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PROPOSED RECORD OF DECISION

FOR THE

APTUS INDUSTRIAL AND HAZARDOUS WASTE TREATMENT FACILITY

TOOELE COUNTY, UTAH

U. S. DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

SALT LAKE DISTRICT

JULY 22, 1988

Decision Record Sheet

APTUS INDUSTRIAL AND HAZARDOUS WASTE TREATMENT FACILITY

TOOELE COUNTY, UTAH

Following the review of the Environmental Impact Statement (EIS) and public comments of record, it is deemed in the public interest to approve the Aragonite site in Tooele County, Utah for the location of an Industrial and Hazardous Waste Treatment Facility.

We hereby approve for issuance the required authorizations for use of the public lands necessary for the construction, operation and maintenance of the Aptus Industrial and Hazardous Waste Treatment facility located at the Aragonite site in Tooele County, Utah. These land-use authorizations include, but are not limited to, right-of-way grants for access roads, railroad spur, power transmission line, natural gas pipeline, and telephone line. The decision also includes the amendment of the Tooele Management Framework Plan to allow for a land exchange at the Aragonite Site. A final decision will be made pending a Supplemental Environmental Assessment addressing the lands to be acquired by BLM.

Pony Express Resource Area Manager

Date

Salt Lake District Manager

Date

Utah State Director

Date

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I. INTRODUCTION: On February 24, 1987, Aptus filed application for rights-of-way on public lands with the Bureau of Land Management (BLM), Salt Lake District that would be required for the construction, operation, and maintenance of an Industrial and Hazardous Waste Treatment Facility in Tooele County, Utah. The Federal Land Policy and Management Act of 1976 (FLPMA) requires that the BLM provide for multiple use management of the public lands with consideration and protection of the environment. It was determined by BLM that the granting of rights-of-way and possible consummation of a land exchange for the proposed project would constitute a "Major Federal Action" under the National Environmental Policy Act of 1969 and would require the preparation of an Environmental Impact Statement (EIS) on the entire project.

The BLM is the Federal agency responsible for preparation of the EIS. Major issues addressed in the EIS include air quality, water resources, public health and safety, and transportation of hazardous waste materials. The Draft EIS was released for public review and comment in February 1988. Public hearings were held in Tooele and Salt Lake City, Utah. The Final EIS was released in July 1988. The decision for the proposed project will be made in August 1988.

II. DESCRIPTION OF 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 the W $\frac{1}{2}$ Section 9, SW $\frac{1}{2}$ Section 4, E $\frac{1}{2}$ SE $\frac{1}{2}$, Section 5 and Section 16 of T. 1S., R. 10W., SLM.

The proposed Aragonite site occupies one section of private land (Section 16) for which Aptus holds an option to purchase and partial sections of Federal land (in Sections 4, 5, and 9) managed by the BLM. Aptus would eventually 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 (MFP). A plan amendment would be required before the proposed exchange could occur. A Final Environmental Impact Statement (EIS) was prepared that analyzes the impacts of the proposal, alternative sites, and an MFP amendment. The EIS will constitute analysis for the amendment under the National Environmental Policy Act of 1969 (NEPA). Aptus would initially be required to obtain right-of-way grants from the BLM for the linear facilities that would cross public lands to the Aragonite site.

The Aptus treatment facility would occupy approximately 15.3-acres of the 1,200 acre proposed site. 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, bag house, sludge and bulk handling system, analytical laboratory, and emergency response center. 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 right-of-way, 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 adjacent to constructed facilities would be restored. Some areas on the facility site would be landscaped while others would be revegetated to aid in inhibiting the invasion of noxious weed species. The plant area would be asphalt surfaced to contain any water runoff on site. The right-of-way would be restored in a manner consistent with BLM requirements and to the standards of the BLM Authorized Officer.

All hazardous 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 on site would be slag from the incineration of solids and fly

ash from the bag house. This waste treatment by-product would be transported off site and disposed of in an existing Environmental Protection Agency (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).

III. ALTERNATIVES ANALYZED IN THE ENVIRONMENTAL IMPACT STATEMENT:

A. Skunk Ridge Alternative: The Skunk Ridge Alternative would differ from the Proposed Action (Aragonite site) 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., Section 4 in Tooele County, Utah. This section is public land managed by the BLM. A land exchange with BLM and right-of-way 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.

B. 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. Section 30 and 31 of Tooele County, Utah. These sections are public land managed by the BLM. A land exchange and right-of-way grants would also be required for this alternative.

Approximately 14.8-miles of transmission line upgraded 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.

C. 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 permitting requirements such as the

hazardous waste permitting requirements of RCRA and TSCA that are administered by the State of Utah and EPA.

D. No Action Alternative: With the No Action Alternative, BLM would not issue the right-of-way 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 right-of-way on private land and proceeding with a treatment project. If private land were utilized, BLM 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.

IV. PUBLIC INVOLVEMENT: 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 citizen 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 analyses in support of the EIS preparation, 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 Department of the Interior requirements, and (2) to the extent practical and allowed by Departmental requirements, prepare the EIS to meet the needs of other Federal agencies, State and county governmental entities, who have major authorizing actions to avoid duplication of effort. The EPA, Region VIII, was a cooperating agency for the preparation of the Environmental Impact Statement.

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 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.







V. LAND USE DECISIONS:

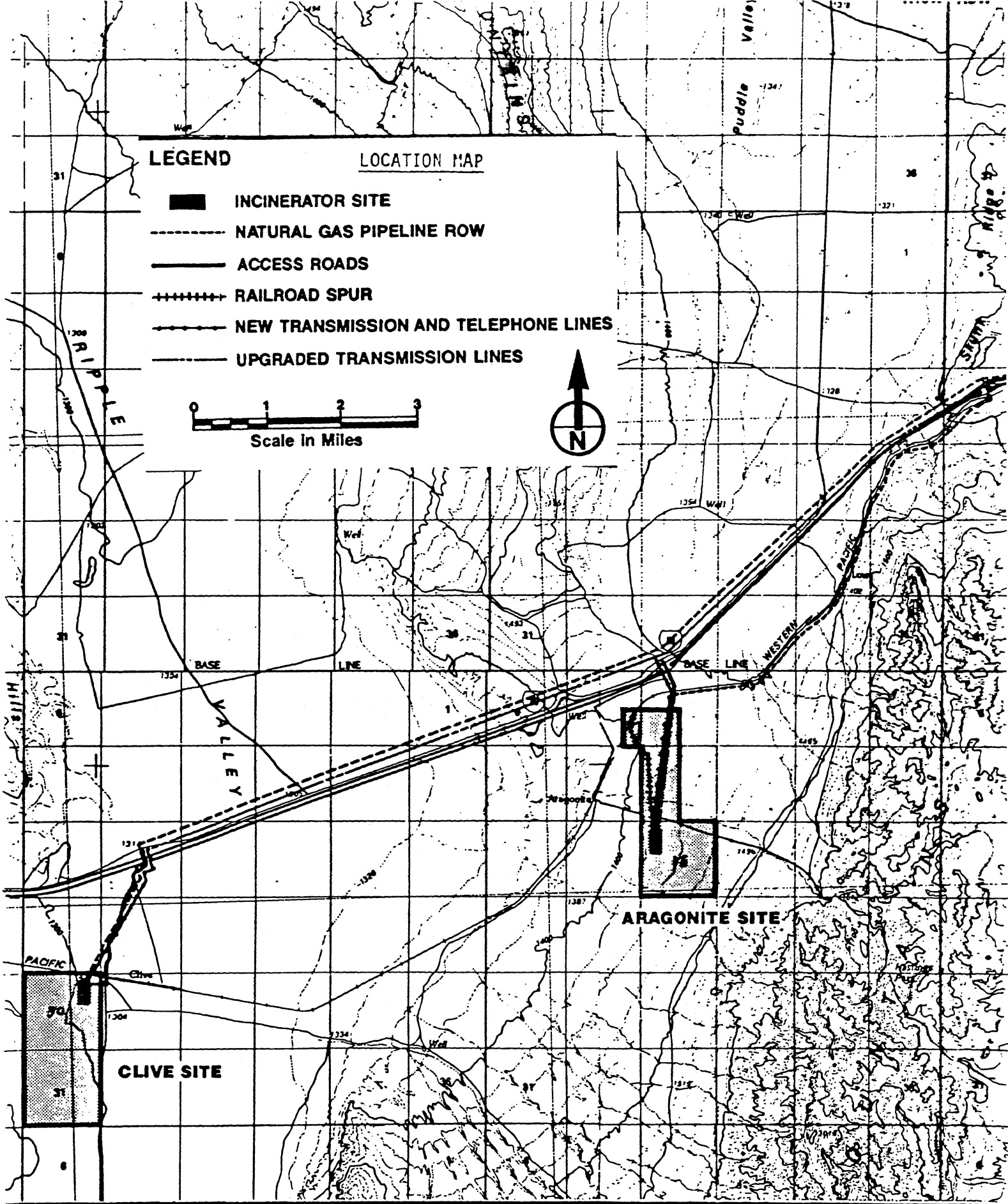
A. Site Selection: The decision is to select the Aragonite site for development of the Aptus Hazardous Waste facility (see location map). BLM will issue the required land-use authorizations necessary for the construction, operation, and maintenance of the Aptus Industrial and Hazardous Waste Treatment facility.

Rationale: The three alternative sites analyzed in the Environmental Impact Statement differed only slightly in environmental impacts all of which were not significant. The Tooele County Commissioners appointed a "citizens siting committee" to help the Tooele County Zoning Commission identify suitable areas for hazardous waste facility sites. The Tooele County Commission identified a geographic area in Tooele County where they would accept rezoning applications for hazardous waste facilities and approve the proposed sites on a case-by-case basis. It was determined by the Tooele County Commissioners that the Skunk Ridge site was unacceptable in that the area was too close to existing major salt production industries. The Skunk Ridge site would also create a large hazardous waste zone that would be difficult to manage and a detriment to other non-hazardous waste industries that desire to locate in the I-80 corridor of Tooele County. The Aragonite and Clive sites are located within the geographic area identified by Tooele County for proposed hazardous waste materials facilities. The Aragonite site is located on private property and Aptus has an option to purchase 640 acres (T. 1S., R. 10W., Section 16)

LEGEND

LOCATION MAP

-  INCINERATOR SITE
-  NATURAL GAS PIPELINE ROW
-  ACCESS ROADS
-  RAILROAD SPUR
-  NEW TRANSMISSION AND TELEPHONE LINES
-  UPGRADED TRANSMISSION LINES



from the current landowner. The actual plant site will occupy about 15.3-acres. The Aragonite site was selected in consultation with the steering committee members.

B. Rights-of-Way to Aragonite Site (T. 1S. R. 10W., Section 16):

1. Access Road: Issue a 2.2-mile access road right-of-way grant through public lands from the Aragonite I-80 interchange to the Aragonite Hazardous Waste Incinerator site.

Rationale: It will be necessary for Aptus to construct a 2.2-mile paved access road to the plant site facility for employee and truck access. It has been determined that the construction, operation, and maintenance of the access road would not significantly impact the environment. Construction, operation, and maintenance would be in accordance with environmental and other conditions that are stipulated in the right-of-way grant. Approximately 63 truck deliveries per week of hazardous waste materials would occur once the plant reaches full operation.

2. Power Transmission Line: Issue a transmission line right-of-way grant through public lands from the Skunk Ridge substation to the Aragonite Hazardous Waste Incinerator. The right-of-way grant would authorize upgrading of about 7.6-miles of Utah Power and Light Company's existing transmission line and about 2.4-miles of new transmission line construction.

Rationale: It will be necessary for Aptus to construct, operate and maintain an electric transmission line to provide 25-kilovolts of electric power to the hazardous waste incinerator and related facilities. The line will be constructed utilizing wood-pole structures on the existing Utah Power and Light Company's right-of-way. It has been determined the construction, operation, and maintenance of the transmission line would not significantly impact the environment. Construction, operation, and maintenance of the transmission line would be in accordance with environmental and other conditions that are stipulated in the right-of-way grant.

3. Natural Gas Pipeline: Issue a natural gas pipeline right-of-way grant through public lands from Rowley to the Aragonite hazardous waste incinerator site. The right-of-way grant would authorize the construction, operation, and maintenance of a 4-inch natural gas pipeline extending 21.3-miles in length.

Rationale: It may be necessary for Aptus to construct, operate and maintain a 4-inch natural gas pipeline as the fuel source for a hazardous waste incinerator; however, Aptus is considering the use of diesel fuel rather than natural gas as the incinerator fuel source. If diesel fuel is utilized, a natural gas pipeline right-of-way grant would not be issued. It has been determined that a 4-inch natural gas pipeline would not significantly impact the environment. The construction, operation, and maintenance of the gas pipeline would be in accordance with environmental and other conditions that are stipulated in the right-of-way grant.

4. Telephone Line: Issue a telephone right-of-way grant through public lands from existing lines to the Aragonite hazardous waste incinerator site. The right-of-way grant would authorize the construction, operation, and maintenance of a new telephone line about 2.4-miles in length.

Rationale: It will be necessary for Aptus to construct, operate, and maintain a telephone line to provide communication services to the Aragonite facility. The telephone line would be attached to the wooden-pole structures for the electric transmission lines. It has been determined that the telephone line would not significantly impact the environment. The construction, operation, and maintenance of the telephone line would be in accordance with environmental and other conditions that are stipulated in the right-of-way grant.

5. Railroad Spur Line: Issue a railroad line right-of-way grant through public lands from the Union Pacific mainline to the Aragonite hazardous waste incinerator plant site. The right-of-way would authorize the construction, operation, and maintenance of 1.5-miles of new spur line.

Rationale: It will be necessary for Aptus to construct, operate, and maintain a 1.5-mile railroad spur line to the Aragonite facility. Approximately two rail deliveries per week would occur once the facility reaches full operation. It has been determined that a railroad line would not significantly impact the environment. The construction, operation, and

maintenance of the railroad spur line would be in accordance with environmental and other conditions that are stipulated in the right-of-way grant.

C. Amendment to the Tooele Management Framework Plan and Exchange of Public Lands at the Aragonite Site: Amend the Tooele Management Framework Plan to allow the exchange of 1,120 acres of public lands at Aragonite in T. 1S., R. 10W., S $\frac{1}{2}$ NW $\frac{1}{2}$ and S $\frac{1}{2}$ Section 4; and E $\frac{1}{2}$ SE $\frac{1}{2}$ Section 5; and Section 9 for private lands of equal monetary value.

Rationale: It is in the public interest for BLM to exchange 1,120 acres of public lands. These lands are located within the geographic area identified by Tooele County for possible hazardous waste facilities. In exchange, BLM would acquire private lands of equal monetary value that have high natural resource values. Such private lands would include, but are not limited to, lands within Areas of Critical Environmental Concern, threatened and endangered species habitat, riparian wetlands, big game habitat, etc. Prior to a final decision, a supplemental environmental assessment (EA) will be completed by BLM when these private lands have been specifically identified for the proposed land exchange. The acquisition of high resource value lands by BLM would have a positive impact to the Bureau's natural resource management programs. Of the 1,120 acres being designated for exchange, 560 acres are being selected in the Aptus exchange. The remaining 560 acres are not a part of the Aptus exchange and would then become available for future land exchange proposals.

D. Exchange of Public Lands at Clive Site: Allow for the exchange of 1,280 acres of public lands at the Clive Alternative site (T. 1S., R. 11W., Sections 30 and 31) in Tooele County into private ownership for private lands of equal monetary value. A final decision on the exchange will be made pending a Supplemental Environmental Assessment addressing the private lands to be acquired by BLM. It is not necessary to amend the Tooele MFP to allow for exchange of public lands at the Clive site.

Rationale: Aptus has identified 1,280 acres of public land at the Clive site Alternative that they would like to acquire for future purposes not yet specifically identified but consistent with Tooele County zoning. Any future development would be subject to applicable Federal, State, and county requirements. These lands are located within the geographic area identified by Tooele County for possible hazardous waste facilities. In exchange, BLM would acquire private lands of equal monetary value that have high natural resource values. Such private lands would include, but not be limited to, lands within Areas of Critical Environmental Concern, threatened and endangered species habitat, riparian wetlands, big game habitat, etc. A supplemental environmental assessment (EA) will be completed by BLM when these private lands have been specifically identified for the proposed land exchange. The acquisition of high resource value lands by BLM would have a positive impact on the Bureau's natural resource management programs.

E. Mitigation Measures Adopted: The following measures would be employed to mitigate the adverse impacts of the right-of-way grants and other permits. Mitigation measures will be specific requirements of Aptus as part of their right-of-way grants and other permits and will be enforced by a BLM Authorized Officer. For each mitigation measure presented below, the measure is outlined. The BLM will attach standard and special right-of-way stipulations to its right-of-way grants and other permits. These stipulations will contain generic measures that are applied to all rights-of-way as well as site-specific measures whose need may be identified at the time the right-of-way centerline is surveyed. For example, the required surveys for cultural resources may identify the need for site-specific stipulations. As noted in several of the following measures, the BLM Authorized Officer will direct the detailed implementation of certain mitigation measures. In addition, BLM will include stipulations for spill clean-up contingency plans, monitoring plans, and liability requirements. Not all mitigation measures will be completely effective in reducing impacts.

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 correction will be evaluated and implemented. Methods would 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.

Measure 2: 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 in 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 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.

Measure 3: Visual Resources. Facility structures will be painted with non-reflective paint of compatible earthtone colors.

Measure 4: Biological Resources.

a. A site-specific Construction, Operation, and Management (COM) Plan 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.

b. Construction of the natural gas pipeline in the vicinity of the critical pronghorn fawning area will be avoided from May through July.

Measure 5: Restoration Requirements. The following measures outline the procedures that will be used for right-of-way restoration following construction. A site-specific COM Plan will be developed by Aptus and approved by the BLM prior to construction initiation. The COM Plan will address appropriate reclamation procedures for various locations along the project right-of-way, describe specific construction and restoration techniques, and establish guidelines to minimize impacts to vegetation and/or wildlife resources. In areas of minimal vegetative potential, specific guidelines may be waived at the discretion of the BLM Authorized Officer. Restoration and revegetation of sites with more than five percent vegetal cover will be required to stabilize the disturbed areas to minimize soil erosion and off site sedimentation and return the disturbed areas to a pre-disturbance condition.

a. Site Clearing: All construction will be executed to minimize the cumulative area of disturbance, thereby reducing the total area impacted and that which will require revegetating. All woody vegetation cleared along the right-of-way will be piled to the side of the right-of-way for later use in site preparation.

b. Topsoil Removal, Handling, and Storage: The surface soil material will be stripped to a minimum depth of 8-inches both from the disturbed areas during construction and from disturbed areas that will be used throughout the life of the project. The topsoil will be deposited 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 will be separated from the topsoil and backfilled in to 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 will be removed from areas with excess topsoil and transported to areas with deficient quantities to increase restoration potential.

c. Trenching, Overburden Removal, Storage, and Replacement: Materials excavated from the pipeline trench will be deposited separately from the topsoil within the right-of-way. Following placement of the pipeline in the trench, the trench will be backfilled. All disturbed portions of the right-of-way will then be regraded to meet the configuration of the adjacent undisturbed land.

d. Runoff and Erosion Control: The applicant will attempt to minimize disturbance to natural drainage channels. No significant drainage channels or floodplains will be crossed; however, when crossing minor drainage channels, construction and restoration activities will be implemented in such a way as to maintain the hydraulic integrity of the channel. The natural gas pipeline will be buried to a minimum depth of 4-feet below the present bottom of all drainage channels. Surface runoff and erosion will be controlled on site during and after construction so that minimal off site sedimentation occurs. Runoff control measures such as water bars will be placed on regraded slopes, in general, and specifically along the disturbed right-of-way to control and minimize runoff across and down the disturbed areas. The water bar spacing guide will be utilized in determining the spacing of such structures, and the need for additional water bars will be determined by the BLM Authorized Officer. The water bars will be constructed such that diverted water will be directed and discharged onto undisturbed areas. The water bars will 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 will 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 will be minimized to reduce the opportunity of significant in-trench water flow in response to precipitation or snowmelt. In the event the trench must be open for a great down-slope distance, ditch plugs, which will consist of small earthen dams within the trench, will be used to divert

water out of the trench. The need for and application of the plugs will be decided by the BLM Authorized Officer. These structures will minimize 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.

e. Topsoil Replacement and Seedbed Preparation: Disturbed areas that will subsequently receive topsoil will be ripped using subsoilers. The stockpiled topsoil will then be deposited evenly over the disturbed area to be restored. The redistributed topsoil will be scarified by disking on the contour if possible to reduce compaction and increase infiltration capacity. Where applicable, the previously piled vegetation will be spread over the clear right-of-way and disked into the topsoil. All topsoil removal, excavation, construction, backfilling, topsoil replacement, and seedbed preparation will be accomplished contemporaneously. Fertilizer will be applied at specific rates approved by the BLM Authorized Officer.

f. Seeding: The seed mixture approved by the BLM Authorized Officer will be applied using a rangeland drill or a deep furrowing seeder on the contour. The drill will cover seeds with approximately 0.5-inch but not greater than 1-inch of soil. A weighted roller will 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 will 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 will be applied at 2.5-times the normally required rate. The broadcast seed will 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 will be planted in late October or early November. Seeding may be required for three consecutive years following disturbance depending upon the success.

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

h. Monitoring and Maintenance: A monitoring plan will be initiated to evaluate restoration success. Any significant problems encountered during monitoring will be immediately mitigated under the direction of the BLM Authorized Officer, including revegetation failure, noxious weed invasion, or erosion.