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File Code: 2160/2800

Date: June 7, 2011

Dave Cline
Rio Tinto
4700 Daybreak Parkway
South Jordon, Utah 84095

RE: Agencies' Comments to Intalco's Draft 2011 Early Works Implementation Plan Holden Mine

Dear Dave,

The Agencies have reviewed the *"Draft 2011 Early Works Implementation Plan Holden Mine,"* (Plan) submitted by MWH on behalf of Intalco, dated, April 20, 2011, and submit our initial comments (attached). We will have additional comments as our review continues and as missing or incomplete sections are submitted to the Agencies.

The above 2011 Early Works Implementation Plan includes the design basis, description of the work, and drawings showing the work to be done and areas of potential earth disturbance. Implementation of the construction phase of work described in the 2011 Early Works Implementation Plan (with the exception of the construction materials investigation and bulkhead construction work plans which are already covered by the 2010 AOC Amendment) is not governed by this letter. The 2011 construction work will be undertaken under either the existing 2010 AOC Amendment (in the case of the construction materials investigation and bulkhead construction work plans) or under a separate agreement now under negotiation (the proposed 2011 amendment of the AOC).

Work described in the 2011 Early Works Implementation Plan and discussed in the attached comments constitutes additional work under the Administrative Order on Consent (AOC) dated April 11, 1998, as amended. Intalco shall respond to the attached comments and resubmit revised portions of the Plan, as required by the Agencies, within fifteen days of receipt of the attached comments, unless Intalco requests (and the Agencies approve) a schedule modification as provided for in Paragraph 33C of the Amended AOC.

According to the AOC, as amended, no work may begin without the Agencies' written approval of the work.

Sincerely,

/s/ Norman F. Day

NORMAN F. DAY
Holden Mine Remedial Project Manager

CC: Theodore Garrett, Covington & Burling
Dave Jackson, David E. Jackson & Associates
Ron Schlicher, MWH
Phil Crouse, MWH
Laura Klasner, WA-DOE
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Rena Rex, USFS – Chelan RD
Mike Bailey, Hart Crowser, Inc.
Rose Longoria, Yakama Nation
Paul Bianco, Ridolfi
Julie Campbell, USFWS
Chuck and Stephanie Carpenter, Co-Directors, Holden Village
Tom Newlon, Stoel Rives (representing Holden Village, Inc.)

AGENCIES' COMMENTS ON INTALO'S DRAFT 2011 EARLY WORKS IMPLEMENTATION PLAN, DATED, 4/20/11

1. General comment. Actions in the 2011 Early Works Implementation Plan ("the Plan") are in preparation for a final remedy that has not yet been selected. As discussed at the 3/24/11 meeting, all actions undertaken are subject to potential change after remedy selection. The Agencies' approval of any of the Early Works activities does not indicate that these activities would necessarily satisfy requirements of the Selected Remedy, prior to issuing the ROD. Construction accomplished as part of the Early Action may need to be modified as part of the final cleanup. However, in the Agencies' judgment, none of the proposed actions would preclude any of the final remedies that are under consideration.

2. General comment. The Agencies expect that the development of Field's Point as a barge facility could be difficult to accomplish quickly because of permitting issues. The NEPA process, including public scoping, and application for all required permits would need to be initiated immediately. The Agencies would require site-specific plans for this facility as soon as possible.

3. General comment. Additional applicable BMPs that must be incorporated when doing the early works activities:

   - Only vegetable based/biodegradable hydraulic fluid can be used in equipment working within Riparian Reserves and in-water.

   - Refueling must take place outside of any surface water body.

   - No dust abatement materials, such as lignin, may be applied during or just before wet weather and at stream crossings or other locations that could result in direct delivery to a water body (typically not within 25 feet).

   - All earth moving equipment (loaders, excavators, dump trucks, etc.) and any equipment used in water (water pumps, excavators) moved to the job site shall be cleaned of weeds and their seeds and aquatic invasive species prior to each entrance onto the National Forest lands. Cleaning shall consist of the removal of all dirt, grease, debris, and materials that may harbor noxious weeds and their seeds and aquatic invasive species.

   - Where possible and beneficial, as determined by the Forest Service, felled trees shall be left within Riparian Reserves.

4. Section 1.2, Remedy Components. This Section states that Railroad Creek is to be rerouted, but this is not reflected in drawings. Rerouting Railroad Creek may have major impacts on the

flood levels, bypass road, and bridge design. Drawings shall show proposed Railroad Creek Realignment. The realignment shall be reflected in all bridge design and calculations.

5. Section 1.3, Project Organization. The Early Works Plan must contain a communications plan that includes all entities and frequencies, and which frequency will be used for what purpose. In particular, the frequency currently used by the village for traffic management on the road must be used by all travelers on the road, and used in conjunction with known landmarks and turnouts to provide for safe passage.

6. Section 3.2, Design Criteria. Design vehicle width at 12-feet and lane width at 12-feet for the bypass road does not appear to allow for passage of two vehicles, despite statements that the bypass road would accommodate such passage. Please clarify this discrepancy.

7. Section 3.2, Design Criteria. Dust abatement must be addressed. Note that no dust abatement materials, such as lignin, will be applied during or just before wet weather and at stream crossings or other locations that could result in direct delivery to a water body (typically not within 25 feet) of a water body or stream channel crossing.

8. Section 3.2, Design Criteria. Include a sign plan with the road plan.

9. Section 3.2, Design Criteria. Safety berms are not preferred. Describe how drainage and berm maintenance will be addressed. Berms will interfere with snow plowing activities. Guardrail is preferred. Generally use guardrail instead of safety berms due to drainage and snowplowing concerns. If a contractor proposes safety berms, please provide a justification so that the Forest Service can consider site specific use of safety berms on a case by case basis.

10. Section 4.2, Timbering. The drawings must delineate "ground disturbing activities."

11. Section 4.3. The conceptual plan appears workable. In addition to the ramp design, the final plan must address the historic crib in a manner consistent with the National Historic Preservation Act (NHPA). Prior to the use of the jib crane, a structural evaluation of the existing facility must be conducted. Dock maintenance/reconstruction must be addressed in the plan. The Agencies note that some of the pilings are owned by the Lake Chelan Boat Company.

12. Section 4.4.5, Backwash Water Systems. The water treatment plant backwash area, which is on National Forest System land, will require Agency approval in the field. The Plan must indicate how much water would be involved, what the expected constituents would be, and the size of the area that would be needed.

13. Section 4.5, USFS Road 8301 Improvements (Holden-Lucerne Road). Within the Early Works Plan, there is no mention of sampling or handling procedures for mine-related materials (e.g.,

waste rock or tailings) encountered during road work. A work plan addressing this be submitted and approved before work on the road can begin.

14. Section 4.5, USFS Road 8301 Improvements (Holden-Lucerne Road). The Agencies note that this road is used by members of the boat club who have access to private vehicles and that their use of the road is unscheduled. The Early Works Plan must address such traffic (e.g., in the communication plan and by closing the road to such use).

15. Section 4.5, USFS Road 8301 Improvements (Holden-Lucerne Road). The Early Works Plan states that "Road maintenance will be performed on an as-needed basis during the early work activities." The Plan must specify that Intalco will maintain the road in accordance with Forest Service requirements and those requirements must be incorporated into the plan. Note that the Forest Service may require additional maintenance beyond what Intalco deems necessary.

16. Section 4.5, USFS Road 8301 Improvements (Holden-Lucerne Road). The Agencies note that where the Plan states that "road maintenance will be performed" or other work is noted, the Forest Service is not responsible for this work and Intalco must perform the needed work.

17. Section 4.5, USFS Road 8301 Improvements (Holden-Lucerne Road). Dust abatement must be addressed. No no dust abatement materials, such as lignin, may be applied during or just before wet weather and at stream crossings or other locations that could result in direct delivery to a water body (typically not within 25 feet) of a water body or stream channel crossing.

18. Section 4.5.2, Drain Structures. The Plan must indicate that, to the extent possible, ditch work must be conducted when there is no flowing or standing water in the ditches. Exceptions may be possible in consultation with an Agency representative.

19. Section 4.5.2, Drain Structures. No material generated during ditch cleaning shall be sidecast such that sediment may reach flowing water.

20. Section 4.5.2, Drain Structures. Clean ditches shall be shaped to a standard template.

21. Section 4.5.2, Drain Structures. Where ditching is needed to control drainage in areas where it is lacking, Intalco shall install it.

22. Section 4.5.2, Drain Structures. The minimum diameter for replacement pipes must be 18 inches.

23. Section 4.5.2, Drain Structures. The Forest Service must approve culvert replacements prior to installation.

24. Section 4.5.2, Drain Structures. The Plan states that "Each culvert location with insufficient cover will be evaluated in the field to determine which of the following mitigating measures is most appropriate:" Intalco shall perform the evaluation, proposed mitigation measures, and the Forest Service shall review and approve.

25. Section 4.5.3, Turnouts. Several turnouts are on the new drawings that were not identified in earlier drawings (11/15/10, Areas of Potential Earth Disturbance) including one to three turnouts between the bypass road and the village (Drawing 10-3-10) and one in Winston (Drawing 10-6-2). The Plan must clarify the purpose of these turnouts given that construction traffic is mainly on the bypass road in the village vicinity.

26. Section 4.5.3, Turnouts. The Plan must identify which BMPs apply, with reference to specific drawing(s) and applications.

27. Section 4.5.3, Turnouts. The Plan must specify that stripped topsoil be stockpiled for reuse.

28. Section 4.5.3, Turnouts. The Plan must define a "leave behind BMP" and must specify which BMPs are considered leave behind as some may not be acceptable (e.g. log cribbing that holds sediment but eventually rots and releases the sediment).

29. Section 4.5.3, Turnouts. The Plan must define what is meant by and what the extent of "on-site borrow sources" is. It must also identify the area of vegetation that would need to be cleared to develop these on-site sources, and the size of these areas. If the intent is to widen the road with a cut to provide the borrow material, site specific information must be provided and Forest Service site review conducted. Also, the drawings must show hillslope cuts.

30. Section 4.5.3, Turnouts. This section states that "Unsuitable foundation material will be removed to provide firm competent foundation conditions". The Plan must identify where this material will go. Absent Agency permission, stockpile the material as a potential borrow source, rather than sidecast. The Agencies prefer that it not be sidecast, but used.

31. Section 4.5.3, Turnouts. Drawings must show clearing limits and cut/fill volumes for turnouts 6 through 8 (all in the narrows) and turnout 26. Drawing 26 is missing the profile diagram; this must be provided.

32. Section 4.5.3, Turnouts. Few details of the construction methods are given. All significant fill slopes shall be constructed in "steps" to eliminate the potential slip plane between existing ground surface and placed fill. Each lift of fill material shall be cut into the existing slope. Fill lifts are not to exceed 24 inches, uncompacted depth.

33. Section 4.5.4, Safety Barriers. The Plan states that "Intalco will assess the need for road safety barriers on the portions of the road between turnouts and in particular in the 'narrows' section

of FS 8301.” The Plan must indicate that Forest Service engineers must be involved in this assessment and that the entire road should be evaluated, not just portions of the road.

34. Section 4.5.4, Safety Barriers. Where safety barriers are required they must facilitate the removal of snow without damage.

35. Section 4.5.4, Safety Barriers. Describe how non-essential traffic will be limited.

36. Section 4.5.4, Safety Barriers. Add that safety barriers shall not retain surface water.

37. Section 4.5.5. Road Repair and Maintenance. Where a 2%-4% crown grade is not possible a 2%-4% cross slope shall be installed (either in or out, depending on site).

38. Section 4.5.5. Road Repair and Maintenance. BMPs must be followed. This includes placement of sidecast material.

39. Section 4.5.6. Bridges that are planned to routinely support the loaded design vehicle (740 articulated truck) shall pass that vehicle at the operating rating. Use of the inventory rating shall not be routine, and must be approved by the Forest Service.

40. Section 4.5.6. All modifications proposed to the existing bridges must be reviewed and approved by the Forest Service.

41. Section 4.5.6. Bridges must be in serviceable condition, similar to the existing condition, upon completion of the project.

42. Section 4.6 – Construction of Bypass Road. Address drainage of the intermittent stream at TP-3 and any other areas along the bypass road.

43. Section 4.6.1, Bypass Road Design. The Plan must indicate what drainage will be provided.

44. Section 4.6.1, Bypass Road Design. The Plan must describe and delineate impacts to wetlands associated with the bypass road.

45. Section 4.6.1, Bypass Road Design. The Plan must specify an approach to characterize soils that are removed during construction of the bypass road. The Plan must indicate that any removed soils that are contaminated above soil cleanup levels will be placed on the tailings piles for consolidation and capping or managed in accordance with the Waste Management Plan.

46. Section 4.6.1, Bypass Road Design. The Plan must indicate what the leave behind BMPs would be in this area. The Agencies note that some may not be suitable.

47. Section 4.6.1, Bypass Road Design. Bypass road width shall include 1-foot minimum shoulders.

48. Section 4.6.1, Bypass Road Design. This road shall receive similar maintenance as existing 8301.

49. Section 4.6.1, Bypass Road Design. Bypass road shall be considered in all flood flow calculations for Railroad Creek.

50. Section 4.6.2, New Railroad Creek Bridge. The Plan states that a temporary culvert bridge may be necessary to assist with early season 2011 construction work. The Agencies are willing to explore this as an option; however, a work plan and design for this must be submitted and approved by the Agencies if this option is to be used.

51. Section 4.6.2, New Railroad Creek Bridge. The proposed bridge shall pass all routine loads at service level.

52. Section 4.6.2, New Railroad Creek Bridge. The bridge shall be installed at a 1% longitudinal slope for drainage.

53. Section 4.6.2, New Railroad Creek Bridge. Submitted drawings are inadequate to verify that abutments are outside of the bank full stream width and must be revised to include adequate detail.

54. Section 4.6.2, New Railroad Creek Bridge. Stream velocities at 100 year flood condition shall be calculated to verify erosion protection measures. More information must be provided on scour protection.

55. Section 4.6.3, Copper Creek Crossing. Unclear as to why road section constraining Copper Creek requires a 16' road width. Clarify.

56. Section 4.6.3, Copper Creek Crossing. Install new corrugated metal pipe (cmp) that allows full road width and fish passage.

57. Section 4.7, Site Debris. A Waste Management Plan ("WMP") must be submitted and approved before work involving the management of waste may begin. In addition to other requirements, this WMP must specify the location(s) for storage for site debris. The Agencies understand Intalco is delaying submission of the Waste Management Plan pending resolution of several issues. However; it may take the Agencies and Intalco some time and additional information to resolve these issues. The Agencies require that an interim WMP be submitted and approved before proceeding with the 2011 construction season.

58. Section 4.8, Installation of Bulkheads in the 1500 Level Main and Ventilator Portals. Drawing 10-9-2 and 10-9-4 differ in terms of the amount of ground to be disturbed. Also, the Riparian Reserve line is incorrect due to the error in our old forest plans regarding the location of the patented mining claim. Intalco has sufficient information to correct this error; revise and resubmit corrected drawings.

59. Section 4.8, Installation of Bulkheads in the 1500 Level Main and Ventilator Portals. What road reconstruction is needed for this work? This is not sufficiently defined. Clarify.

60. Section 4.9, Construction of Temporary Maintenance Building for Holden Village. The Plan must clarify why, if the existing structure is 80' x 30' (2400 sq ft), and the second floor is 2000 sq feet, that the total needed is not 4400 sq feet.

61. Section 4.9, Construction of Temporary Maintenance Building for Holden Village. Timbering in the location of the temporary maintenance shop should be extremely limited. The Plan must clarify why timbering is included for this area.

62. Section 4.9, Construction of Temporary Maintenance Building for Holden Village. Intalco must work with Holden Village and the Forest Service to amend the special use permit if necessary to address the temporary maintenance building.

63. Sections 4.10 and 4.15, Staging and Storage. Intalco proposes to construct two staging areas in the Lower West Area (LWA) by conducting limited soil removal and leaving contaminated materials in place beneath clean surfacing materials. This plan is not in conformance with the preferred alternative presented in the Proposed Plan nor is it clear whether placing fill for construction of staging areas will satisfy cleanup requirements (see 12/3/10 letter). The Agencies understand that construction of staging areas in these locations is desired for early works activities in 2011. However, the Agencies remind Intalco that staging areas constructed in this manner are unlikely to meet cleanup requirements and that additional cleanup work would likely be needed to complete the remedy requirements in this area at a later date. It may be better to remove the contaminated soils prior to placement of the staging area fill, to avoid the possible need to remove these materials later. This was discussed at the 3/24/11 and 4/14/11 meetings between Intalco and the Agencies where Intalco agreed that contamination in the LWA presents a risk to human health and the environment in soil and groundwater but that the delineation of the vertical and lateral extent of contamination is not yet complete for the purposes of remedy design. Because of this, the Agencies require that a Technical Memorandum be submitted and approved by the Agencies prior to construction of the staging areas summarizing existing data from this area in table and figure formats and indicating the proposed extent of contaminated soil removal. Design of the final cleanup in this area will need to be based on additional characterization on the extent of contamination. The Agencies will use information in the requested Technical Memorandum to evaluate the

extent of additional sampling required; whether the early actions in this area meet the ARARs; and to define additional measures that may be required.

64. Sections 4.10 and 4.15, Staging and Storage. Staging areas B and C are within 75 feet and 100 feet of Railroad Creek, respectively. The Agencies are currently evaluating Intalco's floodplain analysis and may have comments regarding the suitability of these areas. In addition, the Agencies note that the wetlands delineations have not been completed in these areas.

65. Sections 4.10 and 4.15, Staging and Storage. Intalco proposes to bring in 1.5 feet of clean soil as a surfacing material on the staging areas. However, the Plan does not provide information on the materials to be used or an evaluation of how it will achieve protectiveness. This information must be included in subsequent design drawings once the borrow areas are confirmed. The Agencies note that the proposed approach is suitable for temporary surfacing of the staging areas but that it may not be suitable as a permanent cap. A permanent cap must meet the requirements outlined in Appendix C of the ASFS. The Agencies' approval to proceed with some or all components of the 2011 work does not indicate the Agencies' acceptance of the proposed surfacing as a permanent cap design for the remedy.

66. Sections 4.10 and 4.15, Staging and Storage. The Early Works Plan must include requirements for frequent inspection of the staging area surfacing materials and appropriate maintenance measures to ensure that a barrier between the underlying contaminated soils and heavy equipment and construction materials is maintained at all times, especially during early season wet conditions.

67. Section 4.11. The Plan must include a spill response plan, particularly in light of the remote location.

68. Section 4.11. Spill Prevention Controls and Countermeasures (SPCC) must be in place before construction of fueling facilities.

69. Section 4.10, Construction of Staging and Storage Areas. Storage areas must drain to holding areas/bio swales before entering Railroad Creek.

70. Section 4.12, Stockpiles and Storage Areas for Timbering Product. The Plan calls for "All saw cut timber" to be sold to Holden for fuel. The Plan must be modified to indicate that some cut material may be used for mitigations and some may be used for saw timber, as designated by the Forest Service on National Forest System lands. The largest trees are generally of the greatest value for habitat and should be retained for mitigation and restoration work. Large trees sold as saw timber must be excess to the need for mitigation material. Root wads, particularly if still attached to tree, are also useful for habitat restoration and mitigation and may not all be shredded or chipped. Trees from privately owned lands need to be addressed separately in the Plan.

71. Section 4.12, Stockpiles and Storage Areas for Timbering Product. Noxious weeds also include ox eye daisy and foxglove.

72. 4.13, Ancillary Access Road Rehabilitation. The Plan must specify which BMPs apply and they must be specified on drawing(s).

73. 4.13, Ancillary Access Road Rehabilitation. Timbering limits must be shown on drawings.

74. 4.13, Ancillary Access Road Rehabilitation. The specific grading and drainage improvement must be defined and these must refer to specific drawings and identify the applicable BMPs.

75. 4.13, Ancillary Access Road Rehabilitation. Drawing 10-6-2 (Construction Support Facilities) shows that lower Winston road would be used for access but this road is currently closed and deemed unsafe due to previous washout. The Agencies note that use of this road would require relocation upslope into the drainfield; this must be addressed in the Plan. Also, explain the purpose of the turnout and the adjacent cross road (not shown).

76. 4.13, Ancillary Access Road Rehabilitation. The Plan states that "Historic monuments and structures in the Winston area will be clearly marked to avoid damage during construction" The Plan must state that Intalco's archeologist must mark these historic locations in consultation with the Forest Service archeologist. Also, the Plan must include a "flagging plan."

77. 4.13, Ancillary Access Road Rehabilitation. Define road reconstruction.

78. 4.13, Ancillary Access Road Rehabilitation. Provide plans showing proposed road.

79. Section 4.14, Construction Water Load Out Stations. The Plan must stipulate that gas or diesel powered pumps will require spill containment provisions.

80. Section 4.14, Construction Water Load Out Stations. Identify what in stream structures are required.

81. Section 4.14, Construction Water Load Out Stations. Pumps in streams shall be equipped with a screen of 3/32 inch mesh or less and will have an intake flow of less than 1 foot/second to prevent entraining juvenile fish and amphibians.

82. Section 4.17, Excavation or In-Situ Remediation of Impacted Soils in the Surface Water Retention Area. Drawings 10-9-2 and 10-9-4 show somewhat different areas of disturbance. Clarification is needed.

83. Section 4.16, Ballfield. The Agencies are willing to participate in a site visit in order to reach agreement on the visually evident extent of contamination. In addition, the Agencies would support the use of a field analysis method, such as an XRF used in accordance with an approved calibration and verification protocol, to aid in the initial gross delineation of potential mine materials in this area. However, the Agencies require that the delineation and removal of material be confirmed by analytical data from an accredited laboratory.

84. Section 4.17, Excavation or In-Situ Remediation of Impacted Soils in the Surface Water Retention Area. The Plan must specify that stockpiling spoils from ventilator portal to provide cover for SRA be performed with as little timbering as possible since this is an area where there is suitable spotted owl habitat and that existing gaps must be used to the extent possible. The Plan must also specify that stockpiling spoils must be accomplished with as little impact as possible to drainages and wetland areas must be delineated and delineation results approved by the Agencies prior to project initiation.

85. Section 4.17, SWRA pond. At the 3/24/11 and 4/14/11 meetings between Intalco and the Agencies, Intalco stated that the SWRA area was not a time critical issue and that ventilator portal spoils quantities and composition were unknown. The Agencies agreed that spoils could be temporarily stockpiled on or near the SWRA until an evaluation of existing conditions at the SWRA is completed. However, if Intalco proposes to place ventilator spoils on the SWRA as a cap, Intalco risks having to go back and do additional cleanup work once the additional evaluation of the SWRA is completed. Meanwhile, the Agencies requested at the 4/14/11 meeting that Intalco prepare a summary of existing data from this area prior to ventilator portal bulkhead construction. Remedial investigation of the SWRA is sufficient to determine that contamination presents a risk to terrestrial organisms in soil; however, little is known about groundwater contamination in this area and additional groundwater investigation is needed. This summary will be used to evaluate whether the early actions in this area meet the substantive requirements of MTCA, CERCLA, and the Forest Service Plan.

86. Section 4.18 – Borrow Source Development. Borrow area development shall avoid wetlands, riparian areas, and the 100-year floodplain unless there are no reasonably practicable alternatives.

87. Section 4.18 – Borrow Source Development. The Plan must provide a better map of the borrow areas and provide Drawing reference (9-1).

88. Section 4.18 – Borrow Source Development. The Agencies require a pit development plan for any borrow sources to be developed for the 2011 construction activities.

89. Section 4.18 – Borrow Source Development. Given the lack of a complete wetland delineation, site-specific riparian designation, and Agency review of floodplain analysis, borrows must focus on areas that have already or will be disturbed (e.g., the Wilson Creek

timber sale area in the Lower West Tenmile area, Dan's Camp, proposed treatment plant location, etc.).

90. Section 4.18 – Borrow Source Development. The Lower West Tenmile borrow source will need more screening than shown on the various figures. At a minimum, the existing fringe of larger trees along the road must be maintained as a visual barrier.

91. Section 4.18 – Borrow Source Development. Paragraph 4 – The Plan states that "an area of no more than 2 acres will be developed in advance of what is predicted for immediate construction material needs." The Plan must clarify that this means that only 2 acres will be exposed at any one time. In addition, this should be located in the treatment plant and/or old timber sale area.

92. Section 4.18 – Borrow Source Development. The Plan indicates dates for wetland delineation (6/13 to 6/26) and borrow source timbering (6/24 to 7/13) but does not include dates for borrow source development and operation, which we would assume would begin around 7/13. We would also assume that the delineation would be complete prior to timbering. The schedule must be confirmed and dates adjusted accordingly.

93. Section 4.18 – Borrow Source Development. The floodplain analysis does not include all of the Lower West Tenmile area and various drawings only have 50-foot contours that are not helpful for estimating potential flooding. Figures 1-4 of the "Floodplain Evaluation of Railroad Creek Existing Conditions" might be helpful for that purpose but is hard to read in hard copy.

94. Section 4.18 – Borrow Source Development. Provide plans for access roads to pits.

95. Section 4.18 – Borrow Source Development. Provide plans as to how the pits will be developed showing phasing, pit wall locations and heights, depths of excavations, etc.

96. Section 5.0, Erosion Control. Paragraph 2 presents the conceptual designs for some structures used in BMPs but these drawings do not adequately address BMPs. The drawings must be revised to provide critical information such as conditions when the BMP would be applied (e.g. slope), materials to be used (e.g. what type of erosion control blankets), intervals between structures, etc.

97. Section 5.0, Erosion Control. The Plan must indicate if filter barriers, sediment traps, and sediment basins are temporary. If so, it must specify removal of structure and disposition of sediment captured. If not, it must address stability of captured sediment over time (which may include stabilization with vegetation), and attempt to use structures that blend with environment.

98. Section 5.0, Erosion Control. The Plan must indicate that seeding will be conducted in conformance with Washington State Department of Agriculture (WSDA) Seed Laws but must also follow Forest Service Regulation and policy regarding use of native materials (FSM 2070).

99. Section 5.0, Erosion Control. The Plan must indicate that, depending on the area, revegetation may be accomplished by various means that are not limited to broadcast seeder or hydroseeding and may need to include collection, propagation, and planting of local native plants including trees and shrubs.

100. Section 5.0, Erosion Control. Provide more detail regarding the rolling dip. Section 5.0, Erosion Control. 4-9 detail 1 is not acceptable because it may not be passable by passenger vehicles.

101. Section 7.0, Management of Wastes. The Plan must address spill response for portable toilets if any will be used on the site.

102. Section 9.0, Site Management. The Plan must address the need to maintain access to ventilator portal, Honeymoon Heights, Diversion Dam, and Ballfield for owl surveys throughout the season. Access will generally be needed in the evening and nighttime hours.

103. Appendix A, Timbering Plan, Section 1.0. The Plan must indicate specific areas to be timbered.

104. Appendix A, Timbering Plan, Section 3.1. Woody areas. Because this list of woody areas includes areas that have not been covered in biological consultation with the Fish and Wildlife Service (e.g., area between the Winston Home site and Holden Village) and areas that have not been cleared by our Archaeologist (Former Winston Home site area), there may be significant delays in obtaining approval of these areas for use.

105. Appendix A, Timbering Plan, Section 3.6 Timber Stockpile Locations. Under paragraph 9 “Recommendations”, the pronoun “I” is used in making the recommendation. This needs to be clear that it is the Forest Entomologist making this recommendation, not Intalco or Intalco’s consultants or contractors.

106. Appendix A, Timbering Plan, Section 4.0 Slash Requirements, Paragraph 2. Change the words “previously approved by the Forest Service” to “approved in advance by the Forest Service”. At this time, the Forest Service has not approved any burn locations and wants to be sure that burning does not damage soils. Pile size is as important as location, and piling specs must be discussed with and approved by Forest Service resource specialists in advance (Janeen Tervo/Rena Rex).

107. Appendix A, Timbering Plan, Section 5.1, Delineating and Approving areas.

- Paragraph 1. All areas to be timbered must be delineated and approved by the Forest Service, not just clear cut areas.

- Paragraph 1. The Forest Service will review and approve delineation of timbered areas as soon as possible, but cannot guarantee completion within 2 weeks of receiving a drawing.

- Paragraph 2. A “Flagging Plan” needs to be created and maintained because there is a lot of flagging out there and a lot more to come.

- Paragraph 4. The Forest Service will make a best effort to complete field review within 1 week of flagging, but cannot guarantee due to the short notice. Field review is needed in any areas where “Ecological Assessment” is not complete.

- Paragraph 5. The first part of the paragraph indicated that the timber contractor will mark the trees to be cut. The later part of the paragraph says that the Forest Service will be responsible for marking the trees. Clear cuts do not require individual tree marking, just designation. Further discussion is needed to determine what marking is done, by whom, and whether tree volume sold can/should be done by measuring decked trees.

108. Appendix A, Timbering Plan, Section 5.2, Timber ownership and accounting.

- Paragraph 1. More discussion must be included regarding what material is to be sold, chipped, burned, or retained on site for habitat mitigation (see also comments on Section 4.12 Stockpiles and storage areas for timbering products).

- Paragraph 2. The Forest Service will need as much advance notice as possible to provide timber cruisers to “track the number and type of trees cut” and “computing the timber volume and associated value for the logs sold to HVI”.

109. Appendix A, Timbering Plan. The Plan calls for “All saw cut timber” to be sold to Holden for fuel. The Plan must be modified to indicate that some cut material may be used for mitigations and some may be used for saw timber, as designated by the Forest Service on National Forest System lands. The largest trees are generally of the greatest value for habitat and should be retained for mitigation and restoration work. Large trees sold as saw timber must be excess to the need for mitigation material. Root wads, particularly if still attached to tree, are also useful for habitat restoration and mitigation and may not all be shredded or chipped. Trees from privately owned lands need to be addressed separately in the Plan.

110. Appendix A, Timbering Plan, Section 6.0 – Temporary Runoff Control. The Agencies note that they have not received a Runoff Control Plan and Stormwater Pollution Prevention Plan (SWPPP) and that these must be approved before work may begin.

111. App B, Port Facilities.

- Site Selection:

  - Lucerne supports a “Boating” Club, not a Yacht Club. The Yacht Club is located downlake and using this term for Lucerne could get confusing.

- Design Basis–General (Page B2).

  - The Chelan Public Utility District (PUD) website indicates that the target construction lake elevation of 1088 feet will occur somewhere between mid January and mid February, not late fall. The lake level curve for the new license predicts an average lake level of 1094 on November 1. The Plan must take this into consideration.

  - Clarify the general design statement that suitable fill material will be provided “near the uplake sites.” It is not clear if this means from the identified quarry and borrow sources. The Agencies note that using material from the lakeshore would be problematic, and would definitely require additional discussion, and be subject to stringent limitations. Some material along the lakeshore has been placed there deliberately (and at great cost by the PUD) for erosion control purposes.

  - The Plan must reflect that transfers of fuel, oil, cement, lime, etc. on the lake (and elsewhere) will require BMPs to provide for spill prevention and cleanup during transport and storage.

  - Laydown and handling area. The Plan must clarify that “no accommodation will be provided for spill containment” refers only to secondary containment and that typical spill prevention and control measures will be taken.

  - Figure 2 is outdated; it needs to reflect the “new” license curve, not “proposed.”

- Preliminary site layout.

  - The Plan must clarify where the cuts (275 cu ft) are located and how this would be accomplished. The drawing seems to suggest that part of the cliff face needs to be removed. The plan must clarify that the cliff face will not be removed. The Agencies note that there is an osprey nest nearby and that bald eagles have been observed in the vicinity. The Plan must specify that blasting would occur outside of the nesting and wintering periods.

  - The Plan must clarify exactly where fill be located and must account for historic features (e.g., crib dock, adit). The work must meet U.S. Army Corps of Engineers (USACE), Washington Department of Natural Resources (WDNR), and Washington Department of Fish and Wildlife (WDFW) substantive requirements for placing fill in the lake.

- Please propose a location for the logistics office off to the side of the landing area, not in the middle.

▪ Construction Sequence.

- Barge facility construction is not on the MWH Early Works Construction Schedule.

- Construction season beginning in "late fall" is too vague, particularly as the target lake elevation is not likely to occur before mid winter. The Plan must provide more detail.

- "Fill for ramp below water" will have different impacts depending on lake level; the Plan must address this.

- The Plan must clarify if "clearing" involves tree removal.

- The Plan must be revised to reflect that Intalco will avoid using/moving rocks at edge of the laydown area. Some of this material is riprap below the road for support and some provides wildlife habitat.

- The Plan must be revised to require a turnaround at the dock that is large enough to accommodate buses.

- If the mortared rock walls and signage will need to be removed, then the Plan must address that these will need to be replaced, as will the vegetation island presently located in the center of the turnaround at the dock. This island is the result of many years of revegetation effort. Interpretive signs must be temporarily moved to another site at the Landing during construction.

- Additional construction worker traffic at the Lucerne Landing will result in a need for Intalco to pump vault toilets on occasion.

- Restoration of the site will need to be addressed in appropriate plans, particularly given that part of the project includes "leave behind" structures, and structures that will need to be rebuilt.

- Submit a more complete design.

112. Appendix C, Earthworks Specifications.

- Section 3.4, Excavation in the vicinity of trees. The Plan must note that protection of the tree includes protection of the roots up to at least the drip line of the tree in question.

- Section 3.6, Disposal of excess excavated material. The Plan must address that if material is not hazardous, material should remain on site unless agency approves of off-site disposal. Excess excavated materials should be considered for construction materials use. Excess material must not be left on the outboard edges of any roads unless adequate breaks in the berm are placed to allow for drainage.

- Section 3.7C. Please clarify that this refers to Contractor's engineer.

- Section 3.8D. The Plan must require trench management in a manner that is not a hazard to wildlife (e.g. pitfall trap).

113. Appendix D.

- All bridges that pass the loaded design vehicle on a reoccurring basis must pass that load at service level. Use of the operational rating must be reviewed by the Forest Service.

- Forest Service must review and approve all proposed modifications of existing bridges before implementation.

- Bridges must remain in similar or better condition to existing upon completion of remedial action.

114. Appendix E, Holden Mine Railroad Creek Hydrologic Evaluation.

- The Agencies are continuing to review the hydrologic evaluation and intend to submit additional comments beyond those below.

- All flood plain and hydrologic evaluations shall take into account the bypass road, bridge, and Railroad Creek realignment.

- HEC-RAS cross sections need labeling.

- The entire proposed bridge package must be submitted to the Forest Service to implement regional Forest Service review in one proposal. This includes hydrologic modeling, abutment design, structural design, plan and profile, and site plan.

115. Drawings, General.

- The Riparian Reserve line on drawings is off due to an error in the Forest Service base map in the vicinity of the Holden patented mining claim properties. Intalco has the necessary information to correct this.

- Private land boundaries should be shown on all project maps, figures, and drawings for both Holden and Lucerne.

- Drawings 10-4-9 through 10-4-16. Clarify if the "runoff ditch" is co-located with the future "upgradient runoff diversion trench." If they are not, address whether the future trench is accommodated by the present plan.

116. Drawings, specific.

- 1-15 New Road is labeled around Dan's camp but no information in the Plan describes these roads. Include such information.

- 1-16 Same comment as above.

- 1-19 Same as above.

- 4-9 Detail 1. Open top box culvert does not appear to allow for passenger vehicle crossing.

- 4-9 Detail 1. Dimensions on top measurement sums to 20", bottom shows 12". Clarify the discrepancy.

- 4-9 Detail B fabric stated at 3/16" centers. Dimension in error. Make corrections.

- 4-11 detail 8. Define T1E.

- 4-11 Define gabion size and type.

- 4-12 Define filter fabric type.

- 4-14 Water bar does not appear to be drivable.

- 4-16 Provide slope into rolling dip, along with width.

- 4-9 to 4-16 Provide general discussion where specific BMPs are to be used. Provide culvert inlet detail.

- 9-1 Show Lightning Ridge and upper East and West Tenmile Creek sites.

- Forest Service RD 8301 general:
    - Include drawings to show extent of existing turnouts.
    - On larger turnouts 1 break in safety berm does not provide adequate drainage. Revise to provide adequate drainage.
    - Generally, use guard rail rather than safety berms due to drainage and snow plowing concerns. If safety berms are proposed, justify.
    - Fill slopes should be constructed utilizing "step" construction with each lift toed into existing ground.
- 10-3-3 Culverts must be shown on profile. Two SB 6 shown, but no SB 9.
- 10-3-6 Define symbol on road just below "Narrows Road Section".
- 10-3-12 Define turnout taper. Is the safety berm only located at the turnouts?
- Provide the dimensions of the drainage break at the low point. Describe What erosion control BMPs are to be used at that location.
- 10-3-26 drawings to show where each type of barrier is to be used. Install Manual for Uniform Traffic Control Devices (MUTCD) object marker on barriers.
- 10-3-29 Verify absence of culverts between stations 48+28 and 84+09. The Agencies believe that cross drainage would be necessary in this area.
- 10-4-2 Show all culvert locations on profile. Show culvert dimensions.
- 10-4-3 Verify absence of culverts between stations 13+15 and 42+50. The Agencies believe that cross drainage would be necessary in this area.
- 10-4-9 Runoff Ditch needs to show slopes and dimensions.
- 10-4-11 Justify or eliminate berm on both sides of road. These could cause drainage issues.
- 10-4-12 Show ditch or outslope.
- 10-4-13 Lengthen culvert to obtain road width congruent with rest of bypass road.
- 10-4-16 station 60+00 shift drawing to show whole template.

- 1-4-18 100 year flood level does not account for bridge installation and should be reevaluated.

- 10-4-18 to 10-4-19 general:

  - Drawings scale does not allow verification of bridge width compared to 2yr flow.

  - Provide more information on scour protection.

  - Provide complete bridge package for Forest Service Regional Office review.

  - 10-4-21 Show culvert dimensions or armor shown.

  - 10-4-22 Ditch dimension information is needed.

117. Comments/questions on 2011 Early Works Construction Schedule.

- Item S1220. If workers are not being accommodated by Holden Village, then additional discussion will be required, particularly regarding camp sanitation, cooking, garbage disposal, waste disposal, etc.

- Item S1006. Where is the "Golder" laydown area? We assume it is not at the portals as the access roads are not scheduled for construction until after the laydown area. We have surveys in June that we would like to accomplish before the scheduled start of bulkhead construction on June 29. There will also be one more survey in July and one more in August.

- Item F1255 "Seed Harvest" will need to be discussed with the USFS Vegetation Team (Janeen, Brigitte, Randy, Rena).

- Item F1305 – Please explain Soil and Vegetation Sampling.

- Item F1325 – Invertebrate sampling. This is aquatic and benthic invertebrate, correct?

- Item F1265 – Railroad Creek alignment. Clarify if this is a reconnaissance investigation or the layout of a new alignment and when a work plan can be expected?

- Item F1285 – Construction Materials (Quarry Investigations). When can the Agencies expect a workplan for these investigations (borrow sources and quarry)?