

## **Characterization Methodology**

In order to appropriately assess current site information in comparison to the large volume of information contained within the original and supplemental EISs and EAs, a comprehensive characterization methodology was developed. The methodology described below sets forth a strategy for the efficient, orderly collection, verification, and evaluation of the NEPA compliance of the SPR. Each phase of the assessment is described in detail in the subsections below.

### ***Data Collection and Verification***

To determine whether an original or supplemental EIS and the ROD rendered remains valid or, alternatively, that a new or supplemental EIS (SEIS) would be required, physical aspects of the site, site operations, and current activities were first investigated, verified, and evaluated for significance of environmental impacts that have not been addressed or are not addressed in the evaluated EISs. Data collection was then extended to encompass the conceptual site data initially evaluated, any regulatory requirements that are applicable to the site, whether or not they have initiated modifications to the site design and/or operations, and any community/socioeconomic changes that occurred subsequent to the initial NEPA assessment of the impacts of each site. Additionally, data was also compiled from subsequent site-wide and programmatic EISs prepared to address modifications to the site or site operations.

Specific data regarding SPR-wide changes, site-specific changes, regulatory amendments and enactments, and population variations collected and verified were then evaluated to determine their significance relative to NEPA.

### **Data Collection**

For this project, the following documentation was initially gathered for review:

- Historical environmental documentation and records including EISs, EAs, RONR, and RODs;
- Documentation regarding state and Federal regulatory amendments and enactments; and
- Documentation of census bureau data for populations affected by SPR sites and pipelines.

Upon review of this documentation, the criteria for the SA set forth previously was corroborated based on the conclusions regarding topics addressed in these

documents that could potentially provide a basis for the need to prepare a new EIS or SEIS. Other data sources and methodology were then utilized to determine if, at a particular site, that topic and/or criteria is significant relative to NEPA compliance, i.e. compelling of a new EIS or SEIS. Refer to Attachment C for a listing all external reference documents, websites, and reports utilized.

### ***Operational and Engineering Modifications***

Data collection regarding O&E modifications included the compilation of the initial site layout, processes, and operations originally evaluated, the investigation of current processes and operations at each site, and any programmatic revisions that have affected site operations/processes. An intensive review of all original site-wide EISs and any subsequent site-wide EISs was the fundamental task conducted to determine the initial site configuration, processes, and operations evaluated. Then, several members of the SPR Engineering and Construction (E&C) department were contacted along with the engineering design and process engineering groups. They were provided with the specifications listed in the original EISs and their comments relative to the current site configuration were solicited. Their responses have been summarized by site and attached to this document as Attachment D. Additionally, site reviewers were contacted and information was requested regarding changes as well as current site operations and activities. Their responses have been summarized by site and are included with comments by the SPR E&C department in Attachment D.

### ***Regulatory Review***

Data collection regarding the regulatory review was completed with the assistance of ICF Consulting (ICF) under contract to DOE SPR Program Office at Headquarters. A list of Federal statutes, regulations, and EOs applicable to the SPR was provided to ICF with the caveat that their support was required to complete the list of applicable regulations through addition of the corresponding applicable state regulations and agency guidance. A submittal from ICF containing a summary of state regulations deemed potentially significant was received on September 26, 2003 and is provided as Attachment E of this document.

The list of applicable state statutes and regulations submitted by ICF was reviewed and expanded to ensure consistency of the state and Federal regulatory reviews and to provide a complete picture of the regulatory compliance at both the state and Federal levels. A complete list of applicable Federal and state statutes and regulations and Federal EOs has been provided in Attachment F.

### ***Socioeconomic Variations***

Data collection regarding the compilation of socioeconomic variations accrued since the original site-wide EISs was completed with the assistance of ICF. Parishes, counties and cities affected by SPR sites and pipelines were submitted to ICF with links to the corresponding Census Bureau uniform resource locator (URL). Their support was required to complete compilation of the detailed information relative to these affected locales for use in an environmental justice assessment pursuant to EO 12898. A submittal containing a summary of the methodology and sources utilized by ICF to compile this information was received on September 26, 2003, and is attached as Attachment G of this document. Current data compiled for each site evaluation and the accompanying analysis is presented for review in Attachment H. Current data compiled for each pipeline evaluation and the accompanying analysis is presented for review in Attachment I.

A complete listing of applicable socioeconomic data for comparison to the original EISs was compiled by the M&O Contractor. This endeavor provided a thorough picture of the demographics and socioeconomics of populations in proximity to each site. Data was summarized in checklists as discussed in the subsection titled 'Data Evaluation.' The checklists are presented in Attachment J.

### **Data Verification**

Data verification occurred throughout the initial data gathering. As potentially significant topics were identified, the appropriate M&O Contractor's environmental staff member verified the data submitted for accuracy and completeness. Staff members verified data as provided by comparison to current and historical environmental documentation and records. The compilation of EAs and EISs in Attachment B has been completed as part of the verification process. All O&E modifications submitted by site ES&H personnel and members of the M&O Contractor's E&C department for review, regulatory amendments, enactments or agency guidance that impacts the sites, and socioeconomic changes that have occurred over time in the vicinity of the site were also verified as appropriate via comparison to the technical baseline, current permitting, regulatory updates, etc.

Data verification is a quality assurance/quality control measure intended to facilitate the use of only reliable, accurate information. Therefore, the specific sources of all information were documented and copies maintained as part of this SA project. The methodology utilized for data verification included cross-

referencing the significant activity, process, impact and site characteristic change identified via comparison of historical EISs and EAs to each other and to the current technical baselines for validation. Responses relating to current practices were verified against current procedures, plans and system description documents. A review of ECPs, Deviations, Waivers, etc. was conducted and compared to the results of a similar review of CXs for verification (10 CFR 1021 subpart D). Other methodology for data verification was utilized as necessary for completeness.

Data collection and verification occurred on each task of this SA project. Once data was collected and verified, it was organized and recorded by task for each site in a tabular format as discussed in the subsection titled 'Data Evaluation.' After all information was compiled, verified, and recorded, data evaluation and analysis was performed.

### ***Data Evaluation & Analysis for Significance***

Each SPR site is unique relative to its surrounding environment, its particular environmental challenges and regulations, its storage capacity, historical uses, current operations and future potential in support of the SPR's mission. Thus, it is clear that each unique site requires site-specific determination of the potential need for preparation of a new EIS or SEIS. As well, the cumulative impacts of program-wide trends must also be evaluated for conclusion regarding the validity of the RODs issued for existing EISs and EAs.

#### **Data Evaluation**

An evaluation of data establishing a deviation from that assessed in the original and supplemental programmatic and site-wide EISs was conducted for each site to determine NEPA significance. This was accomplished utilizing a multi-functional checklist format that was developed and utilized for the recordation of all necessary data as well as evaluation of each site and the SPR program as a whole. The use of checklists for the analysis of data and, especially, for the evaluation of potential cumulative effects is recommended in CEQ guidance (CEQ, 1997). All analysis was documented by site and for the SPR program as a whole in these checklists. Each checklist provides the reviewer with:

- A record of previously evaluated data, data regarding modifications, regulatory information and socioeconomic data;
- A side-by-side comparison of previously evaluated data and data regarding modifications;

- Assessment of each line item of data regarding its effects at the site and programmatic levels;
- Substantiation of the thorough evaluation of each line item of data including rationale and documentation of sources of data and RONR, where appropriate;
- The basis for further assessment or lack thereof; and
- The final determination of significance relative to NEPA and the need to prepare a new EIS or SEIS, if necessary.

These checklists have been provided as Attachment J. Evaluation was based on analysis in accordance with the criteria for significance set forth by the CEQ and best professional judgment.

Evaluation proceeded initially as current site data collected and verified was compared to the technical baseline set forth in the original EISs, applicable subsequent EISs, EAs, etc. Current site data that indicated a change from the original site data was documented in the checklist and further inquiry into each site's circumstance was conducted for a RONR such as a CX or a finding that the change did not meet the criteria to trigger NEPA review. Any item that was not associated with documentation of a NEPA review was considered as having the potential for significance relative to the need for preparation of a new EIS or SEIS.

### **Analysis for Significance**

To accommodate this last level of review, specifications that would designate the change represented by the data applicable to either the site or to the SPR program as significant relative to NEPA and potentially providing a potential basis for the need to prepare a new EIS or SEIS were identified. Determination of significance under the CEQ guidelines is a function of both the context and intensity (40 CFR 1508.27) of the effects of the modifications and is dependant on best professional judgment. In support of this SA, the determination of significance was focused on eight of the ten criteria identified in the CEQ guidelines as indicative of the potential intensity of the modification relative to significance. These specifications are:

- The degree to which the proposed action affects public health or safety;
- The degree to which the effects on the quality of the human environment are likely to be highly controversial;
- The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks;

- The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration;
- Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts;
- The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources;
- The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973; and
- Whether the action threatens a violation of Federal, state, or local law or requirements imposed for the protection of the environment. [40 CFR §1508.27(b)]

The following two additional criteria under the CEQ guidelines were addressed in the initial evaluation for each area of analysis and are not applicable for the purpose of this SA:

- The potential for significant impacts to be beneficial
- The potential for significant effects to result from the unique geographic areas in which the sites are located.

Throughout the initial evaluation, effects of modifications were assessed for potential adverse and beneficial effects as well, in the regulatory review, the potential for effects due to unique geographic areas was specifically assessed relative to the applicable state and Federal regulations and statutes and Federal EOs. Thus, following the initial evaluations, a final determination of significance was based on context [40 CFR 1508.27(a)], the above indicated eight intensity specifications suggested in the available CEQ guidance at 40 CFR 1508.27(b) and best professional judgment.

A discussion of the assessment methodology utilized for each task is provided in each task section below. Additionally, refer to the individual task flow charts in Attachment K for illustration of the process utilized to evaluate each set of data.

Here, the determination of significance ultimately bears on the validity of the current NEPA documents and their associated RODs. CEQ guidance states that terming an action temporary or by proceeding in phases cannot defeat the

significance of the overall action (CEQ NEPA net). Thus, the significance of data relative to compelling the need to prepare a new EIS or SEIS hinges on the context in which the magnitude and potential effects of deviations/modifications from previously evaluated operations, activities, and effects are addressed, i.e. in the original EISs, any subsequent applicable EISs, any subsequent EAs, CXs, etc. Moreover, the potential cumulative effects and impacts of the various modifications at each site were considered during the evaluation process as required by NEPA. The programmatic checklist specifically addresses program-wide trends/modifications and any potential cumulative effects. Cumulative effects were also considered in analysis of modifications of each site.