

Table 1-36: Poverty Status of Families by Race in the Region of Interest (2009–2013)

	Lea County, New Mexico	Eunice, New Mexico	Hobbs, New Mexico	Jal, New Mexico	Andrews County, Texas	Andrews, Texas	Gaines County, Texas	Seminole, Texas	Winkler County, Texas	Ector County, Texas	New Mexico	Texas
Total Families	15,560	834	7,861	566	3,913	2,923	4,158	1,530	1,875	35,011	498,457	6,206,755
Families below poverty	12.0%	8.3%	13.8%	4.4%	9.5%	10.7%	14.7%	12.5%	7.8%	13.1%	15.6%	13.7%
Families with a householder who is:												
White below poverty level	6.7%	2.6%	8.7%	3.5%	6.7%	8.1%	12.3%	11.7%	4.1%	8.0%	7.3%	5.9%
Black or African American below poverty level	22.4%	-	27.8%	0.0%	3.0%	3.4%	0.0%	0.0%	0.0%	26.0%	22.5%	20.5%
American Indian/Alaska Native below poverty level	0.0%	-	0.0%	-	0.0%	0.0%	3.0%	0.0%	0.0%	13.5%	29.7%	18.5%
Asian below poverty level	-	-	-	-	0.0%	0.0%	-	-	0.0%	0.0%	11.0%	9.1%
Native Hawaiian/ Other Pacific Islander below poverty level	-	-	-	-	-	-	-	-	-	0.0%	36.6%	14.9%
Hispanic or Latino below poverty level	17.1%	14.1%	17.3%	6.4%	12.7%	13.3%	19.5%	14.0%	12.0%	16.7%	22.2%	23.7%

Source: ACS Survey Table S1702.

percentage in poverty are highest for Black or African American populations in Lea County and Hobbs, New Mexico, and Ector County, Texas. Percentages below poverty are consistent across the ROI for Hispanic persons, ranging from a low of six percent in Jal to a high of 19.5 percent in Gaines County. Overall, families in poverty constitute between 4 and 15 percent in the ROI, with just over 15 percent in New Mexico and just over 13 percent in Texas. Again, these are statistics rather than census data and are accompanied by a margin of error.

1.3.2.4 Housing

As indicated in **Tables 1-18** and **1-20**, housing within the ROI is less expensive than within the respective states, with median home values at less than \$100,000 in all components of the ROI compared to more than \$100,000 in Texas (\$128,900) and New Mexico (\$160,000). The lowest median home values were in Winkler County at \$45,100 and Jal, New Mexico, at \$63,900. Median rent asked in the ROI ranged from \$575/month in Winkler to \$863/month in Seminole compared to \$758/month in New Mexico and \$851/month in Texas. The number of owner-occupied units substantially exceeded renter-occupied units in the ROI by roughly double. From a race perspective, White and Hispanic owners and renters constituted a substantial portion of the residential populations in the ROI.

A database search of homes currently for sale revealed that in Eunice, the closest town to the proposed site, on May 6, 2015, there were five single family homes for sale ranging in price from \$99,000 to \$140,000. On the same day in Andrews, Texas, there were 175 homes or lots for sale ranging in price from more than \$4 million for 25 acres of land down to \$25,000 for one-quarter to one-half acre of land. Existing homes were listed for \$69,900 to \$1.6 million (www.realtor.com/realestateandhomes-search/).

1.3.2.5 General Summary of Stratification

Looking at selected economic trends over time in the ROI (Lea and Andrews Counties in particular), from 1986 to 2006 it appears that the labor force participation was lower than became equivalent between Lea County and New Mexico, and was lower and subsequently exceeded labor force participation in Andrews County compared to Texas. Unemployment rates were historically equivalent to or higher in the counties compared to the states, but by 2006 they were lower in the counties compared to the states. Per capita income levels used to be lower in counties compared to states but by 2006, they were equivalent to or near the state levels (see **Table 1-33**). More recent data shown in **Table 1-35** indicates that median household incomes for cities or counties in the ROI are generally higher than Texas and New Mexico.

There is still heavy reliance on basic sector employment in the ROI, and jobs requiring higher educational attainment constitute a lower percentage of employment in the ROI compared to the states. The primary industries within the ROI are agricultural and mining based. Educational and health-related industries are very prevalent, along with trade-related industries. There appears to be

a rural-urban differentiation, whereby in the ROI's larger cities there is more similarity in income and employment stratification to state averages. Housing is somewhat less expensive in the ROI than in Texas or New Mexico as a whole.

With some exceptions, the ROI is economically interdependent, with most residents working in or near their residence and evidently within the ROI, given that most travel 25 minutes or less for work. The public sector has benefited greatly by tax payments from oil and gas royalties and ad valorem taxes resulting in a greater level of educational resources, hospital availability, and emergency response resources than would exist in similar regional economies dependent upon less lucrative industries. As a result of WCS' investment in the Andrews County as the host community as well, the ROI has benefitted in terms of economics and related development of community resources and infrastructure.

1.4 HISTORIC, SCENIC, CULTURAL, AND ARCHEOLOGICAL RESOURCES

1.4.1 Historic Resources

Historic resources include buildings, structures, objects, and non-archeological sites and districts that are important in the history of a community, a region, a state, or the nation. The proposed licensing activities are regulated by the NRC; the project is therefore subject to Section 106 of the National Historic Preservation Act.

The Area of Potential Effect (APE) for direct impacts is the project footprint. Taking into consideration the height of the crane that would be required, the height of the potential above-ground facility, and the relatively flat surrounding terrain, the APE for indirect/visual impacts is a 1-mile radius from the proposed project footprint. WCS anticipates that the NRC will issue a Final Environmental Impact Statement and License by April 1, 2019. Therefore, a historic-age date of 1974 (45 years prior to 2019) is proposed. The direct effects APE is contained entirely within the state of Texas, while the indirect effects APE extends into New Mexico. Therefore, coordination is underway with the State Historic Preservation Office for both states.

Direct Effects

A search of the Texas Historic Sites Atlas maintained by the Texas Historical Commission (THC) was conducted for previously identified Official State Historical Markers (OSHM), Recorded Texas Historic Landmarks (RTHL), properties or districts listed on the National Register of Historic Places (NRHP), State Antiquities Landmarks (SALs), cemeteries, or other cultural resources that may have been previously recorded. No such resources were identified within the APE for direct effects. The nearest previously identified resource is the OSHM for Andrews County, located approximately 17 miles southeast of the project area. As the area containing the proposed project footprint is devoid of any standing structures, the proposed project would not result in a direct effect to any non-archeological historic resources.

Indirect Effects

A search of the THC Atlas indicates that there are also no previously identified historic-resources in Texas within the 1-mile APE for indirect effects. A search of the New Mexico Cultural Resources Information System (NMCRIS) database administered by the Archeological Records Management Section (ARMS) of the New Mexico Historic Preservation Division (NMHPD) will be undertaken and results will be provided at a future date.

The area is surrounded by a high density of oil wells to the west and some oil wells to the north; there is little development to the south and east, excluding portions of the existing WCS facility. The first development at the WCS facility was constructed in the late 1990s; none of the development is historic-age. Adjacent to the WCS facility to the west is a large uranium enrichment plant called the National Enrichment Facility, operated by URENCO. This facility was developed within the past 15 years. The proposed project area is located in a very remote area of Texas with little development aside from the non-historic age WCS and URENCO facilities. There do not appear to be any historic resources 45 years or older (dating to 1974 or earlier) within the 1-mile indirect effects APE.

The nearest developed area is Eunice, New Mexico, which is located approximately five miles west of the proposed site. There are two large visual obstructions between viewers in Eunice and the proposed crane at the site: red soil mounds approximately 100 feet in height on WCS property, and the URENCO facility. Based on information from WCS, the soil mounds will be in place indefinitely or potentially utilized as fill. Excluding the crane, the CISF storage facility would be approximately 30 feet above the surface and less visible from Eunice than existing features and structures.

On June 1, 2015, THC concurred with the recommendation that no further survey is required for historic resources and project may proceed (see Appendix D, Texas Historical Commission Coordination Letters and Archeological Survey Permit).

In addition, a coordination letter was submitted to New Mexico State Historic Preservation Office addressing historic and archeological resources in New Mexico. On August 12, 2015, the NMSHPO responded with concurrence that no additional cultural resources identification efforts were needed for the undertaking since all construction activities would be confined to Texas (see Appendix D).

1.4.2 Archeological Resources

A search of the *Texas Archeological Sites Atlas* (Atlas) maintained by the THC and the Texas Archeological Research Laboratory (TARL) was conducted in order to identify archeological sites, OSHMs, RTHLs, properties or districts listed on the NRHP, SALs, cemeteries, or other cultural resources that may have been previously recorded in or near the archeological APE, as well as previous surveys undertaken in the area. With the current APE defined as the proposed 140-acre construction footprint, no previously recorded resources were found in the APE or near it. The nearest known archeological site in Texas is over 3.7 miles away.

One previous survey was found in the records search. The southern half of the current APE appears to have been included in a 1994 archeological survey by Galván Eling Associates, Inc., with only minor finds (six pieces of burned caliche) that the THC agreed did not merit further work (Galván Eling Associates, Inc. 1994; THC 2015). In 2004, URS Corporation contacted the THC on behalf of WCS regarding development of a portion of the Galván Eling 1994 survey area that had not been developed between 1994 and 2004. The THC concurred that no further work was required on June 25, 2004.

Although the APE is located entirely within Texas, CMEC has also requested access to the NMCRIS database. Access to ARMS records is currently pending and the results of an ARMS search will be included in the background research section of draft and final archeological survey reports to be prepared in 2015 (see below).

Because of the ambiguity in older survey maps, the lack of full coverage under the previous survey, and the fact that the Galván Eling study was conducted over 20 years ago, prior to the THC's development of minimum survey standards, WCS elected to scope a survey of the entire new facility footprint. An intensive archeological survey meeting current THC standards was conducted, and the results were presented in a draft report to be submitted to WCS, Andrews County, and the THC. No sites were found. The draft archeological survey report under Texas Antiquities Permit 7277 was submitted to the THC on July 2, 2015. Following THC's 30-day review of the draft report, the final report incorporating regulatory comments was prepared and submitted to the THC, who concurred No Historic Properties Affected – Project May Proceed on July 29, 2015. Copies were prepared for submittal to designated state repositories to close the Antiquities Permit (see Appendix D, Texas Historical Commission Coordination Letters and Archeological Survey Permit).

1.4.3 Scenic Resources

According to the U.S. Department of Interior (DOI) – Bureau of Land Management (BLM) (1986), visual resources consist of landscape or visual character, and visual sensitivity and exposure. A study area's landscape features include landform, vegetation, water resource features, color, adjacent scenery, scarcity, and cultural modifications (that either add to or detract from visual quality). The overall impression of an area, composed of the elements above, is referred to as the "visual character." For this analysis, the visual character of the area is focused on the perspective of residents living in close proximity to the proposed facility who would be affected by the continued operations, and the perspective of the driving public (along roads within the visual resources study area). However, since the closest residence is approximately four miles away from the facility, the majority of the analysis is geared toward the driving public.

The environmental team analyzed whether the following features exist or are likely to exist within 10 miles of the facility:

- landform (elevated views, hilltops, vegetation (woodlands))
- water (stream crossings, bridges, wetlands, pastoral scenes, wildlife viewing potential)
- scarcity (known scarcity of wildlife habitat, vegetation, or cultural resource)
- cultural modifications (urbanized areas, historic structures, visual detractors)

In accordance with DOI and BLM guidance, a photo inventory of the scenic qualities of the WCS facility was conducted on April 7 and 8, 2015. This study included views from as far as 15 miles from the WCS project. Views were captured to illustrate several zones: foreground, middle ground, background, and seldom-seen. This inventory replicated photos taken for the WCS licensing efforts in 2007 and 2008 for the low-level hazardous waste disposal license. The study team was interested in learning what has changed in the landscape over the last seven years.

The Scenic Resources Inventory is located in **Appendix C, Figures C-1 and C-2, and photos 1–14**. Each photo is labeled with the direction in relation to the facility, whether it represents foreground, middle ground, background, or seldom-seen views, and approximate distance from the center point of the proposed CISF facility on the WCS property. The foreground and middle ground views are taken from locations less than three to five miles from the facility, with several mid-ground range photos just beyond the 5-mile radius. This zone includes the road cut for State Highway 176 (SH 176), which creates berms that intermittently obscure views beyond the roadway and then open up views to the various landfills in the vicinity and to the sole urbanized area of Eunice, approximately five miles to the west of the facility. The background zone includes views from locations between five and ten miles away (see **photos 11 and 13**). These views are from generally flatter terrain allowing broader views across the landscape. These broader views take in oil-extraction structures (pump jacks, tanks and fence lines) in the foreground and a combination of constructed landscape forms (i.e., landfill and extraction facility earth mound(s) and naturally occurring swales. The seldom-seen views were from locations that are farther than ten miles away or otherwise hidden from view (see **Photo 12**). The WCS facility is barely seen from this distance, with the most prominent features of the facility (the redbeds) hardly registering as more than an undulation in the horizon. Adjacent to the WCS facility to the west in New Mexico is a large uranium enrichment plant called the National Enrichment Facility, operated by URENCO. This facility was developed and constructed since the last visual resources inventory was conducted. This facility is the most substantial new structure on the visual landscape. The relationship of WCS to URENCO is shown on **Figure C-1**. Photo locations are shown on **Figure C-2** along with a 5-mile radius and a 10-mile radius around the site. The proposed CISF activities would take place beyond the existing railroad spur on the WCS property, farthest from SH 176 compared to other current activities at the site.

It was determined that the visual resources study area does not contain notable representations of any of the landscape features listed above, although the relative lack of visual obstructions to a vast view of this section of the West Texas/East New Mexico landscape could be considered the “visual character” of the area. Overall, the entire study area can be considered to have modest scenic quality that is pleasant to regard for its rural, undeveloped nature, but not dramatic, unique or rare. Facilities geared towards resources extraction, the Lea County Landfill, and oil well pump jacks exist in the project area, in addition to the URENCO facility, which have an equal or higher impact on the visual landscape compared to the proposed new CISF activities at the WCS facility.

1.4.4 Agricultural Production

1.4.4.1 Andrews County

The 2012 Census of Agriculture (USDA 2012) reports that Andrews County had 169 farms in 2012, down three percent from 175 farms in 2007. These farms amounted to 752,030 acres in 2012, and 808,474 acres in 2007, down seven percent. The average size farm in the county was 4,450 acres in 2012, and 4,620 acres in 2007.

The market value of agricultural production was \$12,578,000 in 2012, and \$15,919,000 in 2007, down 21 percent. Crop sales accounted for \$5,819,000 of the total value in 2012, while livestock sales accounted for \$6,758,000 of the total market value. Andrews County is not a leading agricultural producer in Texas, ranking 210 out of 254 counties in market value of agricultural products statewide in 2012.

Table 1-37 presents the agricultural data for the year 2012 from the USDA’s National Agricultural Statistics Service, Census of Agriculture, County Profile for Andrews County. No tobacco; nursery, greenhouse, floriculture, and sod; cut Christmas trees and short duration woody crops; aquaculture; or milk production was reported in the county in 2012.

Table 1-37: Value of Agricultural Products in Andrews County, 2012

Market Value of Agricultural Products Sold			
Item	Quantity (\$1,000)	State Rank	US Rank
Total value of agricultural products sold	12,578	210	2,585
Value of crops including nursery and greenhouse	5,819	174	2,356
Value of livestock, poultry, and their products	6,758	208	2,341
Value of Sales by commodity Group			
Item	Quantity (\$1,000)	State Rank	US Rank
Grains, oilseeds, dry beans, and dry peas	1,424	138	2,150
Cotton and cottonseed	2,241	90	358
Fruits, tree nuts, and berries	60	173	1,676
Other Crops and Hay	2,094	132	1,303
Cattle and Calves	6,240	194	1,656
Hogs and Pigs	*	*	*
Sheep, Goats and Their Products	422	56	395
Horses, Ponies, Mules, Burros, and Donkeys	75	204	2,046

Source: U.S. Department of Agriculture, National Agricultural Statistics Service. County Profile, Andrews County, Texas (2012).

*Withheld to avoid disclosing data for individual operators.

The top livestock inventory items in 2012 in Andrews County included 10,177 cattle and calves, 622 goats, 337 horses and ponies, and 146 sheep and lambs. Cotton was the leading crop in terms of acreage with 8,248 acres, followed by sorghum for grain with 3,856 acres, forage with 1,236 acres, and peanuts with 1,227 acres.

There is no agricultural activity within one mile of the existing WCS facility based on aerial interpretation and land use data. The majority of the land within five miles of the facility is grassland, pasture, and shrublands, with minor outparcels of barren, developed, and alfalfa production.

1.4.4.2 Lea County

The 2012 Census of Agriculture reports that Lea County, New Mexico, had 460 farms in 2012, down from 572 in 2007. The land in farms in the county was 1,981,988 acres in 2012, down from 2,365,168 acres in 2007. The average size farm in the county was 4,309 acres in 2012, compared to 4,135 acres in 2007.

The market value of agricultural production was \$188,926,000 in 2012 and \$93,644,000 in 2007, down 50 percent. Crop sales accounted for 22 percent of the total value in 2012, while livestock sales accounted for 78 percent of the total market value. Lea County ranked fifth out of 33 counties in New Mexico for the market value of agricultural products statewide in 2012.

Table 1-38 presents the agricultural data for the year 2012 from the USDA's, National Agricultural Statistics Service, Census of Agriculture, County Profile for Lea County. No tobacco, cut Christmas trees and short duration woody crops, or aquaculture was reported in the county in 2012.

Table 1-38: Value of Agricultural Products in Lea County, 2012			
Market Value of Agricultural Products Sold			
Item	Quantity (\$1,000)	State Rank	US Rank
Total value of agricultural products sold	188,926	5	582
Value of crops including nursery and greenhouse	40,738	5	1,280
Value of livestock, poultry, and their products	148,188	5	274
Value of Sales by commodity Group			
Item	Quantity (\$1,000)	State Rank	US Rank
Grains, oilseeds, dry beans, and dry peas	*	7	*
Cotton and cottonseed	14,805	1	120
Vegetables, melons, potatoes, and sweet potatoes	*	4	*
Fruits, tree nuts, and berries	793	8	548
Nursery, greenhouse, floriculture, and sod	411	11	1,444
Other Crops and Hay	9,812	7	295
Milk from cows	115,888	5	61
Poultry and eggs	*	*	*
Cattle and Calves	30,468	7	519
Hogs and Pigs	*	*	*
Sheep, Goats and Their Products	119	14	1,212
Horses, Ponies, Mules, Burros, and Donkeys	948	7	269
Other animals and other animal products	757	5	316

Source: U.S. Department of Agriculture, National Agricultural Statistics Service. County Profile, Lea County, Texas (2012).

* Withheld to avoid disclosing data for individual operators.

The top livestock inventory items in 2012 in Lea County included 84,950 cattle and calves, 1,952 horses and ponies, and 1,475 sheep and lambs. Cotton was the leading crop in terms of acreage with 19,589 acres, followed by forage with 16,892 acres, corn for silage with 9,738 acres and wheat for grain with 3,282 acres.

2.0 SOCIOECONOMIC IMPACT ANALYSIS

The characterization of the CISF's social, demographic and economic impacts on the ROI is based upon an economic impact analysis conducted for the WCS's CISF using the IMPLAN economic modeling tool, plus a discussion of anticipated employment during its construction and operations phase. (A summary of the transportation impact assessment is found in a separate report. The discussion of the potential cumulative impacts resulting from this facility and other operations on the WCS property is also in a separate technical report.)

2.1 BACKGROUND: GENERIC EIS FINDINGS

In September 2014, the NRC published a generic assessment of potential impacts of continued storage of spent nuclear fuel, *Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel (NUREG-2157)*. The document relied on the license issued by NRC to Private Fuel Storage, LLC (PFS) to construct and operate a facility on the Reservation of the Skull Valley Band of Goshute Indians in Tooele County, Utah. While the project has not moved forward, the NRC considers the PFS EIS to be a reasonable assessment of potential impacts of away-from-reactor storage of spent nuclear fuel.

For short-term storage activities, the GEIS determined that there would be incremental changes to offsite services to support construction activities. Additionally, relatively few workers would move to the area permanently given the short duration of the construction phase. Impacts to housing and public services would be considered minor. Direct employment impacts on the regional economy would occur as would indirect impacts, such as purchases of goods by workers in the local community. Indirect and induced jobs would likely be filled by local residents.

The GEIS discusses anticipated employment related to operations. Some of the workers employed to operate the CISF facility would be expected to move into the area with their families. According to the GEIS, (based on the PFS analysis), a relatively small number of operations workers would move into the area and the impact on housing, public services, and the local and regional economy would be considered minor. For the WCS spent nuclear fuel CISF, however, the analysis that follows provides modeling information that indicates a substantive impact on the economy of the analysis region.

With regard to impacts to local and state government, tax payments would be received from the CISF licensee. The impact would depend on many factors including the local economy. The magnitude of the tax impact would be relative to the size and overall health of the local and regional economy. In the case of PSF, the tax impacts would be significantly beneficial to the host community; the WCS facility would be constructed in an area with a more established economy and therefore would contribute a smaller overall percentage of government tax revenues.

For short-term storage, the GEIS discussed the PFS' conclusion that the socioeconomic impacts of construction and operation of an away-from-reactor CISF would have a small socioeconomic impact, especially given the sparse local population. NRC concluded that any away-from-reactor CISF would be similar to those described in the PFS EIS — potentially large beneficial economic impacts to rural communities with small adverse socioeconomic impacts due to increased demand for housing and public services.

The analysis that follows focuses on the three-county region used for IMPLAN modeling – Gaines and Andrews Counties, Texas, and Lea County, New Mexico to assess potential socioeconomic impacts of the spent nuclear fuel CISF.

2.2 IMPACT ANALYSIS METHODOLOGIES

This section will summarize the methodology used to conduct the economic impact assessment for the proposed facility. There have been two previous economic impact analyses conducted to permit two other facilities on the WCS property:

- Waste Control Specialists LLC, 2007. Socioeconomic Impacts of the Waste Control Specialists Proposed Low-Level Radioactive Waste Disposal Facility, Andrews County, Texas, March 16, 2007; and
- Waste Control Specialists LLC, 2008. Socioeconomic Impacts of the Waste Control Specialists Radioactive Material Storage and Processing Facility, Andrews County, Texas for the Renewal of License No. R04971, July 3, 2008.

The analysis in this section does not incorporate the economic impacts of the facilities listed above. Another difference with the previous studies is that this study does not utilize the RIMS II Economic Multipliers to assess the facility's direct, indirect, and final economic impacts during the initial construction period or during the ongoing operations phase.¹ The U.S. Bureau of Economic Analysis (BEA) has since discontinued supporting the RIMS II model, so this analysis was performed using the IMPLAN model. In addition to also being an input-output economic analysis tool, the IMPLAN model provides greater analytical detail and is more frequently updated. The IMPLAN model will be the tool that provides insight into how the proposed construction and operational activities may affect the ROI.

2.2.1 IMPLAN Economic Multipliers

IMPLAN stands for "IMPact analysis for PLANning" and consists of the data and software created by MIG, Inc. Originally developed for the U.S. Forest Service, IMPLAN is now privately owned and supported. IMPLAN uses input-output analysis in combination with region-specific social accounting matrices and multiplier models to determine the potential economic impacts of a defined activity on the regional economy. The data in the IMPLAN model contain county, state, zip code, and federal

¹ The resulting analyses from these two previous studies are on file with WCS and the licensing entities.

economic statistics that are specialized by region. The multiplier tools within IMPLAN can be used to estimate the secondary impacts, stemming from an economic change, such as investment of construction dollars or the outlay of the operational expenses.

There are three types of effects measured with a multiplier: the direct, the indirect, and the induced effects. IMPLAN provides the following definitions in its glossary of terms on the company website (https://implan.com/index.php?option=com_glossary&task=list&letter=F&Itemid=1866).

Table 2-1: Definitions of Economic Effects Based on Using the IMPLAN Model	
Direct effects	The set of expenditures applied to the predictive model (i.e., I/O multipliers) for impact analysis. It is a series (or single) of production changes or expenditures made by producers/consumers as a result of an activity or policy. These initial changes are determined by an analyst to be a result of this activity or policy. Applying these initial changes to the multipliers in an IMPLAN model will then display how the region will respond, economically to these initial changes.
Indirect effects	The impact of local industries buying goods and services from other local industries. The cycle of spending works its way backward through the supply chain until all money leaks from the local economy, either through imports or by payments to value added. The impacts are calculated by applying Direct Effects to the Type I Multipliers.
Induced effects	The response by an economy to an initial change (direct effect) that occurs through re-spending of income received by a component of value added. IMPLAN's default multiplier recognizes that labor income (employee compensation and proprietor income components of value added) is not a leakage to the regional economy. This money is recirculated through the household spending patterns causing further local economic activity.

For the CISF analysis, a regional model was built using data for Gaines and Andrews Counties in Texas and Lea County in New Mexico. The IMPLAN software combined these three geographies into a single region for the analysis.

The IMPLAN model's baseline characteristics for the three-county economic analysis region are summarized below in **Table 2-2**. The estimated population of the region was 103,782 residents organized into 34,734 households, with 60,170 workers. The region's land area is almost 7,400 square miles and it had a gross regional product that exceeded \$7 billion in 2013. The region's top industry for employment was *Support Activities for Oil and Gas Operations*, with more than 8,148 workers, who collectively earned more than \$645 million in labor income.² The *Education and Local Government* sector was the second largest employer with approximately 3,432 workers, followed by *Extraction of Natural Gas and Crude Petroleum*, which employed 3,093 persons during 2013.

Various components of these regional data are considered later in this discussion, in order to give additional perspective on the impact of the proposed facility on the analysis region.

² Note that in the IMPLAN model, according to their glossary of terms, labor income is defined as "All forms of employment income, including Employee Compensation (wages and benefits) and Proprietor Income."

Table 2-2: IMPLAN Model – Economic Overview for Three-county Economic Analysis Region

Table 2-2: IMPLAN Model – Economic Overview for Three-county Economic Analysis Region				
Model Information				
Model Year		2013	Value Added	
GRP		\$7,232,027,415	Employee Compensation	\$3,010,447,804
Total Personal Income		\$4,504,796,000	Proprietor Income	\$754,663,331
Total Employment		60,170	Other Property Type Income	\$2,771,458,698
			Tax on Production and Import	\$695,457,582
Number of Industries		209		
Land Area (Sq. Miles)		7,396	Total Value Added	\$7,232,027,415
Area Count		3	Final Demand	
Population		103,782	Households	\$3,222,299,071
Total Households		34,734	State/Local Government	\$720,826,071
Average Household Income		\$129,695	Federal Government	\$112,581,670
			Capital	\$1,941,911,573
Trade Flows Method	Trade Flows Model		Exports	\$6,923,006,334
Model Status	Multipliers		Imports	-\$5,480,401,477
			Institutional Sales	-\$208,195,829
Economic Indicators				
Shannon-Weaver Index		.66093	Total Final Demand:	\$7,232,027,413
Top Ten Industries				
Sector	Description	Employment	Labor Income	Output
38	Support activities for oil and gas operations	8,148	\$645,023,900	\$1,478,596,000
534	* Employment and payroll of local govt, education	3,432	\$199,053,200	\$224,903,800
20	Extraction of natural gas and crude petroleum	3,093	\$414,289,600	\$1,866,120,000
411	Truck transportation	2,661	\$191,987,300	\$439,832,800
395	Wholesale trade	2,083	\$147,388,600	\$448,128,000
533	* Employment and payroll of local govt, non-education	2,006	\$119,118,400	\$136,526,000
37	Drilling oil and gas wells	1,705	\$160,954,300	\$622,492,100
502	Limited-service restaurants	1,632	\$44,977,040	\$97,454,840
501	Full-service restaurants	1,108	\$19,444,230	\$48,600,760
464	Employment services	1,100	\$35,178,440	\$51,651,730
Areas In the Model				
Texas	Andrews County			
Texas	Gaines County			
New Mexico	Lea County			

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2.2.2 Socioeconomic Impact Analysis

The evaluation of the potential social impacts of the CISF considered residents and communities located within a 30-mile ROI (see **Figure 1**) and the three-county economic analysis region. The social impact analysis in this section relies largely on demographic data laid out in **Chapter 1**. Additionally, this section summarizes the results from the IMPLAN model for the construction phase and operations phase impacts.

To assess the relative magnitude of the impacts within the IMPLAN model's analysis region and the 30-mile ROI, the guidelines from the NRC (1996) and the DOE (1999) - documented in the URENCO Environmental Report - were used. These measures were used to assess the levels of socioeconomic impact:

- Employment/economic activity impacts (Geography analyzed: three-county economic analysis region)
 - Small = <0.1% increase in employment
 - Moderate = 0.1 – 1.0 percent increase in employment
 - Large = > 1.0 percent increase in employment
- Population/housing impacts (Geography analyzed: 30-mile ROI)
 - Small = <0.1 % increase in population growth and/or <20% of vacant housing units required to accommodate people moving to the area
 - Moderate = 0.1 – 1.0% increase in population growth and/or 20–50% of vacant housing units required to accommodate people moving to the area
 - Large = >1% increase in population growth and/or >50% of vacant housing units required to accommodate people moving to the area
- Public Revenue impacts (Geography analyzed: three-county economic analysis region)
 - Small = <0.1% increase in local revenues
 - Moderate = 1 - 5% increase in local revenues
 - Large = >5% increase in local revenues

2.3 IMPACTS OF FACILITY CONSTRUCTION

WCS has estimated the cost of the construction the first phase of the CISF to be approximately \$16.1 million (including all excavation and grading, fencing, and security system costs, plus building sufficient storage pads for the first 200 storage systems). Using this estimate, the IMPLAN model analyzed the economic impacts of construction (in nominal dollars) assuming all expenditures (\$16.1 million) occurred during 2018. The initial cost estimate is an approximate amount and the timing of the construction could cause the actual costs to vary. The economic activity sector from the IMPLAN model used for this analysis was *Sector 58 - Construction of Other Non-Residential Structures* (NAICS Code 23). There may be additional construction costs of up to \$40 million to install site infrastructure, utilities, a rail line, and support buildings including Administration, Radiation Safety, Security, and Offload/Transfer buildings. However, this additional investment was not included in the construction costs analyzed here. As proposed, Phase 1 could provide capacity for approximately five years of operations. If the demand exists, additional phases of the project will be constructed in the same five-year patterns for up to eight phases. For this analysis, only the initial investment of \$16.1 million was considered.

Table 2-3 provides an overview of the economic impacts generated by the \$16.1 million that will be spent on the facility's construction. Direct effects include 81.7 jobs, more than \$6,302,032 in labor income, and \$7,477,815 in value-added output.³ The indirect effects of the project's construction include almost 20 jobs, a labor income of more than \$1,087,601, and a value-added output of approximately \$2,002,337. Indirect effect output in 2018 is anticipated to be approximately \$3,615,613. Note that the IMPLAN model's estimate of value-added output means the difference between an industry's or an establishment's total output and the cost of intermediate inputs; it equals gross output (sales or receipts and other operating income, plus inventory change) minus intermediate inputs (consumption of goods and services purchased from other industries or imported). The induced effect resulting from construction would include 20.5 person-years of employment, \$855,015 in labor income, approximately \$1,746,544 value added output, and \$2,982,770 in total output.

Table 2-3: Total Impact of Construction Phase (2018)				
CONSTRUCTION PHASE – 2018, 16M construction				
Impact Type	Person-Years Employment	Labor Income	Value Added	Output
Direct Effect	81.7	\$6,302,032	\$7,477,815	\$16,100,001
Indirect Effect	19.9	\$1,087,601	\$2,002,337	\$3,615,613
Induced Effect	20.5	\$855,015	\$1,746,544	\$2,982,770
Total Effect	122.1	\$8,244,648	\$11,226,696	\$22,698,384

Source: MIG, Inc. IMPLAN model – Gaines and Andrews Counties, Texas, and Lea County, New Mexico. CMEC utilizing inputs from WCS.

Table 2-4 shows the top ten industries benefiting from the project's construction in the modeled region by employment, labor income, value added, and output. By far (as would be expected), the largest employment gains from the \$16.1 million expenditure go to *Sector 58 - Construction of Other New Nonresidential Structures* (81.7 jobs) followed by *Sector 395 - Wholesale Trade*, and *Sector 406 - Retail-Miscellaneous Store Retailers*. The industry sector with the highest labor income gain is also *Sector 58*, with more than \$6 million in anticipated labor income, followed by *Wholesale Trade* sector and *Sector 441 - Truck Transportation*. The estimated value-added output is greatest for *Sector 58*, followed by *Wholesale Trade*, and *Sector 441 - Owner-Occupied Dwellings*. Total output is also highest in *Sector 58*, followed by *Wholesale Trade*, and *Owner-Occupied Dwellings*. Note that depending on the category of impact, the economic benefits of construction phase output affect the various economic sectors differently. Also note that, outside of Sector 58, the impacts of the construction are modest and spread broadly through the regional economy.

³ It is important for the reader to understand that the IMPLAN model's definition of a "job" is one person employed for one year or a "person-year" of employment. This definition of employment may include a person without a job, who is hired for a year, or a person with a job, who retains it for another year. The definition of a "job" in the IMPLAN model does not mean that one person finds continuous long-term employment. Thus, the estimated employment effect of constructing the WCS's CISF is a total of 122 person years of employment.

Table 2-4: Construction Phase (2018) – Top Ten by Category

Sector	Description	Employment	Labor Income	Value Added	Output
TOP TEN INDUSTRIES - EMPLOYMENT					
58	Construction of other new nonresidential structures	81.7	\$6,302,032	\$7,477,815	\$16,100,001
395	Wholesale trade	3.3	\$258,352	\$497,531	\$739,699
406	Retail - Miscellaneous store retailers	1.8	\$62,963	\$67,803	\$91,028
407	Retail - Nonstore retailers	1.7	\$27,087	\$87,162	\$165,181
411	Truck transportation	1.6	\$127,780	\$141,637	\$287,851
501	Full-service restaurants	1.6	\$30,664	\$36,150	\$77,696
502	Limited-service restaurants	1.6	\$48,113	\$68,551	\$105,679
405	Retail - General merchandise stores	1.5	\$48,181	\$73,881	\$112,026
440	Real estate	1.4	\$17,062	\$213,271	\$277,802
403	Retail - Clothing and clothing accessories stores	1.2	\$30,170	\$57,876	\$93,660
TOP TEN INDUSTRIES - LABOR INCOME					
58	Construction of other new nonresidential structures	81.7	\$6,302,032	\$7,477,815	\$16,100,001
395	Wholesale trade	3.3	\$258,352	\$497,531	\$739,699
411	Truck transportation	1.6	\$127,780	\$141,637	\$287,851
445	Commercial/ industrial machinery + equipment rental and leasing	0.6	\$79,280	\$191,880	\$245,751
20	Extraction of natural gas and crude petroleum	0.5	\$68,694	\$247,026	\$360,096
449	Architectural, engineering, and related services	0.9	\$66,512	\$65,131	\$125,827
482	Hospitals	0.9	\$64,532	\$73,817	\$139,363
406	Retail - Miscellaneous store retailers	1.8	\$62,963	\$67,803	\$91,028
396	Retail - Motor vehicle and parts dealers	0.6	\$48,392	\$75,042	\$93,220
405	Retail - General merchandise stores	1.5	\$48,181	\$73,881	\$112,026
TOP TEN INDUSTRIES - VALUE ADDED					
58	Construction of other new nonresidential structures	81.7	\$6,302,032	\$7,477,815	\$16,100,001
395	Wholesale trade	3.3	\$258,352	\$497,531	\$739,699
441	Owner-occupied dwellings	0	\$0	\$408,735	\$582,771
20	Extraction of natural gas and crude petroleum	0.5	\$68,694	\$247,026	\$360,096
440	Real estate	1.4	\$17,062	\$213,271	\$277,802
445	Commercial/ industrial machinery + equipment rental and leasing	0.6	\$79,280	\$191,880	\$245,751
411	Truck transportation	1.6	\$127,780	\$141,637	\$287,851
407	Retail - Nonstore retailers	1.7	\$27,087	\$87,162	\$165,181
433	Monetary authorities and depository credit intermediation	0.7	\$38,870	\$79,101	\$140,852
396	Retail - Motor vehicle and parts dealers	0.6	\$48,392	\$75,042	\$93,220

Table 2-4: Construction Phase (2018) – Top Ten by Category

Sector	Description	Employment	Labor Income	Value Added	Output
TOP TEN INDUSTRIES - OUTPUT					
58	Construction of other new nonresidential structures	81.7	\$6,302,032	\$7,477,815	\$16,100,001
395	Wholesale trade	3.3	\$258,352	\$497,531	\$739,699
441	Owner-occupied dwellings	0	\$0	\$408,735	\$582,771
156	Petroleum refineries	0.1	\$12,693	\$74,537	\$503,993
20	Extraction of natural gas and crude petroleum	0.5	\$68,694	\$247,026	\$360,096
411	Truck transportation	1.6	\$127,780	\$141,637	\$287,851
440	Real estate	1.4	\$17,062	\$213,271	\$277,802
445	Commercial/ industrial machinery + equipment rental and leasing	0.6	\$79,280	\$191,880	\$245,751
407	Retail - Nonstore retailers	1.7	\$27,087	\$87,162	\$165,181
49	Electric power transmission and distribution	0.1	\$12,531	\$29,523	\$146,549

Source: MIG, Inc. IMPLAN model – Gaines and Andrews Counties, Texas, and Lea County, New Mexico. CMEC utilizing inputs from WCS.

When the CISF facility expands its storage capacity over time (eight phases are planned in total), there will be additional construction activities to build these future phases. Even with this initial investment, the analysis of economic impacts shows the construction would be beneficial to the region from a direct, indirect, induced, and value-added output perspective.

The IMPLAN model estimates that 122 person-years of employment would be created through the construction project's direct, indirect, and induced effects. Total 2013 employment in the three-county analysis region is 60,170 jobs. Therefore, the 0.2% increase to regional employment represents a Moderate Effect, according to the previously discussed criteria. This may represent a maximum impact because in some cases, local construction workers may simply transfer to a new project within an existing firm, rather than represent a new hire.

With regard to wages, the Texas Labor Market Information website provides employment and wage information by quarter by industry. Data for total employment and income by county is available, but wage information by county by industry is not available (the Bureau of Labor Statistics was queried for quarterly wage information for the non-residential building construction sector in Andrews County but the information was non-disclosable). Looking at the construction sector (Sector 23) for Texas, based on the quarterly average weekly wage, a total average weekly wage for 2014 was determined. Assuming a 50-week work year, the average construction sector annual income in Texas for 2014 was \$56,400 (Texas Labor Market Information 2015).

According to the IMPLAN model, the region consisting of Andrews County, Gaines County, and Lea County (NM) had an average annual income (including wages and benefits) of \$77,136 in the construction sector (based on total labor income for the sector divided by the 82 direct jobs in the sector) during 2013.

2.4 IMPACTS OF FACILITY OPERATION

2.4.1 Employment Information for Current and Planned Operations

WCS provided information about employment based on current staff, as well as anticipated staffing needs to support CISF operations. As of spring 2015, on-site employment (at all WCS facilities) included the following positions:

- Accounting – 3 employees
- Administrative – 16 employees
- Business Development – 12 employees
- Canister Production Facility – 6 employees
- Engineering – 5 employees
- Environmental – 9 employees
- Field Administration – 15 employees
- Integrated Services – 12
- Laboratory – 3 employees
- Landfill – 7 employees
- Landfill CWF – 6 employees
- Landfill FWF – 12 employees
- Licensing – 4 employees
- Maintenance – 21 employees
- MWTF Treatment and Storage – 11 employees
- Quality Assurance – 4 employees
- Rad Safety – 27 employees
- Safety – 4 employees
- Security – 18 employees
- Various – 9 employees

The total number of employees working at the facility would be approximately 204, with 184 of those employees located at the site and the others being corporate employees. As of mid-2015, approximately 50 percent of the site employees lived in Texas and 50 percent lived in New Mexico. In Texas, most employees live in the city of Andrews and, in New Mexico, the workers are evenly split between residents of Hobbs and residents of Eunice. The average annual salary for WCS employees in 2015 dollars was \$80,334. Employees specifically assigned to the CISF site would be an estimated 20 trained security officers. For the purposes of this analysis, it was assumed that the new jobs created by the CISF operations would be limited to 20 security officer positions, which were incorporated into the input of the IMPLAN model for the operations phase.

2.4.2 Economic Impacts of Operations

WCS provided estimates of annual operating expenditures, not including transportation, professional services, or capital costs. The operating costs accounted for in the IMPLAN model consisted of the following: administration, the purchase of concrete overpacks, labor costs during loading and/or unloading, and labor costs during the caretaker period. Decommissioning costs for the facility are not included. The estimated annual operating costs total \$75.39 million per year. This total cost was disaggregated into two event categories for modelling purposes: operating costs for the *Sector 471 – Hazardous Waste Disposal*, estimated to be approximately \$23.4 million and operating costs associated with the concrete overpacks. These operating costs of \$52 million per year were modeled as an event under *Sector 56 - Construction of New Highways and Streets* (since these activities are expected to be less likely to resemble residential or commercial construction). Model inputs included assuming that the local purchase percentage of the operating costs related to concrete overpacks

would constitute approximately five percent (which assumes that they are manufactured outside of the three-county analysis region).

Once issued, the operating license for this facility would be valid for 20 years. To provide an overview of its regional economic impacts, the estimated annual operating expenditure was entered into the regional IMPLAN model. The activity or “event” year was set to 2019 for the first year of operations and the model was re-run for each event year over a ten-year period (2019-2028) which would represent the first ten years of the facility’s operations. During each year, the operations cost of \$75.39 million, including the purchase of \$52 million of concrete overpacks, and the employment estimates (20 person-years of employment by WCS), were identical. **Table 2-5** below shows the summary information of the economic impacts from the facility’s operations between 2019 and 2028. The total employment, labor income, value-added output, and total output impacts decline because it was assumed the expenditures were fixed in nominal dollars.

Table 2-5: Summary of Economic Impacts from Operations (2019–2028) in 2015 Dollars				
2019				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	29.3	\$7,338,445	\$12,421,597	\$24,256,100
Indirect Effect	39.1	\$2,105,162	\$3,629,120	\$6,623,560
Induced Effect	27.8	\$1,095,874	\$2,238,897	\$3,806,369
Total Effect	96.2	\$10,539,481	\$18,289,613	\$34,686,028
2020				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	29.3	\$7,200,770	\$12,188,558	\$23,839,021
Indirect Effect	38.4	\$2,068,912	\$3,566,403	\$6,508,737
Induced Effect	27.3	\$1,075,689	\$2,197,659	\$3,736,261
Total Effect	95.1	\$10,345,372	\$17,952,620	\$34,084,020
2021				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	29.3	\$7,058,170	\$11,973,099	\$23,429,235
Indirect Effect	37.8	\$2,033,298	\$3,504,790	\$6,395,944
Induced Effect	26.8	\$1,055,006	\$2,155,402	\$3,664,418
Total Effect	93.9	\$10,146,473	\$17,633,291	\$33,489,596
2022				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	29.3	\$6,922,098	\$11,755,026	\$23,026,604
Indirect Effect	37.1	\$1,998,306	\$3,444,261	\$6,285,141
Induced Effect	26.3	\$1,035,153	\$2,114,841	\$3,595,461
Total Effect	92.7	\$9,955,557	\$17,314,128	\$32,907,205

Table 2-5: Summary of Economic Impacts from Operations (2019–2028) in 2015 Dollars

2023				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	29.3	\$6,792,234	\$11,545,248	\$22,642,329
Indirect Effect	36.5	\$1,964,943	\$3,386,691	\$6,179,985
Induced Effect	25.8	\$1,016,209	\$2,076,139	\$3,529,662
Total Effect	91.6	\$9,773,386	\$17,008,079	\$32,351,976
2024				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	29.3	\$6,664,807	\$11,339,229	\$22,264,474
Indirect Effect	35.9	\$1,932,137	\$3,330,086	\$6,076,592
Induced Effect	25.3	\$997,613	\$2,038,146	\$3,465,071
Total Effect	90.6	\$9,594,557	\$16,707,461	\$31,806,136
2025				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	29.3	\$6,539,770	\$11,136,900	\$21,892,935
Indirect Effect	35.3	\$1,899,880	\$3,274,428	\$5,974,931
Induced Effect	24.9	\$979,358	\$2,000,851	\$3,401,664
Total Effect	89.5	\$9,419,008	\$16,412,179	\$31,269,531
2026				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	29.3	\$6,417,078	\$10,938,195	\$21,527,609
Indirect Effect	34.7	\$1,868,163	\$3,219,703	\$5,874,975
Induced Effect	24.4	\$961,438	\$1,964,239	\$3,339,421
Total Effect	88.4	\$9,246,679	\$16,122,138	\$30,742,005
2027				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	29.3	\$6,296,689	\$10,743,051	\$21,168,386
Indirect Effect	34.1	\$1,836,976	\$3,165,893	\$5,776,694
Induced Effect	24	\$943,847	\$1,928,300	\$3,278,319
Total Effect	87.4	\$9,077,512	\$15,837,244	\$30,223,400
2028				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	29.3	\$6,178,559	\$10,551,401	\$20,815,169
Indirect Effect	33.6	\$1,806,310	\$3,112,985	\$5,680,061
Induced Effect	23.5	\$926,578	\$1,893,019	\$3,218,339
Total Effect	86.4	\$8,911,447	\$15,557,405	\$29,713,568

Table 2-5: Summary of Economic Impacts from Operations (2019–2028) in 2015 Dollars				
Total of Totals: 2019 – 2028				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	293.0	\$67,408,620	\$114,592,304	\$224,861,862
Indirect Effect	362.5	\$19,514,087	\$33,634,360	\$61,376,620
Induced Effect	256.1	\$10,086,765	\$20,607,493	\$35,034,985
Total Effect	911.8	\$97,009,472	\$168,834,158	\$321,273,465

Source: MIG, Inc. IMPLAN model – Gaines and Andrews Counties, Texas, and Lea County, New Mexico. CMEC utilizing inputs from WCS.

Overall, the IMPLAN model estimates that the CISF will create 912 person-years of employment over a ten-year period through the direct, indirect, and induced effects of the facility's operations. Over the ten-year period, the average annual direct, indirect, and induced total employment was 91.2 person-years of employment. Total employment in the three-county region of analysis region was 60,170 in 2013. Therefore, the estimated 0.15% increase in employment represents a small positive effect.

According to the IMPLAN regional economic model for Andrews County, Gaines County, and Lea County (NM), the average annual income (wages and benefits) for the hazardous waste disposal facilities sector (based on total labor income for the sector divided by the 82 direct jobs in the sector) was \$74,822 (model year 2013). WCS stated that average income for WCS employees was \$80,334 (2015). It appears that wages and benefits associated with waste disposal activities at WCS and in the economic analysis region exceed the average income for the sector at the State level. Likewise, the wages at WCS exceeds the *Waste Management and Remediation Services* sector (NAICS 562) statewide, which paid an annual average income of \$55,920 during 2014 (Texas Labor Market Information 2015).

2.5 OTHER SOCIOECONOMIC IMPACTS

2.5.1 Competition for Labor and Wage Rates

The impacts of the CISF's operation on the regional labor market and wages can be assessed by relating its impact to regional employment characteristics. Taking Andrews County as representative of the local labor market conditions in the ROI, U.S. Census Bureau (ACS 2009–2013) data showed that out of 11,457 persons 16 years and over, approximately 5.9 percent were unemployed. In Gaines County, Texas, out of 12,468 persons, 5.8 percent were unemployed. These unemployment rates were much lower than the State of Texas' unemployment rate of 8.1 percent during the same period. In Lea County, New Mexico, out of 48,357 persons, approximately 8.4 percent were unemployed compared to 9.7 percent in New Mexico overall. See **Table 1-24** and **Table 1-26**. More recent information from the U.S. Bureau of Labor Statistics indicates that the unemployment rates in the economic analysis region were currently lower than the rates available from the American Community Survey. As of April 2015, in Andrews County, out of 9,625 persons in the civilian labor

force, approximately 274 (2.8 percent) were unemployed. In Gaines County during the same time period, out of 9,519 persons approximately 268 (2.8 percent) were unemployed. In Lea County, New Mexico, as of April 2015, out of 31,322 persons, there were 1,496 unemployed persons (approximately 4.8 percent).

WCS estimates there will be 204 persons working in association with the CISF activities, including current positions at the facility plus approximately 20 new positions specifically devoted to CISF activities. According to the IMPLAN projections, over the 10-year time period a total of 912 person-years of employment would be created through direct, indirect, and induced effects of operations.

2.5.2 Population and Housing

The population of the ROI, according to the 2010 decennial census and based on the total population of all counties with any portion of the county in the ROI, was 241,279 persons in Andrews, Ector, Gaines, and Winkler Counties in Texas and Lea County, New Mexico. The IMPLAN regional model's area of analysis (Andrews and Gaines Counties, Texas, and Lea County, New Mexico) estimated the region to have 103,782 persons, which may more accurately represent the ROI (see **Table 1-16**). (Ector County has only a small portion of its boundary within the 30-mile ROI and has a relatively large population of 137,130 residents). The majority of the employment impacts are expected to occur in Andrews County, Texas, and Lea County, New Mexico.

The WCS's June 2008 Socioeconomic Impact Assessment references an earlier study from 1996 that estimated approximately half of the future workers at the WCS facility would relocate to the region. Other jobs would be filled locally with trained and experienced workers. Indirect and induced jobs could be filled by workers already residing in the ROI. A similar breakdown could be anticipated for the proposed spent fuel CISF activities.

The construction employment impact is estimated at approximately 82 person-years of direct employment (2018) and each year employment impact from operation is estimated to be approximately 29 person-years of employment. Therefore a total of 111 person-years of employment could be created in the first couple years. Because these figures represent only direct employment, if half of those workers moved to the ROI, then that would mean approximately 55 people. The IMPLAN model indicates a population of 103,782 in the region. That number of people (excluding other family members) would constitute approximately 0.053 percent of the population or a small impact, based on the criteria in the URENCO study.

Lea County had 2,683 vacant housing units and Andrews County had 555 vacant housing units in 2010 (see **Table 1-19**). Assuming those figures represent available vacancies, then 55 households seeking to purchase or rent housing units out of 3,238 available units constitutes 1.7 percent of the vacant units. This potential housing need generated by the CISF facility would constitute a small impact on housing according to the criteria in the URENCO study.

Currently, according to WCS, approximately half their employees live in Texas and the other half live in New Mexico. Travel time to work was examined. According to the American Community Survey, over the years 2009–2013, more than 18 percent of commuters in Andrews County traveled more than 45 minutes to reach their job sites compared to 14.8 percent in Texas overall (see **Table 1-31**). More than seven percent of commuters travelled 45 minutes or more to their jobs in Gaines County and Lea County. These existing journey-to-work patterns suggest that some workers who live up to 45 minutes away from the CISF facility might choose to commute there, if they obtained a job at the facility, rather than choosing to move closer to the facility. This may indicate that substantial in-migration of population to the ROI would not be anticipated from the facility's operation-related job growth. Based on 2010 U.S. Census Bureau data, approximately 12.0 percent of total housing units were vacant in Lea County and 10.6 percent of housing units were vacant in Andrews County (see **Table 1-18**). It does not appear that there would be an unmet demand for housing in the ROI created by the new spent fuel CISF project.

2.5.3 Changes in Land Value and Uses

The WCS's spent fuel CISF is one component of a larger waste management plant that occupies 1,338 acres in the middle of approximately 14,400 acres owned by WCS in Andrews County, Texas. The land surrounding the facility is high plains scrub/brush land used for rangeland, limited dryland farming and oil and gas extraction. Since the continued operations at the processing and storage component of the facility would be entirely contained within the WCS property and adjacent uses are characterized by agricultural and resource extraction operations, no negative impacts on proximal property values are expected as a result of the new facility operation.

The small to moderate employment impact described above and the subsequent demographic impact described below further suggests that real estate values in and around the City of Andrews will not be impacted adversely. The closest community to the CISF is Eunice, New Mexico. Eunice was once a small town characterized by older residential and commercial structures, vacant lots, a nearby gasoline plant, active oil and gas wells, pipelines, and related facilities. However, following the construction of the Louisiana Energy Services URENCO plant, employment in the Eunice area has increased and the city has experienced a surge of new development, including a new Main Street landscaped boulevard, in addition to several new businesses and restaurants. The URENCO Environmental Report estimated approximately 400 new jobs (8-year average) in the region associated with the plant's construction. In fact, according to the U.S. Census Bureau, the population of Eunice rose from 2,922 residents during the decennial census to 3,147 residents in 2014 according to American Factfinder.

The construction employment impact is estimated at approximately 82 person-years of direct employment (2018) and each year employment impact from operation is estimated to be approximately 29 person-years of employment. Therefore a total of 111 person-years of employment could be directly created in the first couple years as a result of the WCS CISF. Indirect

employment during construction is estimated to be approximately 20 person-years of employment while induced effects would be approximately 21 person-years of employment. Over ten years from 2019–2028, total direct (293), indirect (363), and induced (256) person-years of employment associated with CISF operations are estimated to total 912 person-years of employment. Some indirect and induced employment would likely go to existing local residents rather than new workers moving into the area. The proposed WCS spent fuel CISF would likely have a positive effect on land values in the overall area, similar to the effects from construction of the URENCO facility.

2.5.4 Government Impacts to the Region of Interest

According to the IMPLAN model, various tax benefits would accrue to state and local governments, based on the economic activity associated with the construction phase of the spent nuclear fuel CISF facility. At the state and local level, tax revenues from employee compensation are estimated to be \$14,744 from the construction activities (**Table 2-6**). Taxes on production and imports would exceed \$500,000. Taxes generated by households would be approximately \$123,103 and corporations would generate \$16,769 in government revenue. At the federal level, employee compensation-generated tax revenues would exceed \$856,119, plus \$40,074 in proprietor income and \$112,035 of tax on production and imports. Households would generate \$549,782 in federal taxes and corporations would generate \$168,387 in federal taxes.

Table 2-6: Local, State, and Federal Estimated Tax Impacts of Construction (2018)				
CONSTRUCTION PHASE - 2018, 16M construction				
TAX IMPACT - STATE AND LOCAL				
Employee Compensation	Proprietor Income	Tax on Production and Imports	Households	Corporations
\$14,744	\$0	\$509,479	\$123,103	\$16,769
TAX IMPACT – FEDERAL				
Employee Compensation	Proprietor Income	Tax on Production and Imports	Households	Corporations
\$856,119	\$40,074	\$112,035	\$549,782	\$168,387

Source: MIG, Inc. IMPLAN model – Gaines and Andrews Counties, Texas, and Lea County, New Mexico. CMEC utilizing inputs from WCS.

Once the facility begins operations, additional state and local tax revenues would be generated on an ongoing basis. Approximately \$181,969 in employee compensation would be generated from the first ten years of operations, along with \$13,881,967 in taxes on production and imports (**Table 2-7**). Household taxes would be \$1,442,781 and corporations would generate \$389,927 in state and local taxes.

Table 2-7: Local and State Estimated Tax Impacts of Operations (2019–2028)

Total State and Local Tax	Employee Compensation	Proprietor Income	Tax on Production and Imports	Households	Corporation
2019	\$19,773	\$0	\$1,497,611	\$156,747	\$42,077
2020	\$19,408	\$0	\$1,470,048	\$153,861	\$41,301
2021	\$19,034	\$0	\$1,446,930	\$150,903	\$40,646
2022	\$18,676	\$0	\$1,422,242	\$148,064	\$39,949
2023	\$18,333	\$0	\$1,398,328	\$145,355	\$39,276
2024	\$17,997	\$0	\$1,374,818	\$142,696	\$38,614
2025	\$17,667	\$0	\$1,351,703	\$140,086	\$37,964
2026	\$17,343	\$0	\$1,328,979	\$137,523	\$37,325
2027	\$17,025	\$0	\$1,306,637	\$135,008	\$36,696
2028	\$16,713	\$0	\$1,284,671	\$132,538	\$36,079
TOTAL	\$181,969	\$0	\$13,881,967	\$1,442,781	\$389,927

Source: MIG, Inc. IMPLAN model – Gaines and Andrews Counties, Texas, and Lea County, New Mexico. CMEC utilizing inputs from WCS.

From the federal perspective, employee compensation taxes would generate \$10,566,288 and proprietor income would generate \$301,707 (**Table 2-8**). Taxes on production and imports would be \$3,052,651. Households would generate approximately \$6,443,530, while corporations would pay approximately \$3,915,549. Overall, these revenues would generate a substantial benefit to the governments receiving the tax payments, as a result of the CISF's operations.

Table 2-8: Federal Estimated Tax Impacts of Operations (2019–2028)

Total Federal Tax	Employee Compensation	Proprietor Income	Tax on Production and Imports	Households	Corporation
2019	\$1,148,133	\$32,720	\$329,325	\$700,041	\$422,527
2020	\$1,126,964	\$32,125	\$323,264	\$687,149	\$414,734
2021	\$1,105,244	\$31,526	\$318,181	\$673,941	\$408,154
2022	\$1,084,411	\$30,945	\$312,752	\$661,262	\$401,154
2023	\$1,064,531	\$30,392	\$307,493	\$649,164	\$394,399
2024	\$1,045,016	\$29,848	\$302,323	\$637,288	\$387,757
2025	\$1,025,860	\$29,315	\$297,240	\$625,629	\$381,227
2026	\$1,007,055	\$28,790	\$292,243	\$614,185	\$374,808
2027	\$988,597	\$28,276	\$287,330	\$602,950	\$368,497
2028	\$970,477	\$27,770	\$282,500	\$591,921	\$362,292
TOTAL	\$10,566,288	\$301,707	\$3,052,651	\$6,443,530	\$3,915,549

Source: MIG, Inc. IMPLAN model – Gaines and Andrews Counties, Texas, and Lea County, New Mexico. CMEC utilizing inputs from WCS.

The 2018 construction impact on state and local tax revenues according to the IMPLAN model would be approximately \$664,095 (see **Tables 2-6** and **2-8**). Federal taxes from construction would be \$1,726,397. For the first year of operations (2019), the IMPLAN model estimates the total local, state, and federal taxes generated to be approximately \$4,348,954. The state and local portion of that would be \$1,716,208.

Tax revenue information was collected for the counties in the economic model. These data may not include the same components and cannot be added together, but provide some perspective on the scale of county revenue. This information does not include any city-level revenue or federal revenue by county. In Lea County, FY 2014 actual revenues were \$29,894,635 for oil and gas taxes; \$4,530,672 for intergovernmental taxes; \$11,995,615 for property taxes; and \$14,142,022 for gross receipts taxes. These tax amounts totaled \$60,562,944 (Lea County Fiscal Budget 2014). According to the auditor's report, for the fiscal year ending September 30, 2014, tax revenues in Gaines County (property taxes levied for general purposes) totaled \$22,464,031 (Gaines County Fiscal Report 2014). Andrews County tax revenues totaled \$23,119,787 in the fiscal year ending September 30, 2014, according to the Comprehensive Annual Financial Report (Andrews County Annual Financial Report 2014).

The URENCO criteria cannot be precisely applied because the modeled data does not directly relate to the county level revenue data, especially given the varying components that go into that data depending on the county. Generally speaking however, it appears that anticipated state and local tax revenues that would result from the WCS CISF facility would have a small positive impact on the overall county tax revenues, based on recent data.

2.6 OTHER IMPACTS

2.6.1 Environmental Justice Impacts

As discussed in Section 1.1.10, based on Appendix C ("Environmental Justice Procedures") to NUREC-1748, the data on minority and low-income populations in the four-mile radius study area does not indicate the presence of an environmental justice community of concern.

No relocations or displacements would be required for the proposed CISF activities. Any noise or air quality considerations would be primarily limited to temporary impacts during the construction phase. Deliveries of storage casks would happen only a few times a week and transportation would be on rail cars, resulting in limited noise or air quality impacts. Economic impacts from construction and operations would result in small positive effects on the local and regional economy.

To achieve meaningful public involvement consistent with E.O. 12898 on Environmental Justice and E.O. 13166 on Limited English Proficiency, future public involvement activities would include populations within the ROI so that questions and concerns from those living within the larger ROI can be incorporated into the environmental process.

2.6.2 Historic Resources Impacts

As discussed in Section 1.4.1, coordination with the THC has been completed and no further work is required regarding historic resources. Coordination with NMSHPO is underway.

2.6.3 Archeological Resources Impacts

As discussed in Section 1.4.2, no impacts to archeological sites would occur as a result of the proposed project within the boundaries of the 2015 survey area. The archeological survey report is under review at THC. Coordination with NMSHPO is underway.

2.6.4 Scenic Resources Impacts

As discussed in Section 1.4.3, scenic resources in the project area are not considered to be dramatic, unique, or rare. The proposed facility would add to other existing industrial facilities in the area but would not have a substantial adverse effect on the current landscape for area viewers.

2.6.5 Agricultural Impacts

As discussed in Section 1.4.4, agriculture has been in decline as documented by the census of agriculture over the period from 2007 to 2012. Between 2007 and 2012, the acreage of land in farms and average farm size declined in Andrews County and Lea County, and the market value of agricultural production declined over that time period as well. Although these data are county-wide, it is assumed that these general trends toward land use development may continue. Though the proposed CISF project would not take land out of agricultural production, some areas surrounding the WCS facility may convert to developed uses over time as CISF activities are mobilized and with continued development of operations at the URENCO nuclear generation facility in New Mexico.

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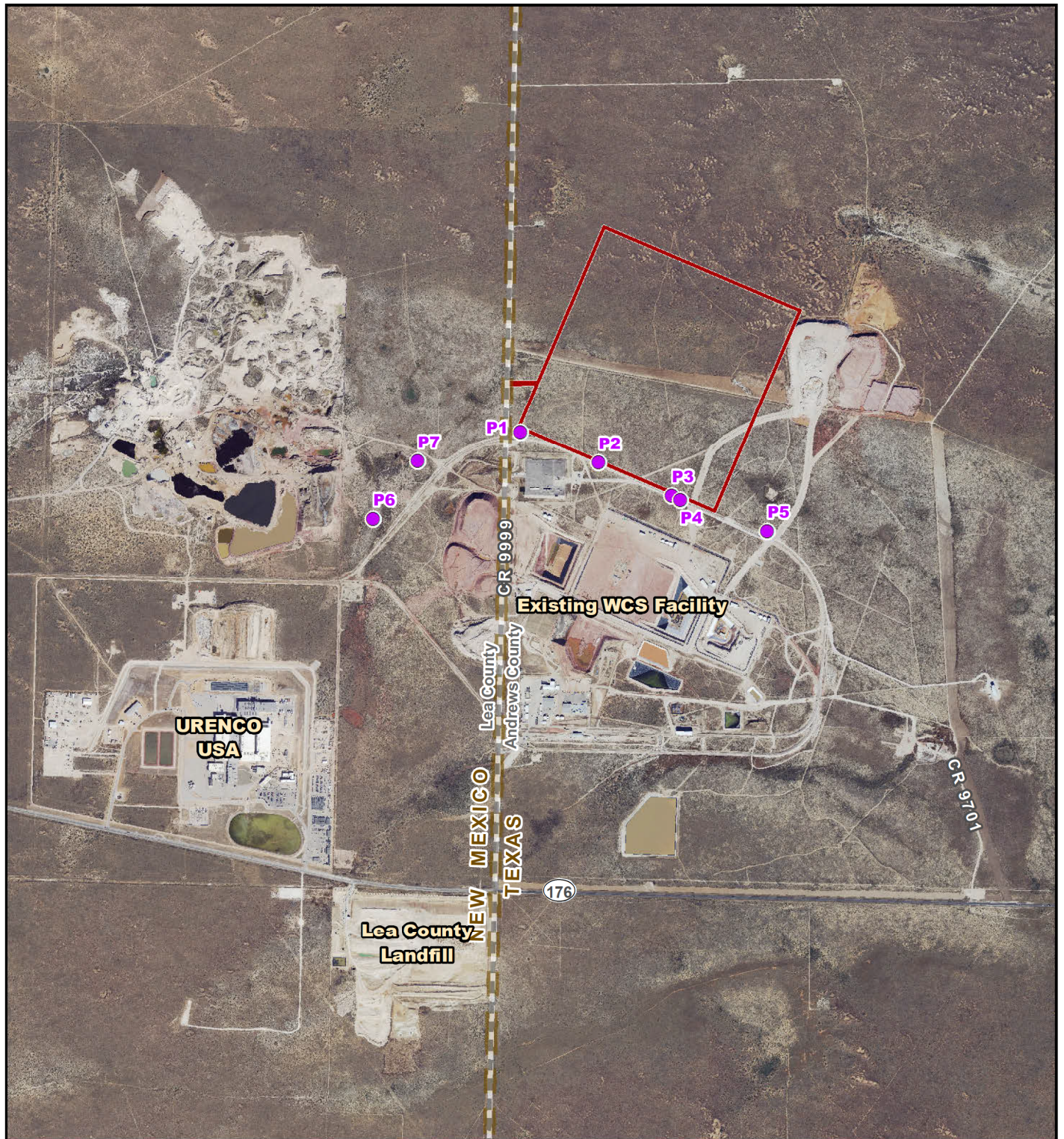
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Appendix A

WCS Photographs of Proposed Spent Fuel Consolidated Interim Storage Facility Site



-  Project Location
-  Photo Location

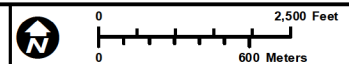


Figure A-1
WCS Photos of
Proposed ISFS Site
 Proposed Consolidated Interim
 Spent Fuel Storage Facility



Prepared for: WCS	1 in = 2,500 feet
	Scale: 1:30,000
Prepared by: SL	Date: 4/4/2016

Source: CMEC (2015)

Aerial Source: TNRIIS (2015)

G:\Projects\WCS\Scenic_Figure A-1_Photos of ISFS Site_20160404.mxd



At P1, facing southwest from proposed site to redbed stockpile on existing WCS site.



At P2, new site facing north.



At P2, from south of new site facing southwest to redbed stockpile.



At P3, WCS railroad spur facing west towards New Mexico, south boundary of proposed site.



At P5, project area vegetation.



At P6, view from top of redbed stockpile towards New Mexico and Urenco facility.



At P7, view northeast from stockpile towards project site at northeast quadrant of intersection.

Appendix B

Andrews County Resolution

IN THE COMMISSIONERS COURT
OF
ANDREWS COUNTY, TEXAS

*A resolution in support of establishing a site in Andrews County
for consolidated interim storage of spent nuclear fuel and high-level radioactive waste.*

WHEREAS, Andrews County, Texas, as host to two low-level radioactive waste disposal facilities operated by Waste Control Specialists LLC (“WCS”), greatly benefits directly and indirectly from the economic activity associated with disposal of radioactive materials; and

WHEREAS, Andrews County recognizes the importance of a diversified economy to the livelihood of the citizens of Andrews County; and

WHEREAS, Andrews County is home to a specialized workforce with expertise concerning radioactive materials, and WCS currently employs more than 170 full-time employees with an annual payroll of more than \$13 million in Andrews County; and

WHEREAS, Andrews County has invested in the success of the low-level radioactive waste disposal facilities operated by WCS by issuing \$75 million in bonds and using that revenue to purchase property leased by WCS as part of the operation of the disposal facilities; and

WHEREAS, Andrews County receives five percent of the gross receipts from waste disposed of at the two low-level radioactive waste disposal facilities, which receipts to date have totaled over \$5 million directly paid to Andrews County and are expected to total more than \$3 million per year in the future; and

WHEREAS, WCS has consistently shown its commitment to the environment and the citizens of Andrews County by, among other things, designing and operating safe, state-of-the-art radioactive materials facilities, working to ensure that Andrews County shares in economic benefits because of WCS operations, and working to ensure that local stakeholders are kept informed and made an integral part of the decision-making process concerning WCS operations; and

WHEREAS, there are substantial quantities of Spent Nuclear Fuel (“SNF”) and High-Level Radioactive Waste (“HLW”) currently stored at sites throughout Texas and the United States; and

WHEREAS, much of the SNF and HLW is currently stored at sites that are vulnerable to natural disasters and located near large metropolitan centers; and