see Map 2-1), in April 1987 and notified the Utah Department of Health (UDH) and EPA that it intended to burn hazardous waste under the hazardous waste fuel exemption as defined by RCRA (40 CFR 266.35). This provision falls under the "Energy Recovery" section of the regulations and allows facilities to burn certain hazardous waste as fuel, in furnaces and boilers only, without a RCRA permit.

USPCI burned ignitable waste and non-halogenated solvents (EPA listed wastes D001 and F003) as defined in 40 CFR 261.21 and 261.313 in July and September 1987. These wastes had been received at the Grassy Mountain Landfill and were mixed to improve the heat content. In September 1987, UDH issued a Cease and Desist Order to USPCI for burning hazardous wastes without an approval order under the Utah Air Conservation Regulations. USPCI stopped burning these wastes and submitted an application to UDH for an approval order which is currently going through the public comment period. The final Air Quality Approval Order will probably be issued in the near future. USPCI will also need a RCRA storage permit issued by EPA before it can continue burning hazardous waste under the RCRA fuel exemption at Marblehead.

EPA plans to propose new boiler and furnace regulations in June 1988 and hopes to promulgate them in June 1989. Under these revised regulations the hazardous waste fuel exemption will no longer be in effect. Essentially industrial furnaces and boilers burning hazardous wastes as fuel will have to comply with current requirements for Destruction Removal Efficiency (DRE) and obtain RCRA and HSWA permits.

Thank you for your clarification. In addition, the Utah Bureau of Air Quality recently issued a permit for USPCI to burn waste solvents at the Marblehead Lime Facility. The Bureau determined that burning waste solvents would cause no significant increases in the emissions from the facility as compared to the current burning of coal (Kostra 1988).
Letter 19 Continued

Response to Letter 19 Continued

19-3
19-4
19-5
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19-10

If USPCI is allowed to burn hazardous waste under the current fuel exemption, they would have to cease once the new regulations are final. These air emissions will no longer be occurring by the time Aptus' incinerator begins operating. Therefore cumulative impacts are not expected from this action.

Based on your comment, text revisions to Page 1-1 in the Draft EIS are included in Section 1.1 of this Final EIS.

Based on your comment, text revisions to Page 1-3 in the Draft EIS are included in Section 1.1 of this Final EIS.

Based on your comment, text revisions to Page 1-4 in the Draft EIS are included in Section 1.1 of this Final EIS.

Based on your comment, text revisions to Page 1-5 in the Draft EIS are included in Section 1.1 of this Final EIS.

Based on your comment, text revisions to Page 1-6 in the Draft EIS are included in Section 1.1 of this Final EIS.

Based on your comment, text revisions to Page 1-7 in the Draft EIS are included in Section 1.1 of this Final EIS.

Based on your comment, text revisions to Page 1-8 in the Draft EIS are included in Section 1.1 of this Final EIS.

Based on your comment, text revisions to Page 1-9 in the Draft EIS are included in Section 1.1 of this Final EIS.

Based on your comment, text revisions to Page 1-10 in the Draft EIS are included in Section 1.1 of this Final EIS.

1st paragraph - This paragraph should read as follows:

"The 1984 amendments adopted a regulation under the Safe Drinking Water Act (SDWA) which bans the disposal of hazardous waste by underground injection into or above any formation which contains a potential underground source of drinking water, if the distance between the well and the aquifer is within 0.25 miles. Under SDWA, final determination of wastes that can be safely injected will be made by 1988."

2nd paragraph - If the advantages of incineration are mentioned, the disadvantages should be included as well.

Based on your comment, text revisions to Page 1-11 in the Draft EIS are included in Section 1.1 of this Final EIS.

Based on your comment, text revisions to Page 1-12 in the Draft EIS are included in Section 1.1 of this Final EIS.

Based on your comment, text revisions to Page 1-13 in the Draft EIS are included in Section 1.1 of this Final EIS.

Based on your comment, text revisions to Page 1-14 in the Draft EIS are included in Section 1.1 of this Final EIS.

19-9
19-10

Please refer to Response to Comment 4-1 for a discussion of Aptus' proposed operating rate.

Based on your comment, text revisions to Page 1-15 in the Draft EIS are included in Section 1.1 of this Final EIS.

Based on your comment, text revisions to Page 1-16 in the Draft EIS are included in Section 1.1 of this Final EIS.

Based on your comment, text revisions to Page 1-17 in the Draft EIS are included in Section 1.1 of this Final EIS.
Letter 19 Continued

Response to Letter 19 Continued

19-11 Based on your comment, text revisions to Page 1-9 in the Draft EIS are included in Section 3.1 of this Final EIS.

19-12 Based on your comment, text revisions to Page 1-9 in the Draft EIS are included in Section 3.1 of this Final EIS.

19-13 The preliminary schedule listed in the Draft EIS is not a certainty. In constructing multi-million dollar plants, the schedule is an optimal goal. The schedule presented on Page 2-12 in the Draft EIS is an Aptus goal and may in actuality have been optimistic. A revised schedule incorporating recent developments is presented on Revised Figure 2-3 in Section 3.2 of this Final EIS.

19-14 As your comment demonstrates, estimating the dermal absorption dose of PCBs is subject to several independent variables. The variables you identify in item #2 of your comment were all considered in the analysis presented in Appendix B - Health Risk Assessment, Appendix B. The following references should be reviewed for determination of dermal dose exposure for the EIS spill scenarios:

1. Animal studies have shown that the predicted absorption of PCBs are approximately 5% to 8% in 60 minutes.

2. Human dermal intake calculations for PCBs used:

   t, liquid film thickness = 0.0016 cm
   a, absorption rate of PCBs = 100%
   s, skin area exposed = 870 sq cm
   d, density of liquid = 1.6 x 10^3 mg/cm³
   c, concentration of PCBs

   t x a x s x d x c = mg absorbed per exposure
   + 1628 mg absorbed

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Reference for 1 and 2: Review of Dermal Absorption; PB85-170694; by USEPA, October 1984.

3. Animal studies of monkeys and guinea pigs (which are considered to approximate human absorption rates) predict absorption rates of 20% to 54%.


4. Dermal studies for those that work with PCBs used 100% absorption. Worker exposure was calculated to be 54,000 ug/day for PCBs, based on 70% concentration of PCBs in Askarel and 200 square centimeters exposed skin area.


Based on Webster's results, an assumption can be made that for concentrated PCB fluids (60 to 70 percent PCB), washing would remove 80 percent of the PCBs leaving 20 percent to be absorbed. Assuming 56 percent absorption of the remaining PCBs, about 11 percent of the PCBs in t was initial exposure would be absorbed.

Using the variables you identify in item 12 would result in a PCB dose that is higher than the one estimated in the DEIS. This would be as follows:

\[ \frac{0.0018 \text{ cm (thickness)} \times 11 \text{ percent (absorption)} \times 870 \text{ cm}^2 \text{ (area)} \times 1,600 \text{ mg/cm}^2 \text{ (density)} \times 65 \text{ percent (concentration)}}{179 \text{ mg absorbed}} = 0.0018 \text{ cm} \times 11 \text{ percent (absorption)} \times 870 \text{ cm}^2 \times 1,600 \text{ mg/cm}^2 \times 65 \text{ percent (concentration)} = 179 \text{ mg absorbed.} \]

The dose per kilogram would be 179 + 70 = 2.56 mg/kg. This is about 2.5 times higher than the dose of 70 mg (1 mg/kg) estimated in the DEIS. The lifetime daily dose would be 2.56 mg/kg x 365 days/year x 70 years = 1 x 10^{-3} mg/kg/day. The excess lifetime cancer risk would be 1 x 10^{-3} mg/kg/day x 4.34 day/kg/mg (polymer estimate) = 4.34 x 10^{-6}. This compares to 1.7 x 10^{-6} estimated in the DEIS.

In summary, individual variables used in estimating dermal exposure could be given a range of values based on the assumptions used in the spill scenario and the interpretation of the available scientific literature. Different values for variables could result in higher or lower estimates of the dermal absorption dose of PCBs. However, it is felt that the basic conclusion of the Health Risk Assessment, that an increased cancer risk in the range of 2 to 4 in 10,000 would occur to a person who contacted spilled PCBs, still accurately represents the impact that could be expected in the event of an accident and spill.
Letter 20

Response to Letter 20

April 25, 1988

Mr. Deane H. Zeller
District Manager
BLM Salt Lake District
2370 South 2300 West
Salt Lake City, Utah 84119

Dear Mr. Zeller:

The Resource Development Coordinating Committee has reviewed the Draft Environmental Impact Statement for the Aptus Industrial and Hazardous Waste Treatment Facility. The following comments are submitted for your consideration.

Utah Department of Health/Bureau of Solid and Hazardous Waste

Page 1-5 of the DEIS states that "approximately 1 million tons of hazardous waste is generated in Utah per year by 400 generators (who generated over 2000 pounds per month) and another 300+ small quantity generators, of the 1 million tons per year, approximately 30,000 tons are incinerable." This information was probably derived from the 4 December 1987 correspondence to John Stephenson, BLM from Brent C. Bradford, USGS. This information should be clarified. As stated in the correspondence, the rough estimate of 30,000 tons of Utah incinerable waste does not include PCB waste, Superfund (CERCLA) waste, or small quantity generator waste (those who generate less than 2200 lbs per month of hazardous waste).

The estimate of 30,000 tons of Utah incinerable waste was based on the information that RCRA generators (those who generate more than 2200 lbs per month of hazardous waste) submitted on the 1985 biennial reports. All Utah RCRA generators are required to submit a 1987 biennial report on or before May 31, 1988. The 1987 biennial report information will provide current data of Utah generated hazardous waste.

Page 1-5 also discusses the Superfund Amendment Reauthorization Act of 1986 (SARA) requirement that each state must certify by November 1989 that it has adequate capacity to dispose of its own wastes for the next 20 years. State capacity certification can be accomplished by entering into disposal agreements with other states.

Based on your comment, text revisions to Page 1-5 in the Draft EIS are included in Section 3.1 of this Final EIS.

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Letter 20 Continued

Response to Letter 20 Continued

Prior to suggesting that Utah would require three incinerators, with an approximate 50,000 tons per year capacity to dispose of the estimated 30,000 tons of Utah generated waste, it should be considered that the DEIS estimate of a Utah capacity requirement of three incinerators was based on an Applus estimation that 20 percent of the waste processed at the facility would be Utah generated. In-state of state origin of potential incinerable waste is difficult to estimate and dependent on several factors (including market disposal costs and time of generation). It is USUW’s understanding that the Applus estimate of 20 percent Utah generated incinerable waste was based on Applus’ market evaluation that Utah facilities would generate a total amount of annual incinerable waste approximately equal to 20 percent of Applus’ market evaluation that Utah facilities would generate a total amount of annual incinerable waste approximately equal to 20 percent of Applus’ annual process design capacity. Based on the market evaluation, Applus determined that 80 percent of the process waste would have to be generated outside of Utah for the Applus facility to feasibly operate.

The pollution equipment discussion on page 206 states that the quench tower will “cool the gas stream and spray dry dissolves solids in the process water.” It should be clarified that the quench tower cools the combustion gas with a “neutralizing scrubbing solution” (alkaline water mixture) prior to entering the other pollution control equipment. The Applus application indicated that the temperature of the influent combustion gas will evaporate all of the quench water into the gas simultaneously as the quench water lowers the combustion gas temperature. Some of the combustion gas particulates will fall out of the gas with the evaporated quench water salts. These solids will be collected in the quench tower hopper.

It is not clear from the DEIS what is the eventual fate of water used in the gas scrubber, wet electrostatic precipitator, and quench tower. The DEIS should clarify whether this water is all recycled or to be disposed of somewhere.

Emergency venting to the atmosphere from waste storage tanks is referred to on page 2-27, 2-24. The DEIS should identify any possible adverse environmental effects from venting the tanks.

The trial burn discussion on page 2-34 states that “the RCRA trial burn would be conducted following the issuance of the draft RCRA permit.” This statement should be corrected. USUW will review RCRA Part B Permit applications and formally correspond with the applicant for additional information modifications and/or clarifications. The USUW will make a completeness determination when all RCRA requirements are met. A “notice of completeness” or “notice of intent to deny” will be issued to the applicant. If a “notice of completeness” is issued, USUW will develop a fact sheet and draft permit. The draft permit will then be subject to a public comment period (minimum of 45 days) and a public hearing. After the public comment period, USUW will prepare and make available to the public a response to the comments. The Executive Secretary of the Utah Solid and Hazardous Waste Committee will then make a final permit determination. Trial burns for new

20-2 Thank you for your comment. Please refer to Response to Comment 4-1 for further discussion of Utah’s incinerable waste.

20-3 Thank you for your clarification.

20-4 All water would be recirculated within various components of the incinerator and pollution control systems. The only water that would leave the system would be an vapor passing out the stack. No liquid water would be discharged.

20-5 Any venting from liquid waste storage tanks would occur only to relieve an accidental over pressure condition. This is a necessary safety measure to prevent tank leakage or rupture. The composition of any gases released in such an event would depend upon the waste material in the tank. However, given that emergency vent releases would be infrequent and short-lived, no detrimental environmental effects would be expected.

20-6 Thank you for your clarification. Based on your comment, text revisions to Page 2-34 in the Draft EIS are included in Section 3.1 of this final EIS.
Letter 20 Continued

Response to Letter 20 Continued

Page Three
Mr. Beane Zeller

facilities will be conducted after the final permit is issued. The final
permit may then be modified or revoked to reflect the results of the trial burn.
EPA would follow similar procedures for portions of the RCRA permit issued by
EPA.

20-6
Cont.

With respect to spill response capability (page 2-42), the DEIS fails to
address the question of how much equipment is dedicated solely to the
facility. This is of concern to the event of the spill response team
responding to an off-site emergency with a subsequent emergency occurring on
site.

The state of Utah hazardous waste disposal fees have been increased to $6
per ton for waste generated in-state and $9 per ton for waste generated
out-of-state. The fee rate given in the DEIS (page 3-29) should be revised
accordingly for the final EIS. Tooele County receives 10 percent of the
collected state disposal fees.

20-7

Page 3.36 states that Aptus plans to begin construction during July 1988.
It is this office's understanding that BLM's record of decision will occur
August 1988.

20-8

Figure 2-3, "Tentative Construction Schedule" should be modified to
reflect BLM's record of decision or EPA requiring both a TSCA and RCRA permit
prior to construction. USWIA is required to make a permit determination
within 270 days. The 270 days exclude time in which 1) USWIA is awaiting a
response from the facility; 2) the draft permit is in the public comment
period; and 3) federal or other state regulatory agencies are reviewing permit.

In the discussion of the location and frequency of spills, the statement
"the majority of the spills are expected to take place outside of Utah" (page
4-41) should refer back to the reasoning behind 11 (page 4-34).

20-9

Some references to section numbers need to be corrected: "see Mitigation
Measures, Section 4.7" (page 4.71) should be Section 4.8; "unavailable
adverse impacts ... Section 4.8" (page 4.73) should be Section 4.9.

20-10

If you have any questions regarding these comments please contact Phillip
Burns or Connie Nakahara at (801) 538-6121.

Division of Wildlife Resources

Generally, the proposed mitigation measures outlined in the DEIS appear
adequate in mitigating anticipated impacts from a wildlife resources
standpoint. From a wildlife value standpoint, the four alternatives were
ranked in ascending order of importance as follows:

1. Clive Alternative
2. Clive - Aragonite Alternative
3. Aragonite Alternative
4. Sunbank Ridge Alternative

20-11

The regional spill response team discussed on Pages 2-41 and
2-42 of the Draft EIS would be located at the Aptus
Incorporator facility; however, this ter is not directly
affiliated with the proposed facility. In the event of an
emergency at the facility, on-site personnel trained in both
spill response and contingency plan implementation would
initiate emergency response activities, utilizing the on-site
equipment described in Table 3-2 located in
Section 3.2 of this final EIS.

The spill control equipment would consist of sumps that are
manually emptied by use of a dedicated vacuum truck. Some
sumps have pumps that would return waste to the spill tank.
Also, spill kits would be located in all buildings and consist of:

- one 55-gallon drum with lever lock ring;
- one dust pan;
- one shop hand brush;
- one square-0 handle shovel Ø 2-4;
- one 18-inch push broom;
- one box 30-gallon heavy-duty trash bags;
- one drum with open top of floor dry;
- one roll of paper towels;
- one 9-foot x 12-foot heavy-duty plastic tarpaulin;
- one 5-gallon can of solvent (Occupational Safety and
Health Administration (OSHA) approved container);
- one first aid kit; and
- two self-contained or air-supply breathing apparatus.

20-12

Please refer to Section 3.1 in the Modifications and
Corrections chapter of this Final EIS for revisions to
Pages 3-29 and 4-38.

20-9

It was Aptus' understanding that the BLM Record of Decision was to be issued during July 1988; however, construction will
not begin until the Record of Decision is issued by the BLM.
Aptus recognizes time constraints that may arise; the
preliminary schedule provides working dates for manufacturers
and a reference base for the facility. Please refer to
Response to Comment 19-13 for additional information on
the proposed schedule.

20-10

Please refer to Response to Comment 19-13 for a discussion of
the tentative construction schedule.

20-11

Based on your comment, text revisions to Page 4-47 in the
Draft EIS are included in Section 3.1 of this Final EIS.

20-12

Based on your comment, text revisions to Pages 4-71 and 4-73
in the Draft EIS are included in Section 3.1 of this Final EIS.

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Letter 20 Continued

Response to Letter 20 Continued

Page Four
Mr. Deane Zeller

The fewest wildlife impacts would occur with the Clive Alternative and the most impacts would occur with the Stunk Ridge Alternative. The Division
prefers and recommends the Clive Alternative over the other three.

Specifically, all disturbed areas should be reseeded (see page 2-14, paragraph 3). Allowing disturbed areas to revert to natural vegetation on
their own will result in noxious weed invasion with the most likely species
being halegon and Russian thistle.

It should be noted that one peregrine falcon egg was produced at the
Timpone Springs WMA hawk site in 1983, however, it did not hatch. (See page
3-17, paragraph 4).

Utah Geological and Mineral Survey

The document was somewhat difficult to follow with regard to mineral
occurrences, geologic features and localities mentioned. It is recommended
that a regional geologic map and structural cross section, probably at the
same scale as Map 1-1 in the DEIS, be included as part of the final EIS. The
map should show to the extent possible 1) bedrock units and structures, 2)
unconsolidated and semi-consolidated Quaternary deposits, and 3) mapped and/or
suspected Quaternary faults. U.S. Geological Survey Map 1-1132, "Geology of
the Toole 112 Quadrangle" by Moore and Sorensen (1983) covers the region in
question, and could be used to construct a regional geologic map for the final
EIS. Addition of a geologic map would provide much greater clarity to the
final EIS.

Office of Planning and Budget

Proximity to faults should not be the only seismic criterion used to
assess the geologic impacts of the proposed action (page 4-20). The
possibility of ground motion, liquefaction, etc. on Basion and range valley
fill associated with a seismic event should receive some inquiry.

Comprehensive Emergency Management

The Division of Comprehensive Emergency Management requests review of the
emergency response plan for both fixed site and transportation accidents.
They would also appreciate notification of shipments when they begin.

Thank you for the opportunity to comment on this proposed action.

Sincerely,

Michael E. Christensen
State Planning Coordinator

MEC/jd

20-13 Please refer to Response to Comment 3-1 for a discussion of
noxious weed invasion.

20-14 Please refer to Response to Comment 3-2 for clarification on
the peregrine falcon hawk site.

20-15 During the preparation of the Draft EIS, the need for a
detailed geologic map was discussed by the project team.
Potential impacts to geology and minerals were not felt to be
great enough to warrant the inclusion of the type of map you
suggest. This is consistent with BLM guidelines for the
preparation of EISs which require the document to focus on
potential significant impacts and not include overly detailed
information. Also refer to U.S. Bureau of Mines comments in
Letter 8.

20-16 As discussed on Pages 4-20 and 4-21 of the Draft EIS, EPA
(NCMA) regulations for the siting of hazardous waste
facilities were used for determining significance criteria for
seismic factors. These criteria were appropriate for the
analysis in the Draft EIS. Also, as noted in the text (see
Page 4-21), the State of Utah may require additional geologic
studies at the selected site as part of the NCMA permit
process. In fact, the state has requested such studies, and
these have been completed by Aptus for the Aragonite site in
May of this year (Earth Fax 1988). The detailed studies
showed the closest fault (Quaternary-age about 15,000 years
old) to be located approximately 7,500 feet southeast of the
Aragonite site on the west front of the Cedar Mountains. No
evidence of Holocene-age seismic activity was observed.
Additional studies could also be requested and could include
site-specific data collection to address the potential for
liquefaction of valley fill associated with a seismic event.
The facility must be designed to withstand accelerations of
0.2 to 0.4 g, and design parameters could also be incorporated
to account for any liquefaction hazards.
Mr. Deane H. Zeller  
District Manager  
BLM Salt Lake District  
2370 South 2300 West  
Salt Lake City, UT 84119

Dear Mr. Zeller:

The siting of a hazardous waste incinerator has ramifications which go beyond state borders. The draft Environmental Impact Statement (EIS) that was prepared by ERT for the Bureau of Land Management (BLM) does not adequately consider the effects to public health or the environment outside of Utah. It is the responsibility of a Federal agency to consider all ramifications and to take a neutral stance in a draft EIS. The possible land exchange offered to the Bureau of Land Management appears to be the carrot being dangled in exchange for this draft EIS.

My specific comments to your proposal are as follows:

1. Capacity Assurance:

The issue of siting and capacity assurance may be inappropriate in a Bureau of Land Management Environmental Impact Statement. The issue of siting and capacity assurance is presently being addressed by the States and EPA and is not as simple as providing incinerators in each state or entering into regional compacts as identified on pages 11 and 48.

Total waste management capacity in a state plays an important role in determining the need for capacity assurance. The State of Nevada feels that an important indicator regarding siting assurance is the ratio of importation vs. exportation. For example the State of Nevada has permitted capacity of 200,000 Tons and 1,600 Tons of manifested waste in 1986 for a ratio of 125:1. The siting of a 50,000 ton incinerator in Nevada would increase that ratio.

Please refer to Response to Comment 13-10 for a discussion of impacts outside of the State of Utah.

21-2

It is agreed that the issues of siting (regional location of incinerators or alternatives) and capacity assurance (number and size of incinerators or alternatives) are very complicated and dealt with by a process that is separate from the EIS process. BLM is not endorsing incinerators or the Apptus proposal in this EIS. Please refer to Response to Comment 4-1 for further discussion of this issue and clarification of the Draft EIS sections you reference.

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April 26, 1988
Letter 21 Continued

Response to Letter 21 Continued

ratio to 156:1. Applying this to Utah, the draft EIS identifies that a 50,000 ton facility would incinerate only 10,000 tons of Utah incinerable wastes and that three such facilities are needed in the State of Utah. This theory if applied to the nation would require each state to have an incinerator siting capacity ratio of 5:1 to that which is generated in each state. At this ratio it would be expected that government subsidies would be necessary to maintain the environmental controls to protect public health and the environment.

2. Waste Generation Data

The data on pages 1-3 through 1-5 regarding waste generation and need in the draft EIS should be clarified. The EIS identifies that Utah generated 1 million tons of hazardous waste in 1985 and that 30,000 tons of that 1 million are incinerable, further, the EIS reports that the Congressional Budget Office estimates hazardous waste generation at 280 million tons nationwide. With no references, the EIS states that 1.7 million tons of wastes were incinerated in 1981 and relates this figure to an estimate that 24 to 36 million tons of wastes may be incinerable and that 82 additional incinerators are needed nationwide. Additionally, the estimate of 82 additional incinerators was preliminary on the part of EPA.

Chemical Waste Management, Inc. reported on March 4, 1988 to the State/EPA capacity assurance work group that incinerator capacity needs were being met by present and proposed incinerators. Please see attached Chemical Waste Management, Inc. documentation from that briefing.

3. Transportation:

Page 1-5 identifies that the high cost of transportation "only serves to encourage the illegal practice of disposal" leading one to believe that the construction and operation of such a facility would encourage Utah generators to utilize this facility rather than illegally disposing of their wastes. In this facility proposes to bring wastes into the State of Utah at a ratio of 5:1, I suggest that the more appropriate location would be in California.

Section 4.2.5 of the draft EIS identifies that 70% of the wastes generated at the site will be transported to the site from the west coast states, thereby making Bodega Bay the major transportation corridor through which the wastes will be transported. Six of the estimated 9 trucks per day will be moving through Sonoma. The EIS does not break this transportation down into corridors but it is a reasonable assumption that half of the transportation would be from

21-3 Please refer to Responses to Comments 4-1 and 7-2, for discussions of the need for the proposed incinerator. The Chemical Waste Management, Inc. (CWM) information that you reference, indicates adequate incinerator capacity for liquids but a shortfall for solids capacity in 1991. The Apts facility would incinerate both liquids and solids. Other National Governor's Association work group participants were less convinced about the adequacy of future capacity than was CWM. Further, EPA has indicated in their analysis of land disposal restrictions for hazardous wastes that "there is not enough commercial fluidized bed or rotary kiln incineration capacity for wastes requiring these technologies" (EPA 1986b, 1986c, and 1988).
Southern California, a quarter from northern California and the remaining quarter from the Northwest. Using this assumption, 3 trucks per day would move through southern Nevada, 1.5 across central Nevada and 1.5 down through northern Nevada.

In sections 4.2.5, 4.3.5 and 4.4.5, the draft EIS summarizes the transportation risk for the various alternatives and reports that 13 accidents resulting in a $11 of hazardous waste will occur during the life of the facility (30 years). This is based upon operational data at APTUS operated facilities in Kansas and Minnesota from the period 1985 through 1987 where one accident occurred in 4.84 million miles of transportation. It is not statistically sound to equate vehicle safety and spill potential to a 2 year review of APTUS records and further study should be made which applies local conditions along major transportation corridors as identified in section 6 above.

The draft EIS states on pages 4-34 and 4-47 that approximately 13 transportation accidents resulting in a release of hazardous waste will occur during the operating life of the facility. However, the EIS emphasizes that due to the siting location (near the Nevada border) that only 1-7% spills will occur inside the State of Utah. I find it difficult to believe that a Federal Agency would dismiss significant impacts based upon limited impacts to one state and not address the remaining states through which lie the transportation corridors. For example a spill of waste in Nevada would most likely occur on Public Lands administered by the Bureau of Land Management and that the potential for a spill on that land is potentially 3.8 spills during the operating life.

6. Water Resources:

Section 4.2.3 of the draft EIS reports that potential surface water contamination is minimal due to limited exposure to water resources in Utah. Again this stance does not consider the importance of transportation corridors and the exposure potential to surface waters along these corridors. The transportation corridors in Nevada traverse and/or cross the following major water systems:

1. The White river system in Lincoln and Sye Counties including the Pahranagat and Sunnyside Wildlife Management Areas;

2. The Duck creek system in White Pine County;


21-4 Please refer to Response to Comment 13-5 for a discussion of spill frequency. Further, no data base is known for specialized hazardous waste haulers operating along major transportation corridors in Nevada.

21-5 Please refer to Response to Comment 13-10 for a discussion of impacts outside of the State of Utah. As you correctly stated, and as was indicated in the draft EIS, about 11 spills over the life of the project are expected to occur in the states surrounding Utah and within approximately 890 miles of the incinerator site. It is very difficult to predict the haul routes taken and the expected number of trucks per day on those segments beyond the Nevada border or Salt Lake City. If one makes the conservative assumption that the average haul distance in Nevada would be 400 miles (distance from Wendover to Reno) x 6 trucks per day, about 5.1 spills would be expected to take place in Nevada over the life of the project. The remaining 5.7 spills would take place in other states. It is impossible to predict where these spills might occur, who might own the affected property, and whether a sensitive receptor might be affected. Significant impacts would not be expected for every spill.

21-6 Various probabilities for spills at surface water resources (e.g., rivers, lakes, wetlands) are presented below. These probabilities are applicable to water resources or other sensitive areas occurring anywhere along the transportation corridors.

<table>
<thead>
<tr>
<th>Area of Exposure (miles of roadway at risk)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<tbody>
<tr>
<td>Traffic Volume (trucks per day)</td>
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<tr>
<td>1.5</td>
<td>.0011</td>
<td>.0066</td>
<td>.0131</td>
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<tr>
<td>1.0</td>
<td>.0066</td>
<td>.0131</td>
<td>.0263</td>
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<tr>
<td>6.0</td>
<td>.0131</td>
<td>.0263</td>
<td>.0526</td>
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</table>

Source: ERT. Based on the formula: area of exposure x trucks/day x 365 days/year x 30 years project life x spill frequency (0.2 million WTF) x number of spills in an area over the life of the project.

Thus, the number of spills over the life of the project at a specific location ranges from about 0.003 to 0.053 or one spill every 9,090 years to one spill every 570 years. This is felt to be minimal exposure of any given water resource.
Letter 21 Continued

Response to Letter 21 Continued

Page 4

...in Proposed Wildlife Management Area...

iv. The Salton River system in Elko County;
v. The Spotted River system in Humboldt County;
vi. The Virgin Creek system in Humboldt County including the Sheldon National Wildlife Area; and
vii. The Truckee River System in Washoe County which supports the endangered Culov fish in Pyramid Lake.

Due to the potential for spills in these water systems the Significant Impact Summary should identify the impact.

5. Biological Resources:

Section 6-30 of the draft EIS identifies that "Hazardous spills from a leaking accident would be significant if a spill occurred in the proximity of a surface water resource, potentially affecting aquatic plant or animal life." The EIS goes on to identify that due to the limited access along I-80 to the water resources of Utah that only "1 spill every 160 years" would occur and that combined with the US Army Corps of Engineers' clean-up and response capability would prevent significant impacts. Additionally, this section cites an estimate of an spill every 2,000 years within the Timpie Peregrine falcon area is adequately low enough so as to not warrant further consideration. These considerations to biological resources do not address the transportation corridor issue as stated in section 4 above. Further consideration should be given to these resources outside the State of Utah.

I urge you to consider the above comments in the processing of your EIS. Please contact me if you have any questions regarding this matter.

Sincerely,

[Signature]

[Name]

Administrator

cc: Paul Westergard

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2.3 Public Hearing Comments and Responses

This section presents the comments that were received at the two public hearings held for the Aptus Draft EIS on March 16 and 17, 1988 in Tooele and Salt Lake City, Utah, respectively. The verbal comments have been abstracted to reduce the volume of the transcripts. Complete copies of the hearing transcripts are available for review in the BLM office identified in the introduction to Section 2.2 of this Final EIS. Table 2-2 identifies the individuals who presented their comments, the hearings that they attended, and the index number for each statement. Formal responses have been prepared only for those comments or questions that address the accuracy and/or adequacy of the Draft EIS. However, the BLM has reviewed all statements, opinions, and concerns; these have been considered in the decision-making process.

The reader is reminded that being an abbreviated Final EIS, it is necessary to use the Draft EIS in conjunction with the Final EIS in order to fully understand the analysis that was conducted for the proposed Aptus waste treatment facility.

<table>
<thead>
<tr>
<th>Reference Number</th>
<th>Source of Verbal Comments</th>
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<tr>
<td>March 16, 1988</td>
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<tr>
<td>Tooele, Utah</td>
<td>7:00 p.m.</td>
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<tr>
<td>1. Pat Sackett - representing Utah Wildlife Federation</td>
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<td>2. John Piliny</td>
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<tr>
<td>3. Dan Bauer - representing Sol-Aire Salt</td>
<td></td>
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<tr>
<td>4. Gene Ekenstam - representing Tooele County Wildlife Federation</td>
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<tr>
<td>5. Gary Resnick</td>
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<td>6. Frank Dorman</td>
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<td>7. Mike Hansen</td>
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</tbody>
</table>

| March 17, 1988   |                           |
| Salt Lake City, Utah | 7:00 p.m. |
| . June Wickham - representing Utah Environment Center |
| 2. Mark Precup - representing Sierra Club |
| 3. Nina Dougherty - representing American Lung Association of Utah |
| 5. Don R. Christensen - representing The Nature Conservancy |
| 6. Nancy Fox      |
**Public Hearing Comments and Responses**

<table>
<thead>
<tr>
<th>Comments</th>
<th>Responses</th>
</tr>
</thead>
</table>
| March 16, 1988  
Tooele, Utah  
7:00 p.m. |  |
| 1. Pat Sackett - representing Utah Wildlife Federation | 1. Pat Sackett  
Thank you for your statement. Your concerns will be considered in the final decision-making process. Please refer to Comment 19-1 and the response to the statement by Nancy Fox for discussions of monitoring, Page 4-12 in the Draft EIS for a discussion of metals emissions, Responses to Comments 2-1 and 5-2 for a discussion of the meteorological data used in the air quality analysis, and Responses to Comments 12-5 and 12-8 for discussions of the frequency of truck accidents resulting in spills.  
No studies are available that would allow the evaluation of the synergistic effects of the various pollutants that would be emitted by the Aptus facility in the concentrations that have been predicted. This limitation applies to all industrial facilities and not just the proposed Aptus incinerator. |
| Concerned that the proposed annual monitoring of the facility by the states would not be sufficient, and the emission testing programs would not test for hazardous non-priority pollutants. Recommends that recycling and waste exchanges be utilized as alternatives to incineration. Objections to the proposed incineration facility include: maintenance of rotary kiln seals; production of fly-ash; use of scrubbers and electrostatic precipitators; and temperature maintenance for dioxin and furan destruction. Requests to know the amount of heavy metal emissions and information concerning the possibility of synergistic reactions. Would like to see the efficiency rating of 99.9999 percent for the facility maintained during operation. Concerned with potential contamination of the area proposed for reclamation, following facility closure.  
Questions the standards of equipment replacement or repair.  
Opposes any land exchange between the BLM and Aptus, and supports the No Action Alternative. Finds that the EIS lacks validity on the weather and wind conditions because they were quoted from the Salt Lake City Airport, and that the data presented on ground transportation of hazardous wastes is in error. Believes that the potential for accidents is much higher than the EIS shows, according to other incinerator facilities. Opposes the location of the Aptus incineration facility within the community and believes that the community is not receiving any economic benefit from the facility. | |
| 2. John Pilny | 2. John Pilny  
Thank you for your statement. Your concerns will be considered in the final decision-making process, and the majority of your comments are responded to as part of the written comments you submitted. Please refer to Letter 18 in Section 2.2 of this Final EIS. Your comment on the adequacy of the air quality analysis is noted; however, BLM believes that the analysis presented in Sections 4.2.1, 4.3.1, and 4.4.1 of the Draft EIS accurately represents the air quality impacts that would be expected from an incinerator located at each of the three alternative sites. Please note that air quality sensitive receptor sites were located at Grantsville, Tooele, Magna, and Salt Lake City (see Map 2-2 in the Draft EIS) and that no significant air quality impacts were predicted at any of these receptors for any of the alternatives (see Tables 4-6, 4-9, and 4-10 in the Draft EIS). Please refer | Opposes the incinerator facility because of health concerns, environmental issues, and facility hazards. Concerned that the long-term effects of the air emissions will be detrimental to the health of the Tooele County and Salt Lake residents. Believes that only hazardous waste from the State of Utah should be handled at the proposed facility, and that other states should process their own hazardous wastes. Feels that an on-site monitor should be present daily. Does not think that the EIS adequately addresses the combined effects of the existing air quality problems in the Salt Lake area with the proposed facility emissions. | |
PUBLIC HEARING COMMENTS AND RESPONSES (CONTINUED)

<table>
<thead>
<tr>
<th>Comments</th>
<th>Responses</th>
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<tbody>
<tr>
<td>Additional statement:</td>
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<tr>
<td>Believes that the risks and calculated estimates of accident</td>
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<td>rates in the EIS are not indicative of what is actually present</td>
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<td>or potentially occurring. Feels that the EIS did not take all</td>
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<td>variables into account when calculating these statistics, and</td>
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<td>believes that additional safety factors should be considered.</td>
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<tr>
<td>3. Dan Bauer - representing Sol-Aire Salt</td>
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<tr>
<td>Commented that Sol-Aire is considering a salt refinery installation in</td>
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<td>Tooele County, with an estimate of 150 personnel required.</td>
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<td>Concerned that the EIS may have overlooked mentioning the facility.</td>
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<td>The facility is proposed to be larger than the current Sol-Aire</td>
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<td>operation at Lake Point, and will probably increase the amount of</td>
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<td>truck and rail shipments.</td>
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<td>4. Gene Ekenstam - representing Tooele County Wildlife Federation</td>
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<tr>
<td>Opposes the Aptus treatment facility because of potential effects</td>
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<td>to wildlife species. Feels that the proposed facility would</td>
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<td>require expansion due to a large amount of hazardous and industrial</td>
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<td>wastes from the surrounding western states. Concerned about the</td>
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<td>loss of wildlife habitat, current grazing allotments, recreational</td>
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<td>activities, and other wildlife-related projects potentially affected by</td>
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<td>the project. Feels that any construction activities would</td>
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<td>disturb the Puddle Valley antelope herd to possibly relocating.</td>
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<td>Believes that a large hazardous waste spill could significantly affect</td>
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<tr>
<td>the waterfowl and other wildlife within the area, and a</td>
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<td>resultant explosion could create a range fire destroying vegetation</td>
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<td>utilized for wildlife forage and habitat. Concerned that a spill</td>
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<td>could also jeopardize major watersheds and water supplies. Supports the</td>
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<tr>
<td>No Action Alternative.</td>
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<tr>
<td>Additional statement:</td>
<td></td>
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<tr>
<td>Concerned about a toxic waste spill into Great Salt Lake and how</td>
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<tr>
<td>it may affect the industry currently located surrounding the lake.</td>
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<td>Concerned that the county's population and economy will suffer</td>
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<td>because of the facility location. Feels that the calculated</td>
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<td>transportation accident rates in the EIS are not representative of what</td>
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<td>would really exist.</td>
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<td>5. Gary Resnick</td>
<td></td>
</tr>
<tr>
<td>Concerned with compliance with air emission standards. Suggests</td>
<td></td>
</tr>
<tr>
<td>using a monitoring device measuring critical parameters and</td>
<td></td>
</tr>
<tr>
<td>providing a hard copy data read-out to track potential failure rates,</td>
<td></td>
</tr>
<tr>
<td>with specified penalties. Believes that Tooele County and</td>
<td></td>
</tr>
<tr>
<td>Utah should receive appropriate compensation from other states for</td>
<td></td>
</tr>
<tr>
<td>allowing the incineration of their wastes within the state.</td>
<td></td>
</tr>
</tbody>
</table>

Thank you for your statement. The information you provided will be considered in the final decision-making process; however, it does not change any of the analysis or conclusions that were presented in the Draft EIS.

Thank you for your statement. Your concerns will be considered in the final decision-making process. The concerns you have raised are addressed in the respective sections of the Draft EIS. BLM feels that the estimated accident rates presented in Section 4.2.5 of the Draft EIS are representative of those that could be expected for the Aptus proposal. It is estimated that 13 truck accidents resulting in spills would occur during the 30-year life of the project. This is based on actual operating experience. It must be kept in mind that other accidents not resulting in spills would also be expected. Please refer to Responses to Comments 13-5 and 13-8 for further discussion of accident rates.

Thank you for your statement. Your concerns will be considered in the final decision-making process.
<table>
<thead>
<tr>
<th>Comments</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Frank Dorman</td>
<td></td>
</tr>
<tr>
<td>Believes that often the design of projects is sufficient; however, maintenance becomes the problem with assuring proper functioning. Feels that the proposed project area is the best place for the facility, but does not believe that incineration is the best possible method.</td>
<td>6. Frank Dorman</td>
</tr>
<tr>
<td>Thank you for your statement. Your concerns will be considered in the final decision-making process.</td>
<td></td>
</tr>
<tr>
<td>7. Mike Hansen</td>
<td></td>
</tr>
<tr>
<td>Questions who would be responsible for the costs associated with medical, employment, and workman’s compensation for bystanders or those that are first to arrive on the scene of an accident involving hazardous waste. Feels that this formation should be added to the EIS.</td>
<td>7. Mike Hansen</td>
</tr>
<tr>
<td>Thank you for your statement. Please refer to Section 4.2.10 in the Draft EIS for a discussion of liability issues.</td>
<td></td>
</tr>
<tr>
<td>Comments</td>
<td>Responses</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>March 17, 1988</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Salt Lake City, Utah</strong></td>
<td></td>
</tr>
<tr>
<td><strong>7:00 p.m.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>1. June Wickham</strong></td>
<td></td>
</tr>
<tr>
<td>Feels that the EIS does not sufficiently explain the distribution of Utah's hazardous waste to be disposed of, and would like information on where the remaining 20,000 tons per year of Utah waste will be processed. Concerned that permitting of the incinerator facility will remove motivations to dispose of hazardous and industrial wastes using alternative methods, such as recycling and waste exchange. Asks that the citations for minor violations at the Coffeyville facility be presented in further detail. Asks if all water sources in the area will be identified, and will sampling wells be installed adjacent to the project site to monitor for potential groundwater contamination? Quotes the EIS as sitting on Page 3-3, that there are no site-specific wind data available for the alternatives and therefore, questions the wind rose graph. Also states that the EIS air data from Dupway are not separated into stability classes for climatic characterization and modeling. Will funding exist for state-monitoring of air toxics or who will be responsible? Feels that the population numbers cited for Salt Lake City are a misrepresentation of data and Salt Lake County numbers should have been used. Feels that potential air toxics effects should address systemic or chronic problems. States that on Page 4-9 of the EIS, the estimated time for any upset conditions would be approximately 5 minutes, questions this information. Will the trial burn include metal emission data? Supports the Clive Alternative.</td>
<td>Thank you for your statement. Your comments are responded to as part of the written comments you submitted. Please refer to Letter 4 in Section 2.4 of this Final EIS. Also, please refer to Comment 19-1 and the response to the statement by Nancy Fox for discussions of monitoring.</td>
</tr>
<tr>
<td><strong>2. Mark Precup – representing Sierra Club</strong></td>
<td></td>
</tr>
<tr>
<td>Concerned that the Wilderness Study Area is within the 1 to 1.7 kilometers listed in the EIS as being the area of maximum concentration of pollutants for the Aragonite Alternative. Requests that it be stated in the EIS that the Clive Alternative be listed as having fewer potential impacts than the Aragonite Alternative. Feels that particulate deposition is not adequately addressed, especially with heavy metals deposition in soils, and that the air quality model should include analysis of particulate deposition. Believes that incomplete combustion was not addressed. Concerned that the EIS does not fully address cumulative impacts relating to present levels combined with anticipated levels. Concerned that during potential upset conditions, emissions will exceed those stated in the EIS and that a positive pressure may build within the kiln during facility power loss. Questions the net importation of hazardous waste into Utah and where the remaining 20,000 tons of Utah's waste will be processed.</td>
<td>Thank you for your statement. The majority of your comments are responded to as part of the written comments you submitted. Please refer to Letter 12 in Section 2.2 of the Final EIS. Table 2-6 in the Draft EIS compares the concerns and impacts for each of the alternatives considered; Section 1.5 in this Final EIS presents the BLM's preferred alternative. Your definition of cumulative impacts is not consistent with the one used in the Draft EIS. The impacts associated with anticipated project effects and existing conditions are discussed in Sections 4.2 through 4.5 in the Draft EIS. The cumulative impacts discussed in Section 4.7 of the Draft EIS are limited to the combined effects of the interconnected projects (Section 7.7 in the Draft EIS) and the Agus proposal; none of these effects are currently existing but could exist in the future. Please refer to Response to Comment 4-1 for further discussion of incinerating Utah-generated wastes.</td>
</tr>
</tbody>
</table>
3. Nina Dougherty – representing American Lung Association of Utah

Concerned about potential exposure to toxic air pollutants. Feels that the issue of wind-blown contaminated dust is not addressed in the EIS. Believes that the state needs to ensure monitoring and proper operational procedures for the facility. Questions the validity of the EIS concerning estimated hazardous waste from Utah and needed facilities to process the waste. States that the 30,000 tons of waste per year is not characterized and that the discussion of the proposed wastes is confusing. Feels that the population numbers for Salt Lake City are not representative of the population closer to the site. States that some disadvantages and problems were not covered in the EIS, specifically those listed in the Oppelt 1987 reference. Concerned that not enough is known about metals emissions and that the figures listed in the EIS may not be relative. Feels that the EIS does not discuss alternatives to incineration, such as waste reduction. Questions the number of recreation users in the Cedar Mountains and the characterization of the three alternatives as being identical. Supports the Clive Alternative.


Believes that the state and federal governments should provide incentives to minimize industrial waste. Would like the EIS to address the storage of materials onsite prior to incineration, specifically the length of time of storage and the amount of materials likely to be stored. Would also like an explanation of the transfer of materials on the facility site.

5. Don R. Christensen – representing The Nature Conservancy

Believes that plant species utilized for revegetation following closure should be native shrub species that are found currently onsite and not introduced grass species.

3. Nina Dougherty

Thank you for your statement. The majority of your comments are responded to as part of the written comments you submitted. Please refer to Letter 15 in Section 2.2 of this Final EIS. In addition, please refer to the responses to comments in Letters 5, 12, and 13 for further discussion on air quality issues. Comment 19-1 and Response to Comment 19-1 discuss monitoring. The number of visitor-use days for the Cedar Mountain area presented on Page 3-32 in the Draft EIS represent the BLM's most recent information on this area and is believed to accurately represent recreation use. As shown on Table 2-6 in the Draft EIS impacts associated with the three alternative sites are the same for certain resources and different for others.

4. Karen Hoggan

Thank you for your statement. Wastes would be stored at the facility an average of 30 days before they are incinerated. If the incinerator is shut down for maintenance or repair, wastes could be stored up to 90 days. The facility would have storage capacity for 500,000 gallons of liquid waste, 20,000 gallons of sludge, 1,000 cubic yards of soil, and 3,000 drums. Based on operating experience at the Coffeyville, Kansas facility, this capacity would be about 20 percent filled at any given time. The proposed Aptos facility would be a hazardous waste transfer facility in that if non-incinerable wastes are received as part of a shipment, they would be manifested and transferred to another permitted facility for proper disposal. This would include the slag that would be generated by the incinerator.

5. Don R. Christensen

Thank you for your statement. The seed mixture presented in Appendix A of the Draft EIS is intended for the restoration of disturbed BOW. The intent of this restoration is to stabilize the BOW to prevent erosion, inhibit the invasion of noxious weeds, and provide a suitable environment for native species, especially shrubs, to reoccupy the BOW. The species and seed application rates selected by BLM are ones that they have found to be suitable for BOW restoration in similar elevation and precipitation zones in the Salt Lake District.
6. Nancy Fox  
Feels that the EIS did not address the concern of monitoring. Would the analysis be completed onsite, and how would the monitoring of incomplete combustion be completed? Questions how often monitoring of the facility would be undertaken following the trial burn.

6. Nancy Fox  
Thank you for your statement. Please refer to Section 1.3 in the Draft EIS and Comment 19-1 and Response to Comment 19-1 in Section 2.2 of this Final EIS for discussions of monitoring. For clarification, monitoring can be divided into three separate activities.

- Monitoring by Aptus of operating parameters of the incinerator, such as carbon monoxide, oxygen, combustion temperature, mass feed rate, and combustion gas velocity. This will be required under the RCRA and TSCA permits.

- Reporting by Aptus of incinerator operating performance and any spills of hazardous wastes to appropriate agencies.

- Inspection of the facility and its operating records by the Utah Bureau of Solid and Hazardous Waste and the EPA. The frequency of this inspection will be established as part of the RCRA and TSCA permits and is expected to be at least once per year for RCRA and twice per year for TSCA.

Thus, there would be continuous onsite monitoring of combustion efficiency to ensure required destruction and removal of hazardous wastes. If the incinerator exceeds its preset operating parameters, the automatic shut-down sequence would be triggered. Adjustments or repairs would then be made to the incinerator before it was restarted.
MODIFICATIONS AND CORRECTIONS

3.0

3.1 Text Revisions to the Draft EIS

Section 3.1 presents page by page text corrections to the Draft EIS in tabular form. Column 1 indicates the page in the Draft EIS on which the correction occurs; Column 2 indicates the paragraph in which the correction occurs (P represents a partial paragraph at the top of the page); Column 3 indicates the line within the paragraph; and Columns 4 and 5 present the text as it occurs in the Draft EIS ("Is") and how it should be corrected or modified ("Should Be").
### MODIFICATIONS AND CORRECTIONS

<table>
<thead>
<tr>
<th>Page</th>
<th>Paragraph</th>
<th>Line</th>
<th>Is:</th>
<th>Should Be:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ii</td>
<td>3</td>
<td>2</td>
<td>...Conservation and Recovery Act (BCRA) state that land disposal should be a method of last resort.</td>
<td>...Conservation and Recovery Act (BCRA) state that land disposal should be the least favored method of managing hazardous wastes.</td>
</tr>
<tr>
<td>ii</td>
<td>3</td>
<td>8</td>
<td>...Amendments also banned the disposal of hazardous waste by underground injection into or above any formation that contains a potential underground source of drinking water, if the distance between the well and the aquifer is within one-quarter mile.</td>
<td>...Amendments adopted a regulation under the Safe Drinking Water Act (SDWA) which bans the disposal of hazardous waste by underground injection into or above any formation which contains a potential underground source of drinking water, if the distance between the well and the aquifer is within 0.25 mile.</td>
</tr>
<tr>
<td>iii</td>
<td>1</td>
<td>11</td>
<td>...year, approximately 30,000 tons are incinerable. Approximately 80 percent of the wastes (or 40,600 tons per year) transported to the proposed Aptus incinerator would be from California, Oregon, Washington, Idaho, Wyoming, and Colorado. The other 20 percent (or 10,150 tons per year) would be from Utah. Based on the proposed Aptus capacity and transport scenario, three such incinerators would be required in Utah to incinerate Utah's annual 30,000 tons of incinerable wastes.</td>
<td>...year, approximately 30,000 tons are incinerable. This estimate of Utah incinerable waste does not include PCB waste, Superfund (CERCLA) waste, or waste from small quantity generators who produce less than 2,200 pounds per month of hazardous waste. Based on Aptus' proposed operating rate of 50,750 metric tons per year, Aptus could process all the incinerable wastes produced by all Utah generators; however, it is unlikely that Aptus could capture all of the Utah market. This is a decision that can be made only by the generators, based on free-market considerations. It has been estimated that approximately 80 percent of the wastes (or 40,600 tons per year) transported to the proposed Aptus incinerator would be from California, Oregon, Washington, Idaho, Wyoming, and Colorado. The other 20 percent (or 10,150 tons per year) would potentially be from Utah.</td>
</tr>
<tr>
<td>iv</td>
<td>3</td>
<td>3</td>
<td>...be allowed to revert to natural vegetation.</td>
<td>...be revegetated to aid in inhibiting the invasion of noxious weed species.</td>
</tr>
<tr>
<td>1-1</td>
<td>3</td>
<td>6</td>
<td>...264 million tons of hazardous waste generated per year. The facilities operating now are...</td>
<td>...264 million tons of hazardous waste generated per year. The commercial facilities operating now are...</td>
</tr>
<tr>
<td>1-3</td>
<td>2</td>
<td>6</td>
<td>...1990. These new amendments state that land disposal should be a method of last resort.</td>
<td>...1990. These new amendments state that land disposal should be the least favored method for managing hazardous wastes.</td>
</tr>
<tr>
<td>1-4</td>
<td>1</td>
<td>1</td>
<td>...systems. Landfills, to the extent they can be proven safe, have become more expensive as a means to dispose of waste.</td>
<td>...systems. As a result of these requirements to aid in the prevention of groundwater contamination, landfills have become more expensive as a means to dispose of waste.</td>
</tr>
</tbody>
</table>

**BEST COPY AVAILABLE**
MODIFICATIONS AND CORRECTIONS (CONTINUED)

<table>
<thead>
<tr>
<th>Page</th>
<th>Paragraph</th>
<th>Line</th>
<th>Is:</th>
<th>Should Be:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-4</td>
<td>1</td>
<td>1-5</td>
<td>The 1984 amendments banned the disposal of hazardous wastes by underground injection into or above any formation which contains a potential underground source of drinking water, if the distance between the well and the aquifer is within 0.25 mile. Final determination of wastes that can be safely injected will be made by 1988.</td>
<td>The 1984 amendments adopted a regulation under the Safe Drinking Water Act (SDWA) which bans the disposal of hazardous waste by underground injection into or above any formation which contains a potential underground source of drinking water, if the distance between the well and the aquifer is within 0.25 mile. Under SDWA, final determination of wastes that can be safely injected will be made by 1988.</td>
</tr>
<tr>
<td>1-5</td>
<td>1</td>
<td>3</td>
<td>...per year, approximately 30,000 tons are incinerable. Based on Aptus’ proposed operating rate of 50,750 metric tons per year and a similar transport scenario (20 percent of capacity used for Utah waste), Utah would require three similar incinerators to process the 30,000 metric tons per year of incinerable waste generated in Utah.</td>
<td>...per year, approximately 30,000 tons are incinerable. This estimate of Utah incinerable waste does not include PCB waste, Superfund (CECIA) waste, or waste from small quantity generators who produce less than 2,200 pounds per month of hazardous waste. Based on Aptus’ proposed operating rate of 50,750 metric tons per year, Aptus could process all the incinerable wastes produced by all Utah generators; however, it is unlikely that Aptus could capture all of the Utah market. This is a decision that can be made only by the generators, based on free-market considerations.</td>
</tr>
<tr>
<td>1-5</td>
<td>2</td>
<td>1</td>
<td>If responsible treatment, storage, and transfer facilities are not...</td>
<td>If permitted treatment, storage, and transfer facilities are not...</td>
</tr>
<tr>
<td>1-7</td>
<td>2</td>
<td>2</td>
<td>Plan (MPP)</td>
<td>Issue right-of-way (ROW) grants</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3</td>
<td>Issue FLPA right-of-way (ROW) grants Natural gas pipeline, railroad spur, electric and telephone lines</td>
<td>Natural gas pipeline, railroad spur, electric and telephone lines, access roads</td>
</tr>
<tr>
<td>1-9</td>
<td>1</td>
<td>1</td>
<td>...frequency of RCRA inspections (at least once a year) would be identified at the time of permit approval and would be carried out by personnel from the Bureau of Solid and Hazardous Waste of the Department of Health and/or EPA as required to maintain reasonable assurance that the facility is in compliance with the RCRA permit conditions. EPA will conduct inspections under TSCA; however, the frequency of inspections has not been determined since the permit is not yet issued (Modi 1987a).</td>
<td>...frequency of RCRA inspections will be determined at the time of permit approval and would be implemented by personnel from the Utah Bureau of Solid and Hazardous Waste of the Department of Health and/or EPA, as required to maintain reasonable assurance that the facility is in compliance with RCRA permit conditions. State regulations require that hazardous waste treatment facilities be inspected at least once per year. The minimum number of inspections required for facilities receiving waste from a Superfund site is two per year. The State and EPA are currently assessing various funding sources to provide additional RCRA inspections, if permit requirements mandate. The number of TSCA inspections conducted by EPA Region VIII are projected to be twice a year and may be unannounced. The frequency of inspections under TSCA will be determined at the time of permit approval.</td>
</tr>
</tbody>
</table>

86
2-14 2 2 ...consistent with their intended use. Some areas on the facility site would be landscaped while others would be allowed to revert to natural vegetation.

2-34 3 5 ...the issuance of the draft RCRA permit.

3-5 2 15 ...USFLC 1985).

3-15 1 5 ...mountains to the east and the Wendover Bombing and Gunnery Range to the west.

3-17 4 9 ...peregrine pair was observed using the site in Spring 1987. No eggs were produced in 1987, however, it is likely the hack site will contain a breeding pair of peregrines in Spring 1988 (Benton 1987, BLM 1987).

3-29 1 1-3 Hazardous Waste Fee. Currently there is a $3 per ton commercial disposal fee for hazardous wastes disposed of in Tooele County, implemented by the State of Utah. Tooele County...

4-6 4 2 ...facility was conducted under BLM...

4-11 3 4-5 ...acceptable ambient concentration level, gives the relative significance of the potential for significant impacts.

4-12 1 1 ...facility was conducted by BLM...

4-20 1 1 ...was evaluated by ERT through conducting...

1 7 ...for HCl assuming the higher emissions of the TSCH feed...

Hazardous Waste Fee. Currently there is a $6 per ton in-state commercial disposal fee for hazardous wastes disposed of in Tooele County, implemented by the State of Utah. The out-of-state fee is $9 per ton. Tooele County...

...acceptable ambient concentration level, gives the relative potential for significant impacts.

Add: Dioxins and furans are products of incomplete combustion (PICs) formed during incineration of hazardous wastes.

...was evaluated through conducting...

...for HCl assuming the higher emissions of the TSCH feed...
<table>
<thead>
<tr>
<th>Page</th>
<th>Paragraph</th>
<th>Line</th>
<th>Is:</th>
<th>Should Be:</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-25</td>
<td>1</td>
<td>3-11</td>
<td>...within 0.5 mile of the Great Salt Lake. Assuming a probability of $6 \times 10^{-6}$ spills per mile over the 30-year life of the project (see Section 4.2.10), 0.065 spills would be expected along this stretch of I-80 during the 30 years. One chance in 160,000 of a toxic spill occurring is calculated for this area, which would be considered minimal. If a spill were to occur along the stretch of I-80 within 0.5 mile of the Great Salt Lake, spill response coordination would be the responsibility of the State Highway Patrol, and Aptus would be responsible for any cleanup.</td>
<td>...within 0.5 mile of the Great Salt Lake. Assuming a probability of $6 \times 10^{-6}$ spills per mile over the 30-year life of the project (see Section 4.2.10), 0.065 spills would be expected to occur along this 10-mile stretch of I-80 during the 30 years, or 1 spill every 500 years. If a spill were to occur along the stretch of I-80 within 0.5 mile of the Great Salt Lake, the State Highway Patrol would be responsible for spill response coordination, and Aptus would implement cleanup activities. The low spill frequency combined with Aptus’ emergency cleanup capabilities would prevent significant impacts to water resources along the Great Salt Lake.</td>
</tr>
<tr>
<td>4-31</td>
<td>1</td>
<td>6</td>
<td>...prevent exposure of sensitive species</td>
<td>...minimize exposure of sensitive species</td>
</tr>
<tr>
<td>4-38</td>
<td>4</td>
<td>3-7</td>
<td>...per year. Currently, there is a $5 per ton commercial disposal fee for hazardous waste imposed by the State of Utah. Tooele County currently receives 10 percent of the commercial disposal fee. Consequently, Tooele County would receive approximately $21,000 in revenue (70,000 tons/year x $5/ton x 10 percent), and therefore representing a beneficial impact on the local area economy.</td>
<td>...per year. Currently, there is a $6 per ton in-state commercial disposal fee for hazardous waste imposed by the State of Utah. The fee for out-of-state wastes is $9 per ton. Tooele County currently receives 10 percent of the commercial disposal fee. Consequently, Tooele County would receive approximately $42,630 in revenue (10,150 tons/year x $6/ton x 10 percent + 40,600 tons/year x $9/ton x 10 percent), and therefore representing a beneficial impact on the local area economy.</td>
</tr>
<tr>
<td>4-47</td>
<td>1</td>
<td>7</td>
<td>...however, the majority of spills are expected to take place outside of Utah (1.79 spills in Utah versus 12.8 spills for all areas, including Utah).</td>
<td>...however, based on the calculations presented on Page 4-34 of the Draft EIS, the majority of spills are expected to take place outside of Utah (1.79 spills in Utah versus 12.8 spills for all areas, including Utah).</td>
</tr>
<tr>
<td>4-71</td>
<td>2</td>
<td>8</td>
<td>...Engineer. (See Mitigation Measures, Section 4.7.)</td>
<td>...Engineer (see Mitigation Measures, Section 4.8).</td>
</tr>
<tr>
<td>4-73</td>
<td>1</td>
<td>9</td>
<td>...in unavoidable adverse impacts that are discussed in Section 4.8.</td>
<td>...in unavoidable adverse impacts that are discussed in Section 4.9.</td>
</tr>
<tr>
<td>B-8</td>
<td>7</td>
<td>3</td>
<td>...Environmental Protection Agency by THC...</td>
<td>...Environmental Protection Agency by THC...</td>
</tr>
</tbody>
</table>

**BEST COPY AVAILABLE**
3.2 New and Revised Tables, Figures, and Maps

Section 3.2 presents complete new and revised tables, figures, and maps that serve as clarification or expansion of the analysis presented in the Draft EIS. Two new tables that are referenced in responses to comments in Section 2.2 of this Final EIS are shown in numerical order, followed by a revised figure and a map clarification. Map 3-1 is presented to clarify an error on Map 2-2 in the Draft EIS concerning the northern boundary of the Cedar Mountains Wilderness Study Area (MSA) and its relationship to the Aragonite and Clive facility sites.

### TABLE 3-1
PROPOSED APUS HAZARDOUS WASTE INCINERATOR
UPSET CONDITIONS AND EMERGENCY SHUTDOWN PROCEDURES

<table>
<thead>
<tr>
<th>1. Upset Conditions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• low oxygen in the waste gas;</td>
</tr>
<tr>
<td>• low temperature of the waste gas from the afterburner chamber; or</td>
</tr>
<tr>
<td>• sustained high carbon monoxide in the waste gas.</td>
</tr>
<tr>
<td>Response:</td>
</tr>
<tr>
<td>Shutdown of all waste feeds.</td>
</tr>
<tr>
<td>• all solid, semi-solid, and liquid waste feeding will stop;</td>
</tr>
<tr>
<td>• the clean fuel burners will start to maintain waste gas temperature; and</td>
</tr>
<tr>
<td>• waste feeding can resume only after the problem has been corrected.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Upset Conditions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• loss of power;</td>
</tr>
<tr>
<td>• loss of induced draft fan;</td>
</tr>
<tr>
<td>• high temperature of waste gas to the gas cleaning system; or</td>
</tr>
<tr>
<td>• sustained positive pressure in the incinerator.</td>
</tr>
<tr>
<td>Response:</td>
</tr>
<tr>
<td>Complete shutdown of the incinerator.</td>
</tr>
<tr>
<td>• the induced draft fan will stop;</td>
</tr>
<tr>
<td>• all waste feeding will stop;</td>
</tr>
<tr>
<td>• the emergency vent will open;</td>
</tr>
<tr>
<td>• a water seal will fill to prevent flow of hot gases to the gas cleaning system; and</td>
</tr>
<tr>
<td>• the clean fuel burners will start to maintain waste gas temperature.</td>
</tr>
</tbody>
</table>
3. Upset Conditions:
   - Low flow in various systems.
     Response: Start standby pumps.

4. Upset Condition:
   - Burner system or combustion air malfunction.
     Response: Cut off feed to individual burner.

Note: All of the plant operating parameters are continuously monitored by a computer. The computer is programmed with various interlocks to ensure that the plant is operated within the permitted limits and also to ensure that the system will always fall safe when problems occur. All of the emergency shutdown controls are automated. A manual panic button is provided to enable manual shutdown from the control room and/or other strategic locations. Many alarm functions are provided to warn the plant operators when various operating parameters start to deviate from the desired conditions. This normally enables the operator to correct the situation and prevent problems that could lead to an automatic shutdown.

During a complete shutdown the combustion air fan continues to run and the kiln continues to rotate in order to ensure proper burnout and complete destruction of any residual waste solids in the kiln. In the event of a power failure an emergency generator will start to provide power for the kiln drive, combustion air fan, circulating pumps, and induced draft fan. This enables the emergency vent to be closed within minutes after a power failure.

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### Table 3-1 (Continued)

<table>
<thead>
<tr>
<th>Emergency Equipment Type</th>
<th>Brief Description</th>
<th>Outline of Capabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire extinguishers</td>
<td>Red cylinder, 2.5 to 20 pounds</td>
<td>Content CO₂ and dry chemicals with wide range of extinguishing capabilities including: paper, electrical, and chemical.</td>
</tr>
<tr>
<td>SCBA cabinets</td>
<td>Yellow 3-foot x 3-foot</td>
<td>Provide emergency breathing with Scott air packs.</td>
</tr>
<tr>
<td>Fire alarm boxes</td>
<td>Red 1-foot x 1.5-foot</td>
<td>Part of plant fire protection system.</td>
</tr>
<tr>
<td>Fire protection switches</td>
<td>Red push-buttons and butterfly switches</td>
<td>Part of plant fire protection system.</td>
</tr>
<tr>
<td>Gas release alarm</td>
<td>Yellow 1-foot x 1.5-foot</td>
<td>Part of plant alerting system.</td>
</tr>
<tr>
<td>Acid suit cabinets</td>
<td>Light green 2-foot x 7-foot</td>
<td>Provide personal protection equipment.</td>
</tr>
<tr>
<td>Safety showers</td>
<td>Green light, yellow piping</td>
<td>Provide emergency wash-out.</td>
</tr>
<tr>
<td>Eyewash stations</td>
<td>Yellow with black caps</td>
<td>Provide emergency wash-out.</td>
</tr>
<tr>
<td>Sprinkler system</td>
<td>Heads are red</td>
<td>Water deluge.</td>
</tr>
<tr>
<td>Hydrant houses</td>
<td>Red housing 8-foot x 8-foot x 6-foot</td>
<td>Water deluge.</td>
</tr>
</tbody>
</table>
Revised Figure 2-3. Tentative Construction Schedule

*May be constructed two to three years following facility start-up.
Note: Construction schedule is contingent on acquisition of required permits.
4.0 APPENDICES

4.1 Mitigation Measures and Restoration Requirements

4.1.1 Mitigation Measures

The following mitigation measures have been developed to mitigate the significant adverse impacts that were identified in Sections 4.2, 4.3, and 4.4 of the Draft EIS. An additional mitigation measure is recommended (Measure D) for Biological Resources concerning on-site revegetation procedures. Mitigation measures will be specific requirements of Aptus as part of their ROAs grants and will be enforced by a BLM Authorized Officer. For each mitigation measure presented below, the measure is outlined and its effectiveness is assessed. Not all mitigation measures will be completely effective in reducing potential significant impacts below the significance threshold. This will result in unavoidable adverse impacts that were discussed in Section 4.9 of the Draft EIS. All measures would be applied to any of the three site alternatives analyzed in this document except where noted otherwise. In addition to the mitigation measures contained in this Final EIS and Plan Amendment, the BLM will attach standard and special ROA stipulations to its ROA grant. These stipulations will contain generic measures that are applied to all ROAs as well as site-specific measures whose need may be identified at the time the ROA centerline is surveyed. The required surveys for cultural resources, for example, may identify the need for site-specific stipulations. As noted in several of the following measures, the BLM Federal Authorized Officer will direct the detailed implementation of certain mitigation measures.

Measure 1: Water Resources. In the event of a spill of organic contaminants in a shallow groundwater area penetrating to the depth of and contaminating the groundwater, alternatives for remediation will be evaluated and implemented. Methods could include a waste recovery pumping system or a recovery system coupled with a water treatment
system. These could consist of pumping of the waste and/or contaminated groundwater; followed by treatment systems such as physical separation of the water, air stripping, or carbon filtration; and finally reinjection of the treated water back into the aquifer.

Effectiveness. This measure will ensure that groundwater resources are not significantly affected by a spill of organic wastes.

Measure 2: Water Resources. The water supply well at the Skunk Ridge site will be located so that its drawdown of the aquifer will not affect other existing wells in the vicinity. This determination will be made by the Utah State Engineer.

Effectiveness: This measure will ensure that no existing water users are significantly affected by the operation of Apus’ water supply well if the facility is located at the Skunk Ridge site.

Measure 3: Cultural Resources. Potential adverse impacts to cultural resources will be mitigated in the following manner. Prior to construction, an intensive Class III (100 percent) cultural resource survey will be conducted on all affected federal land that has not previously been surveyed. Survey on non-federal lands will be conducted as specified by the Authorized Officer after consultation with the State Historic Preservation Officer (SHPO). During the survey, information will be gathered on all newly discovered and previously recorded archaeological sites to determine their potential eligibility to the National Register of Historic Places. Limited testing of some sites may be necessary in order to determine their eligibility. Following the survey, an inventory report will be prepared and submitted to the BLM Authorized Officer for review and comment. The report will contain the results of the inventory, and all sites will be evaluated for potential eligibility to the National Register. The report will include a proposed mitigation plan for all sites that are considered to be potentially eligible for inclusion on the National Register. The mitigation plan may include avoidance of sites, data collection, site-specific control of access and construction, monitoring recommendations, and salvage excavation.

Based on the above mitigation plan, the Authorized Officer will submit a treatment plan to the SHPO and to the Advisory Council on Historic Preservation. Following the consultation period, the treatment plan will be implemented. All field work must be completed before construction can begin in a given area. Monitoring will be implemented during construction where required by the treatment plan. Any sites located during construction or as the result of monitoring will be evaluated and a treatment plan will be developed as needed.

Effectiveness: The cultural resources treatment plan will ensure that the data which help determine a resource’s significance will not be destroyed or lost and the effects of construction and operation on cultural resources are fully considered as required by law. While implementation of the treatment plan will avoid most significant impacts to cultural resources, it may not be possible to mitigate all impacts.

Additional Mitigation Measures

The mitigation measures presented in the preceding section were developed in response to specific significant impacts that were identified earlier in this chapter. To supplement these measures, additional mitigation measures not linked to significant impacts were also developed. These measures would further reduce the overall impacts of the project and are presented below.

Measure A: Visual Resources. Facility structures will be painted with non-reflective paint of compatible earthtone colors.

Effectiveness. This measure will reduce the visual contrast of the proposed structures.
Measure B: Biological Resources. A site-specific Construction, Operation, and Management (COM) Plan for rights-of-way, which describes specific construction and restoration techniques and establishes guidelines in sensitive biological areas, will be developed by Aptus and approved by the BLM prior to construction initiation.

Effectiveness. This measure will minimize impacts to vegetation and wildlife resources.

Measure C: Biological Resources. Construction of the natural gas pipeline in the vicinity of the critical pronghorn fawning area will be avoided from May through July.

Effectiveness. This measure will avoid disturbance to pronghorn during fawning activities.

Measure D: Biological Resources. Revegetation procedures will be implemented by Aptus on the facility site following facility construction to restore any disturbed areas not designated for landscaping. Seed mixtures, methods of dispersal, mulching, and monitoring will be designed to prevent the invasion of noxious weeds.

Effectiveness: Revegetation areas on the facility site, previously disturbed by construction activities, will aid in inhibiting the invasion of noxious weeds such as halopeat and Russian thistle.

4.1.2 Restoration Requirements for Rights-of-Way

The following measures outline the procedures that would be used for ROW restoration following construction. A site-specific COM Plan would be developed by Aptus and approved by the BLM prior to construction initiation. The COM Plan would address appropriate reclamation procedures for various locations along the project ROW, describe specific construction and restoration techniques, and establish guidelines to minimize impacts to vegetation or wildlife resources. In areas of minimal vegetative potential specific guidelines may be waived at the discretion of the BLM Authorized Officer.

Restoration Goal

Restoration and revegetation of sites with more than five percent vegetal cover would be implemented to meet the following objectives:

1. stabilize the disturbed areas to minimize soil erosion and off-site sedimentation, and
2. return the disturbed areas to a pre-disturbance condition.

Site Clearing

All construction would be executed to minimize the cumulative area of disturbance, thereby reducing the total area impacted and that which would require revegetating. All woody vegetation cleared along the ROWs would be piled to the side of the ROW for later use in site preparation.

Topsoil Removal, Handling, and Storage

The surface soil material would be stripped to a minimum depth of 8 inches both from the disturbed areas during construction and from disturbed areas that would be used throughout the life of the project. The topsoil would be disposed in an area separate from all construction activities and labeled to distinguish it from other deposited earthen materials. Unsuitable materials such as large cobbles and rocks that occur in the stripped topsoil would be separated from the topsoil and backfilled into excavated areas or disposed of in other areas approved by the BLM Authorized Officer. Some disturbed areas may not contain adequate topsoil quantities for successful restoration; consequently, also at the direction of the BLM Authorized Officer, additional topsoil would be removed from areas with excess topsoil and transported to areas with deficient quantities to increase restoration potential.

Trenching, Overburden Removal, Storage, and Replacement

Materials excavated from the pipeline trench would be deposited separately from the topsoil within the ROW. Following placement of the
pipeline in the trench, the trench would be backfilled. All disturbed portions of the ROW would then be regraded to meet the configuration of the adjacent undisturbed land.

Runoff and Erosion Control

The applicant would attempt to minimize disturbance to natural drainage channels. No significant drainage channels or floodplains would be crossed; however, when crossing minor drainage channels, construction and restoration activities would be implemented in such a way as to maintain the hydraulic integrity of the channel. The natural gas pipeline would be buried to a minimum depth of 4 feet below the present bottom of all drainage channels. Surface runoff and erosion would be controlled onsite during and after construction so that a minimum of off-site sedimentation occurs. Runoff control measures such as water bars would be placed on regraded slopes, in general, and specifically along the disturbed ROW to control and minimize runoff across and down the disturbed areas. The following waterbar spacing guide (see Table 4-1) would be utilized in determining the spacing of such structures, and the need for additional waterbars would be determined by the BLM Authorized Officer. The waterbars would be constructed such that diverted water would be directed and discharged onto undisturbed areas. The waterbars would be constructed with gradients of approximately one percent, but no greater than two percent perpendicular to slope.

The time between site clearing and construction and the initiation of restoration procedures would be minimized to reduce the amount of soil loss due to erosion. Similarly, the time and the distance the natural gas pipeline trench is open would be minimized to reduce the opportunity of significant in-trench water flow in response to a precipitation event or snowmelt. In the event the trench must be open for a great downslope distance, ditch plugs, which would consist of small earthen dams within the trench, would be used to divert water out of the trench. The need for and application of the plugs would be decided by the BLM Authorized Officer. These structures would minimize

<table>
<thead>
<tr>
<th>Slope (%)</th>
<th>Spacing (ft)</th>
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<tbody>
<tr>
<td>5</td>
<td>150</td>
</tr>
<tr>
<td>10</td>
<td>100</td>
</tr>
<tr>
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<td>50</td>
</tr>
<tr>
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<td>40</td>
</tr>
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<td>40</td>
<td>30</td>
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<tr>
<td>50</td>
<td>20</td>
</tr>
<tr>
<td>60</td>
<td>15</td>
</tr>
<tr>
<td>70</td>
<td>10</td>
</tr>
</tbody>
</table>
the potential for significant concentrations of flow within the trench. Such structures may also serve to facilitate the movement of livestock and wildlife across the trench.

Topsoil Replacement and Seedbed Preparation

Disturbed areas that would subsequently receive topsoil would be ripped using subsoilers. The stockpiled topsoil would then be deposited evenly over the disturbed area to be restored. The re-distributed topsoil would be scarified by diskimg on the contour if possible to reduce compaction and increase infiltration capacity. Where applicable, the previously piled vegetation would be spread over the cleared ROW and disked into the topsoil. All topsoil removal, excavation, construction, backfilling, topsoil replacement, and seedbed preparation would be accomplished contemporaneously.

Seeding

The seed mix presented in Table 4-2, or an equivalent mixture depending on seed availability and approval by the BLM Authorized Officer, would be applied using a rangeland drill or a deep furrowing seeder on the contour. The drill would cover seeds with approximately 0.5 inch but not greater than 1 inch of soil. A weighted roller would be pulled behind the seeder to surround the seed with a firm seed bed. The seed mix is designed to provide successful revegetation on all soils within the mixed desert shrub and grassland communities. Seed mixtures for the pinyon-juniper community would be determined by the BLM Authorized Officer. On steep slopes or on soils with a high coarse fragment content, seed broadcasting may be required. In such cases the seed mix would be applied at 1.5 times that shown in Table 4-2. The broadcast seed would be applied using a rotary spreader mounted on a tractor and covered with soil by pulling a flexible cultipacker or a chain behind the tractor. The seed mix would be planted in late October or early November. Seeding may be required for three consecutive years following disturbance, depending upon the success of reseeding.

Mulching

Native certified weed-free hay would be applied to the disturbed areas after seeding at a rate of 2 tons per acre. The hay would be crimped into the soil surface using a serrated disk crimper.

Monitoring and Maintenance

A monitoring plan would be initiated to evaluate restoration success. Any significant problems encountered during monitoring would be immediately mitigated under the direction of the BLM Authorized Officer, including revegetation failure, noxious weed invasion, or erosion.
# Table 4-2

**Prescribed Seed Mixture for Restoration of Disturbed Rights-of-Way**

<table>
<thead>
<tr>
<th>Species</th>
<th>Cultivar or Variety</th>
<th>Seed Application Rate (PLS lbs/acre)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grasses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hiicrest wheatgrass</td>
<td></td>
<td>3.0</td>
</tr>
<tr>
<td>Thickspike wheatgrass</td>
<td></td>
<td>2.5</td>
</tr>
<tr>
<td>Bottlebrush squirreltail</td>
<td></td>
<td>1.5</td>
</tr>
<tr>
<td>Mammoth wildrye</td>
<td></td>
<td>1.5</td>
</tr>
<tr>
<td>Sand dropseed</td>
<td></td>
<td>0.25</td>
</tr>
<tr>
<td><strong>Forbs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gooseberry-leaf globemallow</td>
<td></td>
<td>0.5</td>
</tr>
<tr>
<td>Yellow sweetclover</td>
<td></td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Shrubs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fourwing saltbush</td>
<td></td>
<td>1.0</td>
</tr>
<tr>
<td>Prostrate sumac</td>
<td></td>
<td>0.5</td>
</tr>
<tr>
<td>Fringed sagebrush</td>
<td></td>
<td>0.02</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td>11.27</td>
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</table>

<table>
<thead>
<tr>
<th><strong>Alternate Species</strong></th>
<th>Cultivar or Variety</th>
<th>Replacement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grasses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crested wheatgrass</td>
<td>Ephraim</td>
<td>Hiicrest wheatgrass</td>
</tr>
<tr>
<td>Alkal saltbush</td>
<td>Viva</td>
<td>Any grass</td>
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<tr>
<td>Galleta</td>
<td>Vinall</td>
<td>Mammoth wildrye</td>
</tr>
<tr>
<td>Russian wildrye</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Forbs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desert marigold</td>
<td></td>
<td>Gooseberry leaf globemallow</td>
</tr>
<tr>
<td>White evening primrose</td>
<td></td>
<td>Same as above</td>
</tr>
<tr>
<td><strong>Shrubs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bodasage</td>
<td></td>
<td>Fringed sage</td>
</tr>
<tr>
<td>Shadscale</td>
<td></td>
<td>Fourwing saltbush</td>
</tr>
<tr>
<td>Mat saltbush</td>
<td></td>
<td>Fourwing saltbush</td>
</tr>
</tbody>
</table>

---

1. Seed mix based on objectives previously listed, species adaptation to the site conditions of the project, usefulness of species for site stabilization and livestock and wildlife use, species success in revegetation efforts, and current seed availability and cost.

2. Application rates are for drilled seed. If seed broadcasting is required, these rates would be increased by a factor of 2.5. PLS- pure live seed.

3. Species that would be used to replace the prescribed species in the event that they are not commercially available in suitable quantities or are too expensive. The substitution will be at the discretion of the BLM Authorized Officer.
Memorandum

To: State Supervisor, Fish and Wildlife Enhancement, U.S. Fish and Wildlife Service, Salt Lake City, Utah

From: Deputy State Director, Lands and Renewable Resources

Subject: Request for Species List

In accordance with the Endangered Species Act, we request that you provide us a list of the species that may occur within the project area as described in the attachment. Contact Margaret Kelsey (524-3138) if you have questions.

Thank you.

Attachment
Public Scoping Document for the HEI Industrial Waste Treatment Facility EIS
United States Department of the Interior
Fish and Wildlife Service
Fish and Wildlife Enhancement
2060 Administration Building
1749 West 1700 South
Salt Lake City, Utah 84104-5110
September 18, 1987

To: Deputy State Director, Lands and Renewable Resources
   Bureau of Land Management, Salt Lake City, Utah
From: State Supervisor, Fish and Wildlife Enhancement
   Fish and Wildlife Service, Salt Lake City, Utah
Subject: Species List for NEI Industrial Water Treatment Facility

We have reviewed your memorandum of August 31, 1987 concerning the subject Environmental Impact Statement. It appears that listed endangered species, may occur in the area of influence of this action.

To comply with Section 7(c) of the Endangered Species Act of 1973, as amended, several agencies or their designees are required to obtain from the Fish and Wildlife Service (Service) information concerning any species or critical habitat, listed or proposed to be listed, which may be present in the area of a proposed construction project. Therefore, we are furnishing you the following list of species:

Listed
Bald eagle Haliaeetus leucocephalus
Peregrine falcon Falco peregrinus

Section 7(c) also requires the Federal agency proposing a major Federal action significantly affecting the quality of the human environment to conduct and submit to the Service a biological assessment to determine the effects of the proposal on listed and proposed species. The biological assessment shall be completed within 180 days after the date on which initiated or a time mutually agreed upon between the agency and the Service. Before physical modification or alteration of a major Federal action is begun the assessment must be completed. If the biological assessment is not begun within 90 days, this list should be verified with us prior to initiation of the assessment. We do not feel that we can adequately assess the effects of the proposed action on listed species without a complete assessment.

When conducting a biological assessment a thorough review of the project and the potential impacts of the project on threatened and endangered species within the immediate project area as well as the area of influence must be made.

Specific concerns the Service has about this project and its potential impacts on threatened and endangered species are as follows:

Bald eagle
Utah has one of the largest wintering populations of bald eagles in the United States. Rush Valley and the adjacent Skull Valley to the west have been identified as major concentration areas for eagles. Our concern would be the release of toxic materials into the environment. The effects of DOT and other similar chemicals have reduced the numbers of bald eagles substantially in the past.

Peregrine falcon
A Peregrine falcon hack tower is currently located at Timpe Point on the north end of the Stansbury Mountains. Our concern here would also be the release of toxic materials into the environment that would negatively affect this species.

The Fish and Wildlife Service can enter into formal Section 7 consultation only with another Federal agency. State, county or any other governmental or private organizations can participate in the consultation process, help prepare information such as the biological assessment, participate in meetings, etc.

After your agency has completed and reviewed the assessment, it is your responsibility to determine if the proposed action "may affect" any of the listed species. If the determination is "may affect" for listed species you must request in writing formal consultation from the State Supervisor, Fish and Wildlife Enhancement Office, U.S. Fish and Wildlife Service at the address given above. At that time you should provide this office a copy of the biological assessment and any other relevant information that assisted you in reaching your conclusion.

Your attention is also directed to Section 7(d) of the Endangered Species Act, as amended, which underscores the requirement that the Federal agency or the applicant shall not make any irreversible or irretrievable commitment of resources during the consultation period which, in effect, would deny the formulation or implementation of reasonable and prudent alternatives regarding their actions on any endangered or threatened species.

If we can be of further assistance, please advise us. The Fish and Wildlife Service representative who will provide you with technical assistance is Robert Benton, FTS 588-4430.

Robert A. Russink
REFERENCES


**ABBREVIATIONS AND ACRONYMS**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>BLM</td>
<td>Bureau of Land Management</td>
</tr>
<tr>
<td>Btu</td>
<td>British thermal unit</td>
</tr>
<tr>
<td>CAA</td>
<td>Clean Air Act</td>
</tr>
<tr>
<td>CBO</td>
<td>Congressional Budget Office</td>
</tr>
<tr>
<td>CERCLA</td>
<td>Comprehensive Environmental Response, Comprehension, and Liability Act</td>
</tr>
<tr>
<td>CEQ</td>
<td>Council on Environmental Quality</td>
</tr>
<tr>
<td>CO₂</td>
<td>Carbon dioxide</td>
</tr>
<tr>
<td>COM Plan</td>
<td>Construction, Operation, and Management Plan</td>
</tr>
<tr>
<td>DOT</td>
<td>Department of Transportation</td>
</tr>
<tr>
<td>D.E.</td>
<td>destruction removal efficiency</td>
</tr>
<tr>
<td>EIS</td>
<td>environmental impact statement</td>
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<tr>
<td>EPA</td>
<td>Environmental Protection Agency</td>
</tr>
<tr>
<td>ft</td>
<td>feet</td>
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<tr>
<td>HCl</td>
<td>hydrogen chloride</td>
</tr>
<tr>
<td>I-80</td>
<td>Interstate 80</td>
</tr>
<tr>
<td>kV</td>
<td>kilovolts</td>
</tr>
<tr>
<td>lb/hr</td>
<td>pounds per hour</td>
</tr>
<tr>
<td>MFP</td>
<td>Management Framework Plan</td>
</tr>
<tr>
<td>NAAQS</td>
<td>National Ambient Air Quality Standards</td>
</tr>
<tr>
<td>NEI</td>
<td>National Electric, Inc.</td>
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<tr>
<td>NEPA</td>
<td>National Environmental Policy Act</td>
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<td>NHPA</td>
<td>National Historic Preservation Act</td>
</tr>
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<td>NIOSH</td>
<td>National Institute of Occupational Safety and Health</td>
</tr>
<tr>
<td>NO₂</td>
<td>nitrogen oxides</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Administration</td>
</tr>
<tr>
<td>PCB</td>
<td>polychlorinated biphenyl</td>
</tr>
<tr>
<td>PIC</td>
<td>product of incomplete combustion</td>
</tr>
<tr>
<td>POHC</td>
<td>principal organic hazardous constituents</td>
</tr>
<tr>
<td>PLS</td>
<td>Pure live seed</td>
</tr>
<tr>
<td>PSD</td>
<td>Prevention of Significant Deterioration</td>
</tr>
<tr>
<td>RCRA</td>
<td>Resource Conservation and Recovery Act</td>
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<tr>
<td>ROW</td>
<td>right-of-way</td>
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<tr>
<td>SARA-Title III</td>
<td>Superfund Amendment and Reauthorization Act - Title III</td>
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<td>SDWA</td>
<td>Safe Drinking Water Act</td>
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<td>SHPO</td>
<td>State Historic Preservation Office</td>
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<td>SO₂</td>
<td>sulfur dioxide</td>
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<td>STEL</td>
<td>Short-Term Exposure Limit</td>
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<tr>
<td>TLV</td>
<td>Threshold Limit Value</td>
</tr>
<tr>
<td>TPY</td>
<td>tons per year</td>
</tr>
<tr>
<td>TSCA</td>
<td>Toxic Substance Control Act</td>
</tr>
<tr>
<td>TSP</td>
<td>total suspended particulate</td>
</tr>
<tr>
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<td>Utah Bureau of Solid and Hazardous Waste</td>
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<tr>
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<td>USPCI</td>
<td>U.S. Pollution Control, Inc.</td>
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<tr>
<td>VMT</td>
<td>vehicle miles traveled</td>
</tr>
<tr>
<td>WSA</td>
<td>Wilderness Study Area</td>
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